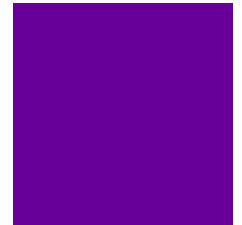
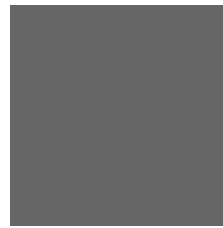


# PROPOSED OPERATING AND CAPITAL BUDGET

JULY 1, 2018 — JUNE 30, 2019



CENTRAL MARIN SANITATION AGENCY

1301 Andersen Drive • San Rafael, CA 94901 • 415.459.1455 • [www.cmsa.us](http://www.cmsa.us)



**CMSA PROPOSED BUDGET  
FISCAL YEAR 2018-2019: JULY 1, 2018 – JUNE 30, 2019**

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PROPOSED

# Central Marin Sanitation Agency

## Budget Acknowledgements

### San Rafael Sanitation District

Maribeth Bushey, Commissioner, appointed January 2018

Dean DiGiovanni, Commissioner, appointed, January 2018

Albert Boro, Alternate, appointed January 2018

Katie Rice, Alternate, appointed January 2018

### Ross Valley Sanitary District

Thomas Gaffney, Vice-Chair, appointed July 2016

Michael Boorstein, Commissioner, appointed July 2016

Doug Kelly, Alternate, appointed July 2016

Mary Sylla, Alternate, appointed July 2016

Pamela Meigs, Alternate, appointed July 2016

### Sanitary District No. 2

Diane Furst, Chair, appointed December 2014

Sloan Bailey, Alternate, appointed March 2017

### City of Larkspur

Dan Hillmer, Commissioner, appointed October 2010

### Executive Team

Jason R. Dow, P.E., General Manager

Loren Chris Finton, Treatment Plant Manager

Kenneth Spray, CPA, Administrative Services Manager

Brian Thomas, P.E., Technical Services Manager

### Finance Team

Heidi Lang, Financial Analyst

Ahn Ta, Personnel & Accounting Technician

Kate Brouillet, Administrative Assistant



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished  
Budget Presentation  
Award*

PRESENTED TO

**Central Marin Sanitation Agency  
California**

For the Fiscal Year Beginning

**July 1, 2017**

*Christopher P. Morill*

Executive Director



## **Message from the General Manager**

On behalf of the Board of Commissioners and staff of the Central Marin Sanitation Agency (CMSA), I am pleased to present the Agency's Fiscal Year 2018-19 (FY 19) Budget. This budget serves as the financial plan for FY 19, and details the resource requirements and costs associated with providing safe, effective, and environmentally sound wastewater services to approximately 105,000 residents, businesses, and institutions of Central Marin County. All the financial documents referenced in this document are available online at [www.cmsa.us/finance](http://www.cmsa.us/finance).

This is the Agency's eighth comprehensive budget using Government Finance Officers Association (GFOA) presentation guidelines. Our goal is to prepare high quality budgets and financial documents that are readily accessible and easily understandable to CMSA's Joint Powers Authority (JPA) members and ratepayers, customers, stakeholders, regulators, and other interested parties.

## **Achieving Outstanding Performance Past, Present, and into the Future**

Since 1985, CMSA has operated a regional wastewater treatment facility that receives, cleans, and discharges wastewater, and beneficially reuses biosolids that are collected from households and businesses within the Central Marin County, California service area. CMSA strives for, and will continue to maintain or exceed, high industry standards in all aspects of its business and operations. The Agency's high performance has been recognized by national, state, and regional industry groups in key areas:

- Achieved compliance with the Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES) permit requirements for the calendar year 2017.
- Received recognition from the GFOA for Excellence in Financial Reporting for the Agency's Comprehensive Annual Financial Report (sixteen consecutive years), Outstanding Achievement in Popular Annual Financial Reporting (eight consecutive years) and the Distinguished Budget Presentation Award (seven consecutive years).
- Garnered state-level recognition of first place from the California Water Environment Association (CWEA) for outstanding Mechanical Technician Person of the Year.
- Recognized by the regional CWEA Redwood Empire Section for Engineering Achievement of the Year, Public Education Program of the Year, as well as recognizing three Agency employees for exceptional performance in their respective professions.

## Major Agency Objectives for FY 19

- Exceed all NPDES permit requirements.
- Update existing and develop new procedures to comply with ELAP TNI standards for the laboratory.
- Deliver excess generated power to the local electrical utility grid.
- Operate the treatment facilities to minimize odors and public complaints.
- Implement an Agency-wide facilities master plan.
- Consistency of asset management and inventory system with accounting system
- Implement the Agency's upcoming FY 19 Business Plan.
- New financial software assessment
- Launch and maintain an Agency Facebook presence
- Maintain a safe work environment and promote a culture of safety as measured by no incidents of employee lost time injuries.
- Maintain a high level of service to customers in our service area and other clients outside the service area who contract for Agency services.

## FY 2018-19 Budget

The Agency is committed to developing fiscally responsible and sustainable annual budgets, and planning for the future through developing 10-Year Capital Improvement Programs (CIP) and Financial Forecasts with each annual budget.

The FY 19 Budget includes an expected operating surplus of approximately \$533,000. The budget includes an operating revenue increase of 3.5%, and an expenditure increase of approximately 3% from the fiscal year 2018. Debt service revenues total nearly \$5.0 million, of which approximately \$993,000 comprises debt service coverage used for CIP funding. The Agency plans to expend approximately \$2.9 million on 33 capital improvement activities using dedicated capital funding sources accumulated in the restricted capital reserve accounts and amounts from unrestricted capital reserve accounts to balance. Detailed discussions of the FY 19 Budget, the Capital Improvement Program, and the 10-Year Financial Forecast can be found in Sections 7, 8, and 9, respectively.



The main features of the FY 19 Budget are:

- Total Operating Revenues of approximately \$12.3 million, and dedicated capital related fees in the amount of approximately \$1.8 million consisting of capital fee, \$800,000, debt service coverage fee, \$993,000, and capacity charges in the amount of \$30,000
- Application of a 36-month wastewater flow and strength methodology for the allocation of the regional sewer service charges to the JPA member agencies. The allocation is based on the JPA member's proportionate share of the 12,799 million gallons of wastewater treated by CMSA during the April 1, 2015 to March 31, 2018 period, along with 27.7 million pounds of Biological Oxygen Demand (BOD) and 37.7 million pounds of Total Suspended Solids (TSS) during the April 1, 2015 to March 31, 2018 period. The FY 19 regional sewer service and capital charges CMSA will receive from its JPA member agencies is approximately \$540,000 more than FY 18, as scheduled in the Agency's current Five-Year Revenue Program.
- The Agency expects to receive approximately \$1.7 million in revenues from other sources; the largest single source is approximately \$0.68 million from the state of California for providing wastewater and pump station services to San Quentin State Prison.
- Debt Service of \$4.97 million, or \$95.43 per Equivalent Dwelling Units (EDU), in the combined service area.
- Total Operating Expenditures of approximately \$11.8 million, an overall increase of 2.9% from FY 18. The main changes to the FY 19 budget are due to scheduled salary and benefit increases of approximately 4%, increases in chemicals and fuels of 5.4%, and decreases in permit testing and monitoring of (17.1%) and utilities of (9.3%).

### **Making Significant Capital Investments in the Agency's Infrastructure**

The treatment and disposal of wastewater and reuse of its by-products is a highly regulated enterprise that requires significant capital infrastructure. CMSA operates an around-the-clock wastewater facility, and the various fixed assets and equipment used in the treatment processes are subjected to heavy usage, sometimes under a challenging operating environment. Capital assets are used to move large volumes of wastewater through the treatment facilities and are subjected to constant contact with wastewater and various chemicals used in the treatment processes. Agency staff monitors new technologies and operational approaches, and evaluates those that may improve the treatment process, save energy, reduce chemical usage, minimize greenhouse gas emissions, and meet changing regulatory requirements. The maintenance, replacement, and addition of capital assets are an essential part of the Agency's CIP and Budget.

In FY 18, the Agency completed a multi-year project to modify the maintenance building and construct a new material storage building totaling approximately \$701,000. Additionally, the Agency continued work on the PG&E Interconnection Agreement Modification, Hillside Slope

Stabilization, and Facility Paving projects. These three projects are expected to be completed in FY 19. Also the Agency Facilities Master Plan is mostly complete and projects identified as part of the condition assessment task have been incorporated into the FY 19 10-year CIP. Budgeted capital improvements for FY 19 amount to approximately \$2.9 million.

The total cost of the planned CIP over the next ten years is approximately \$48 million. The 10-year CIP focuses on replacing and rehabilitating aging infrastructure and assets, implementing new projects to reduce energy use and greenhouse gas emissions, meeting regulatory objectives, and increasing energy self-sufficiency. CIP funding sources are from ongoing capital-related service charges, debt coverage charges, capacity fees, and capital reserves. By the end of the FY 19 the Agency will have accumulated approximately \$5.5 million in capital reserves to finance higher priority projects in the current 10-Year CIP.

### **Sustainable Budgeting for the Future**

The Agency has pursued a number of budget initiatives over the past few years to achieve long-term budgetary sustainability and financial stability. One such initiative was a methodology change for the allocation of sewer service charges to JPA members resulting in equitable allocation based upon their respective wastewater flow and strength. Another initiative was to adopt a Five-Year Revenue Plan to provide JPA members ample time to incorporate Agency revenue requirements into respective financial plans and rate increase processes. The Agency fixed its debt service cost allocation to the JPA members based upon their 10-year average dwelling unit counts to smooth annual fluctuations. CMSA locked-in a five-year, \$8.7 million contract with the State of California to provide wastewater services to San Quentin Prison. Lastly, to smooth potential rate increases, the Agency is anticipating debt issues in each of the fiscal years 2019-20 and 2022-23 to finance major capital improvements.

On the expense reduction side, the Agency previously retired \$1.5 million in pension obligations by paying off its CalPERS side fund that resulted in budget savings of approximately \$300,000 per year for seven years, with one year of this cycle remaining. The Agency's most recent labor negotiations with its two employee groups resulted in a six-year agreement with employee cost-sharing for their pension contributions to CalPERS. The Agency took advantage of historically low interest rates to advance refund debt to defease and retire original issue debt from 2006. This transaction resulted in total savings of \$12 million to our customers over the period from the fiscal year 2015-16 to the fiscal year 2031-32.

The focus for FY 19 will be on delivering renewable energy generated by the Agency cogeneration system, and to begin projects identified in the Agency's Facility Master Plan.

## **Our People Make Us a High-Performing Agency**

CMSA is recognized as a high performance wastewater utility within Marin County and the San Francisco Bay Area, and we are sought out by local agencies to provide various wastewater and environmental services. The Agency continues to be recognized by state and national organizations in the areas of permit compliance, facility operations, safety, and financial reporting. I am privileged to work alongside 43 talented, experienced, and dedicated professionals.

On behalf of all the employees, I would like to express our thanks and appreciation to the CMSA Board of Commissioners for supporting the Agency's mission, vision, and goals and in securing the necessary resources to enable us to achieve a recognized level of high performance in safeguarding public health and the environment.

We hope that the FY 19 Budget will provide the reader with a thorough understanding of the sources and uses of Agency resources. We welcome your comments, feedback, and suggestions for improving future budget publications.

Respectfully,

A handwritten signature in blue ink, appearing to read "J. Dow".

Jason R. Dow, P.E.  
General Manager



## **SECTION 1. ORGANIZATION**

### **Formation History and Organization**

Faced with wastewater collection and treatment challenges unique to Central Marin County and the need to meet the 1972 Federal Clean Water Act and subsequent State Water Code requirements, Ross Valley Sanitary District (RVSD) and No. 2 (SD #2) of Marin County, the City of Larkspur (LARK), and the San Rafael Sanitation District (SRSD) united in 1979 to form a joint powers authority (JPA) and created the Central Marin Sanitation Agency (CMSA). San Quentin State Prison (SQSP), which represents the largest single customer of wastewater treatment services in the combined service area, opted not to join the JPA. The treatment facilities were constructed at a cost of \$84 million and were funded by federal (75%) and state (12.5%) clean water grants and local contributions (12.5%) from the four local wastewater agencies and SQSP. The CMSA wastewater treatment facility, the largest in Marin County, became operational in January 1985.

CMSA's governing body is a six-member Board of Commissioners (Board), appointed by the JPA members. Each JPA member determines the term for its appointed representative(s). SRSD and RVSD each have two members on the Board, while LARK and SD #2 each have one.

The Board sets policy and adopts the annual budget for CMSA, and appoints the General Manager and Treasurer/Controller. The General Manager is the chief executive officer and the Treasurer/Controller is responsible for all financial operations.

### Agency Officials as of July 1, 2018

#### Board of Commissioners (year appointed):

Diane Furst, Chair, Sanitary District No. 2 (December 2014)  
Thomas Gaffney, Vice-Chair, Ross Valley Sanitary District (July 2016)  
Michael Boorstein, Commissioner, Ross Valley Sanitary District (July 2016)  
Maribeth Bushey, Commissioner, San Rafael Sanitation District (January 2018)  
Dean DiGiovanni, Commissioner, San Rafael Sanitation District (January 2018)  
Dan Hillmer, Alternate, City of Larkspur (October 2010)  
Sloan Bailey, Alternate, Sanitary District No. 2 (March 2017)  
Al Boro, Alternate, San Rafael Sanitation District (January 2018)  
Doug Kelly, Alternate, Ross Valley Sanitary District (July 2016)  
Pamela Meigs, Alternate, Ross Valley Sanitary District (July 2016)  
Katie Rice, Alternate, San Rafael Sanitation District (January 2018)  
Mary Sylla, Alternate, Ross Valley Sanitary District (July 2016)

#### Agency Managers (tenure):

Jason R. Dow, P.E., General Manager (employee since 1993, General Manager since 2002)  
Loren Chris Finton, Treatment Plant Manager (employee since 1997, Manager since 2010)  
Kenneth Spray, CPA, Administrative Services Manager (Manager since 2017)  
Brian Thomas, P.E., Technical Services Manager (Manager since 2013)

## Employees, Service Achievements, and Recognitions

The authorized staffing level for CMSA is 44 full-time positions, including a safety professional position whose salary and benefit costs are shared with one other wastewater agency in Marin County. Characteristics of the workforce:

- 44 authorized positions
- Average age 44.9 years old
- Average length of service is 7.7 years
- 10 employees with over 10 years of service
- 26.8% of the current employees meet the minimum requirements for retirement benefits from the California Public Employees Retirement System

The exceptional dedication, experience and caliber of the workforce are reflected in the service achievements and recognitions that have been received by the Agency over the years. Below is a summary of the significant accomplishments and the most recent industry awards that have accompanied these accolades.

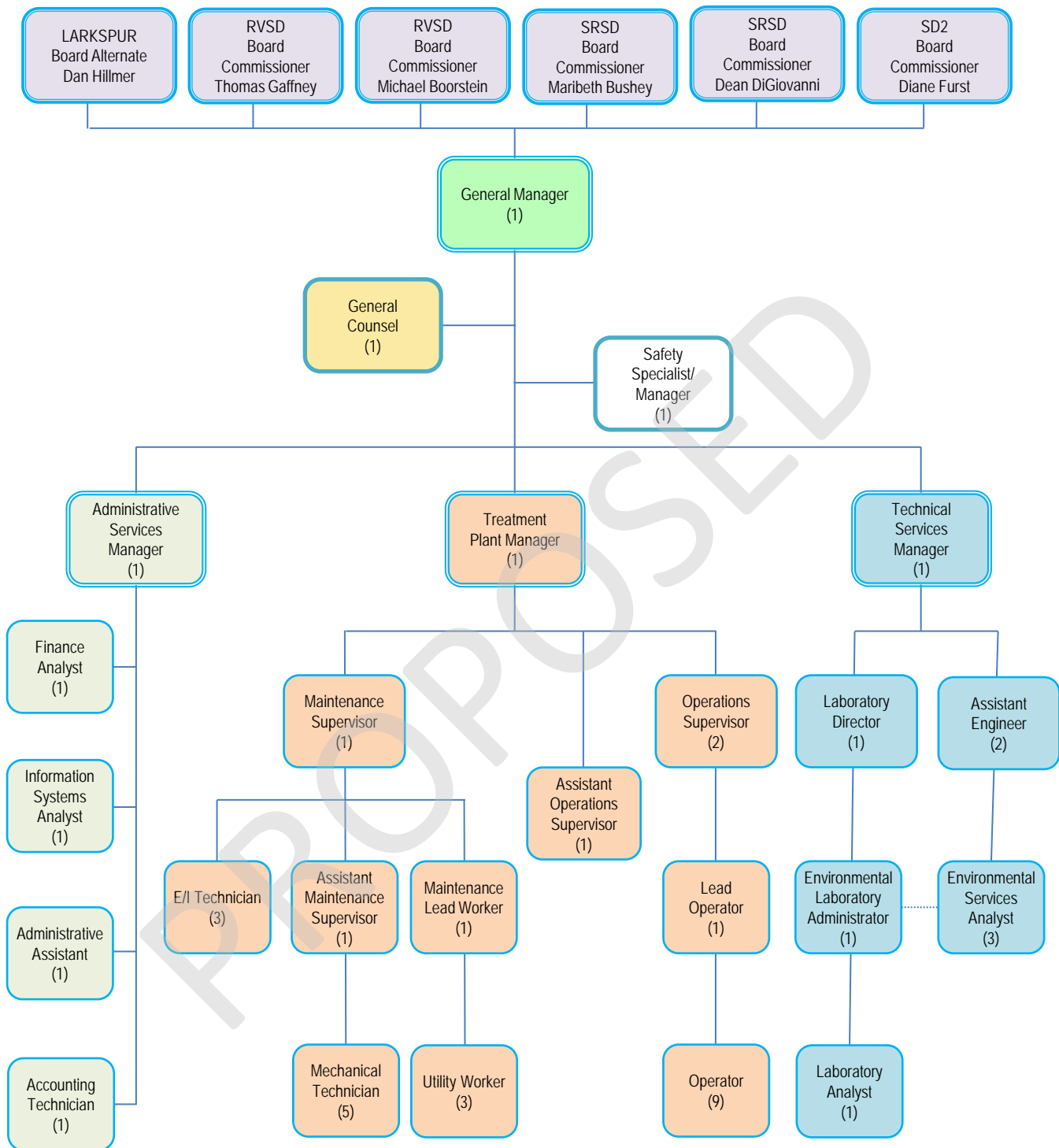
- **Record of Regulatory Compliance:** Recognition by the National Association of Clean Water Agencies (NACWA) with the Silver Peak Performance Award (2017). The award recognizes the achievement of obtaining compliance with the National Pollutant Discharge Elimination System (NPDES) permit requirements over the calendar year, with less than five violations. NACWA annually recognizes excellent performance at wastewater utilities through its Peak Performance Awards program.
- **Certificate of Achievement for Excellence in Financial Reporting:** Recognition from the Government Finance Officers Association (GFOA) for the Agency's FY 2016-17 Comprehensive Annual Financial Report (CAFR). The Certificate of Achievement is the highest form of recognition in governmental accounting and financial reporting and its attainment represents a significant accomplishment by a governmental entity. This marks the sixteenth consecutive year that the Agency's CAFR has met the high standards of the GFOA for governmental accounting and financial reporting. The Agency continually strives to comply with GFOA guidelines and recommendations. All its financial reports—from the Annual Budget, audited Annual Financial Statements, and CAFR reports to the monthly Treasurer's, Investment and Quarterly Budget Status Reports—are transparent representations of the Agency's financial operations. Each of aforementioned reports are presented to the Board for review and acceptance and are posted on the Agency's website [www.cmsa.us/finance](http://www.cmsa.us/finance).
- **Award for Outstanding Achievement in Popular Annual Financial Reporting:** Recognition from the GFOA for the Agency's FY 2015-16 Popular Annual Financial Report (PAFR). The PAFR Award is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government popular reports. The PAFR is specifically designed to be readily accessible and easily understandable to the general public and other interested parties who do not have a background in public finance. This marks

the seventh consecutive year that the Agency's PAFR has met the high standards of the GFOA for governmental accounting and financial reporting. The Agency expects to receive an award for its FY 2016-17 PAFR in July.

- **Distinguished Budget Presentation Award:** Recognition from the GFOA for the Agency's FY 2017-18 Adopted Budget. The award is the highest form of recognition in governmental budgeting and its attainment represents a significant accomplishment by a governmental entity. The GFOA encourages public entities to prepare budget documents that fully explain the agency's business, are transparent, and are designed to be readily accessible to the general public and other interested parties. The Budget Award deems the Agency's Budget to be proficient as a policy document, financial plan, operational guide, and communication device for the Agency's business. This marked the sixth consecutive year that the Agency's budget has met the high standards of the GFOA for budget presentation.
- **State-level Awards from the California Water Environment Association (CWEA):** Recipients of Regional CWEA Awards (below) became eligible for consideration for state level CWEA recognition. In March 2018, the Agency was recognized by CWEA at the state level for the following achievements:
  - Third Place – Abel Villarreal for Mechanical Technician of the Year
- **Redwood Empire Section CWEA Awards:** In November 2017, Redwood Empire Section of the California Water Environment Association (CWEA) recognized the Agency for outstanding work in the disciplines listed below.
  - Abel Villarreal for Mechanical Technician of the Year
  - Russ Turnbull for Electrical Instrumentation Person of the Year
  - Jose Gutierrez for Community Engagement and Outreach Person of the Year
  - Community Engagement and Outreach Project of the Year – Large Budget
  - Engineering Achievement of the Year – PG&E Interconnection Agreement Modification Project
  - Mark Koekemoer for Supervisor of the Year







44 Full Time Equivalent Employees (FTE)  
July 1, 2018

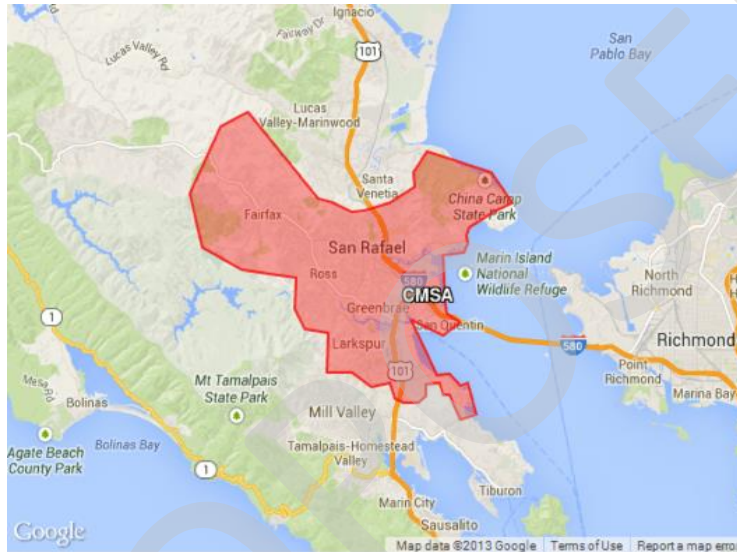
<b>CMSA Authorized Staff Positions</b>	<b>FY 17</b>	<b>FY 18</b>	<b>FY 19</b>
<b>ADMINISTRATION</b>			
General Manager	1	1	1
Administrative Assistant	1	1	1
Treatment Plant Manager	1	1	1
Administrative Services Manager	1	1	1
Financial Analyst	1	1	1
Personnel and Accounting Technician	1	1	1
Information Systems Analyst	-	1	1
<b>Total Administration</b>	<b>6</b>	<b>7</b>	<b>7</b>
<b>COOPERATIVE AGREEMENTS</b>			
Safety Specialist/Manager (Replaced Health and Safety Manager)	-	-	1
Health and Safety Manager (Replaced Safety Director)	-	1	-
Safety Director	1	-	-
<b>Total Cooperative Agreements</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>MAINTENANCE</b>			
Maintenance Supervisor	1	1	1
Assistant Maintenance Supervisor	1	1	1
Maintenance Lead	1	1	1
Maintenance Repair (Eliminated Maintenance Repair position replaced with Mechanical Technician)	1	1	-
Mechanical Technician	4	4	5
Utility Worker	3	3	3
Electrical/Instrumentation Assistant Maintenance Supervisor	1	1	-
Electrical/Instrumentation Tech	2	2	3
<b>Total Maintenance</b>	<b>14</b>	<b>14</b>	<b>14</b>
<b>OPERATIONS</b>			
Operations Supervisor	2	2	2
Assistant Operations Supervisor (new position: promoted Lead Operator)	-	-	1
Lead Operator	2	2	1
Operator (Trainee, I-III)	9	9	9
<b>Total Operations</b>	<b>13</b>	<b>13</b>	<b>13</b>
<b>TECHNICAL SERVICES</b>			
Technical Services Manager (Combined Environmental Services and Engineering Manager positions)	-	1	1
Assistant Engineer	-	2	2
Laboratory Director	-	1	1
Environmental Laboratory Administrator	-	1	1
Laboratory Analyst (New FY 19)	-	-	1
Environmental Services Analyst (I-II)	-	3	3
<b>Total Technical Services</b>	<b>-</b>	<b>8</b>	<b>9</b>
<b>ENVIRONMENTAL SERVICES (Reorganized into Technical Services)</b>			
Environmental Services Manager	1	-	-
Environmental Laboratory Administrator	1	-	-
Environmental Services Analyst (I-II)	3	-	-
<b>Total Environmental Services</b>	<b>5</b>	<b>-</b>	<b>-</b>
<b>ENGINEERING (Reorganized into Technical Services)</b>			
Engineering Manager	1	-	-
Assistant Engineer	2	-	-
Information Systems Analyst (Transferred to Administration)	1	-	-
<b>Total Engineering</b>	<b>4</b>	<b>-</b>	<b>-</b>
<b>TOTAL AUTHORIZED STAFFED POSITIONS</b>	<b>43</b>	<b>43</b>	<b>44</b>

## SECTION 2. LOCATION AND SERVICE AREA, LOCAL DEMOGRAPHICS AND ECONOMY

### Location and Service Area

CMSA is located in San Rafael, California and is adjacent to the San Rafael side of the Richmond-San Rafael Bridge. The shaded area on the below map highlights the CMSA service area. It measures approximately 43.5 square miles, and encompasses the residents, businesses, and institutions within the City of Larkspur, the Towns of Corte Madera, Fairfax, Ross, and San Anselmo, portions of the City of San Rafael, the unincorporated areas of Ross Valley and San Quentin Village, and San Quentin State Prison (SQSP). The population served within this area is approximately 104,500.

The shaded area shows the location of CMSA service area.



### Local Demographics and Economy

Marin County has a total population 260,651 with a growth rate of less than one percent annually. The county's residents continue to have the highest California per capita income of \$63,608, and a median per household income of \$100,310.

#### Population of Cities, Towns, and Correctional Facilities in the CMSA Service Area

City of San Rafael (Approximately 2/3 of the city's population)	39,500
City of Larkspur	12,382
Town of Corte Madera	9,858
Town of San Anselmo	12,599
Town of Fairfax	7,598
Town of Ross	2,467
San Quentin State Prison	4,004
Unincorporated CMSA Service Area (San Quentin Village, Greenbrae, Kentfield, Sleepy Hollow, Tiburon Peninsula)	16,092

Sources: United States Census Bureau State and County Quick Facts (2010 Census), Bureau of Economic Analysis; California Department of Finance Demographic Research Census 2010 and Population Factors; Bureau of Labor Statistics

Marin’s unemployment rate of 2.3% remains among the lowest in California and remains below the national level of 4.1% as of March 2018. Six of the top ten employers in the CMSA service area as measured by number of employees are governmental entities. The majority of the remaining businesses employ between 1-250 employees, and approximately 90% of these business enterprises include goods and services occupations.

Ten Largest Employers and Number of Employees in CMSA Service Area

BioMarin	1,700
San Quentin State Prison	1,662
Marin General Hospital	1,650
Dominican University	1,000
Golden Gate Transit	810
College of Marin	507
Restoration Hardware	500
City of San Rafael	401
San Rafael City Schools	355
Kentfield Rehabilitation & Hospital	345

The local real estate and housing market continued to improve during FY 18. The annual mean/median home sale price for a home in Marin was \$1,338,367/\$1,000,000 as reported by the Marin County assessor’s office website for the calendar year ending December 2017, compared to \$1,271,060/\$975,000 reported at end of December 2016. The upward trend continued January through April 2018 where the county reported at April 30th a mean/median \$1,469,385/\$1,200,000 sales data statistic for a mean home living area of 2,027 square feet.

*Source: www.marincounty.org/depts/ar/divisions/assessor/sales*

Equivalent Dwelling Units (EDU’s)

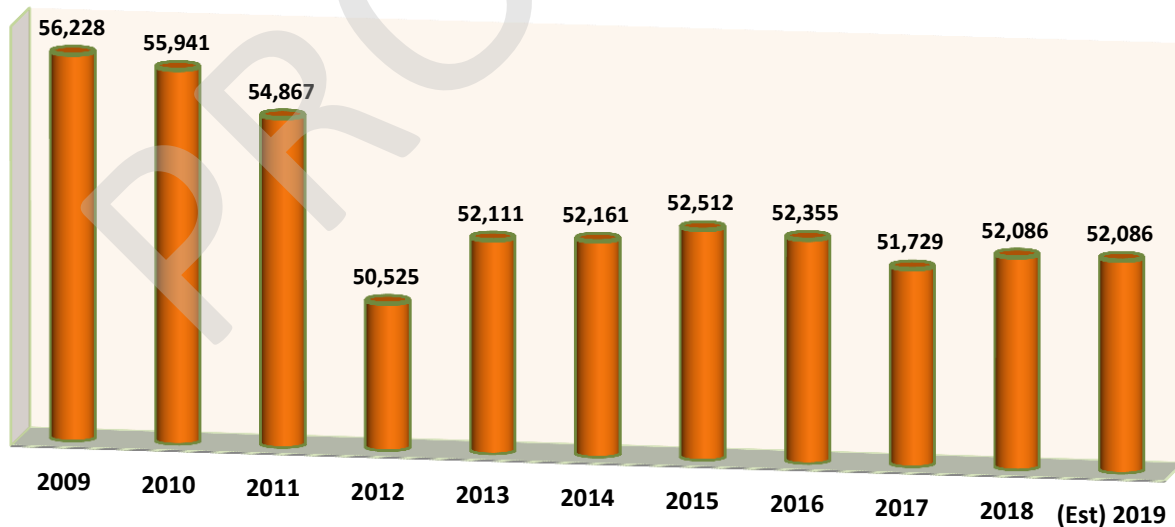
In past fiscal years, EDU’s had been used to determine the number of households served, as well as the sewer service charge (SSC) to set the Agency’s annual budget. An EDU refers to a unit of wastewater discharge, and is the estimated volume and strength generated by an average, single-family residence. Each JPA member agency is responsible for determining the number of EDU counts in its jurisdiction and works with the County Tax Collector to add the SSC to the property tax bill, which is the method used to collect SSC payments from its customers. The annual SSC EDU rate is established each July 1 in the CMSA adopted budget. The Agency’s EDU Rate is based on the total revenue budget for SSC, capital fee and debt service charged to members divided by the number of reported EDU. The EDU rate is used to determine fee schedules for waste haulers and industrial monitoring. Additional information can be found by referring to CMSA’s Fee Schedule Ordinance available on the www.CMSA.us website.

The Agency utilizes two different units of measure for allocating total sewer and debt service charges to the JPA member agencies. The allocation of the SSC is now based solely on the strength and volume of wastewater discharged from each satellite collection system into CMSA for treatment, as indicated by measurements taken by CMSA the prior wet weather period (the 36-month period April 1 to March 31 for strength and volume).

The allocation of debt service is pursuant to the October 2016 Debt Service Payment Agreement between CMSA and the Member Agencies, as well as the Master Indenture between CMSA and the Bond Trustee. The proportionate allocation of the debt service payment and coverage to each member is based upon average EDU counts over a 10-year period from the fiscal year 2006-07 to the fiscal year 2015-16 reported for the JPA service area. This allocation method smooths out unit count fluctuations and promotes stable/predictable debt service costs to members.

The chart and table below displays the total EDU count within the CMSA service area for the last ten years, and estimates FY 19 to be the same as FY 18. The number of residential EDUs tends to be stable in the Central Marin service area because there is generally very little commercial and residential development in central Marin County. The fluctuations from year-to-year are generally due to new sewer connections for new construction, variable water usage for commercial properties, and a change in the number of EDUs assigned to SQSP. There were three consecutive years (FY 09-FY 11) of decreases in the total number of reported EDUs, with another significant decrease in FY 12 attributable to changing how the number of EDUs was determined for SQSP. Effective FY 13, CMSA entered into a service contract with the State of California for wastewater service for SQSP, and is now responsible for determining the prison’s EDU count. The increased EDU count in FY 13 is the result of new construction for single family dwellings and a multi-unit residential development in the service area. Since FY 13 there has been little development. Additionally, increased drought-related water conservation efforts and reduced water consumption by commercial users have had a stabilizing effect on the EDU count.

**EDU Totals for CMSA Service Area Fiscal Year End June 30th**

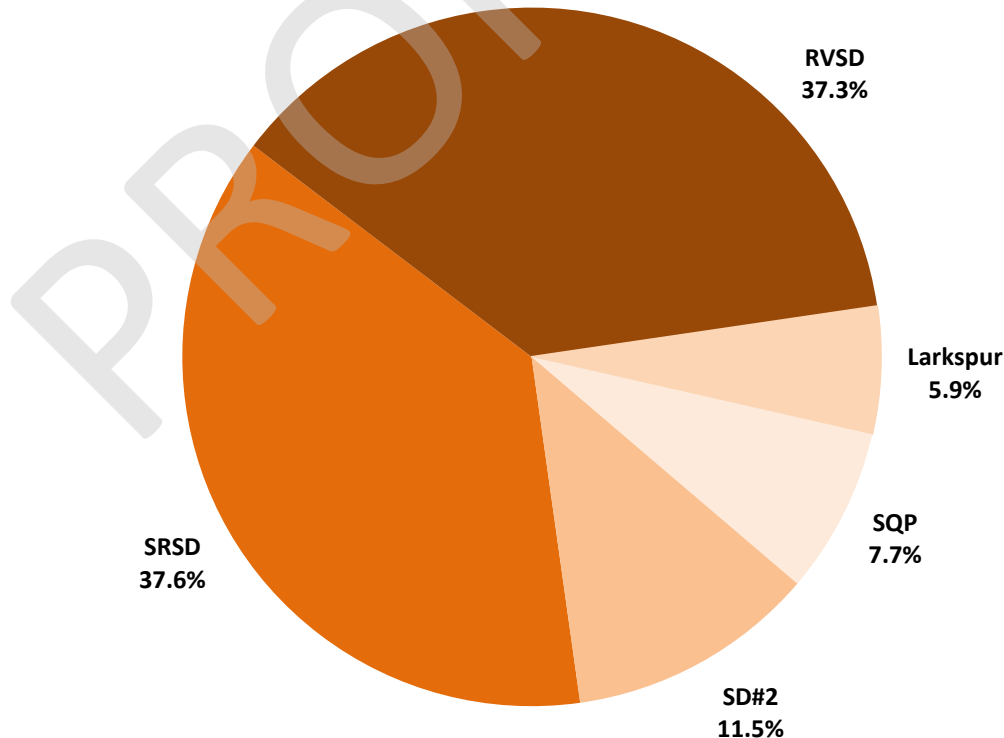


**EDU Count by JPA Member Agency and San Quentin State Prison FY 2009 to FY 2019**

<b>Fiscal Year Actual</b>	<b>San Rafael Sanitation District (SRSD)</b>	<b>Ross Valley Sanitary District (RVSD)</b>	<b>City of Larkspur (SD #1)</b>	<b>San Quentin State Prison (SQSP)</b>	<b>Sanitary District #2 (SD #2)</b>	<b>Total EDU Count</b>
(EST) 2019	19,565	19,448	3,060	4,005	6,008	<b>52,086</b>
2018	19,565	19,448	3,060	4,005	6,008	<b>52,086</b>
2017	19,332	19,298	3,039	4,005	6,055	<b>51,729</b>
2016	19,555	19,700	3,019	4,005	6,076	<b>52,355</b>
2015	19,643	19,666	2,982	4,005	6,216	<b>52,512</b>
2014	19,703	19,498	2,949	4,005	6,006	<b>52,161</b>
2013	19,482	19,511	2,997	4,005	6,116	<b>52,111</b>
2012	19,409	18,835	3,079	3,247	5,955	<b>50,525</b>
2011	19,401	19,261	3,021	7,209	5,975	<b>54,867</b>
2010	19,575	19,709	3,050	7,529	6,078	<b>55,941</b>
2009	19,685	19,295	3,116	7,936	6,196	<b>56,228</b>

The pie chart below shows the EDU count reported by each member agency as a percentage of the total number EDUs in the service area.

**EDU's by Member Agencies and San Quentin Prison  
as a Percentage of Total EDU's for FY 2018-19**



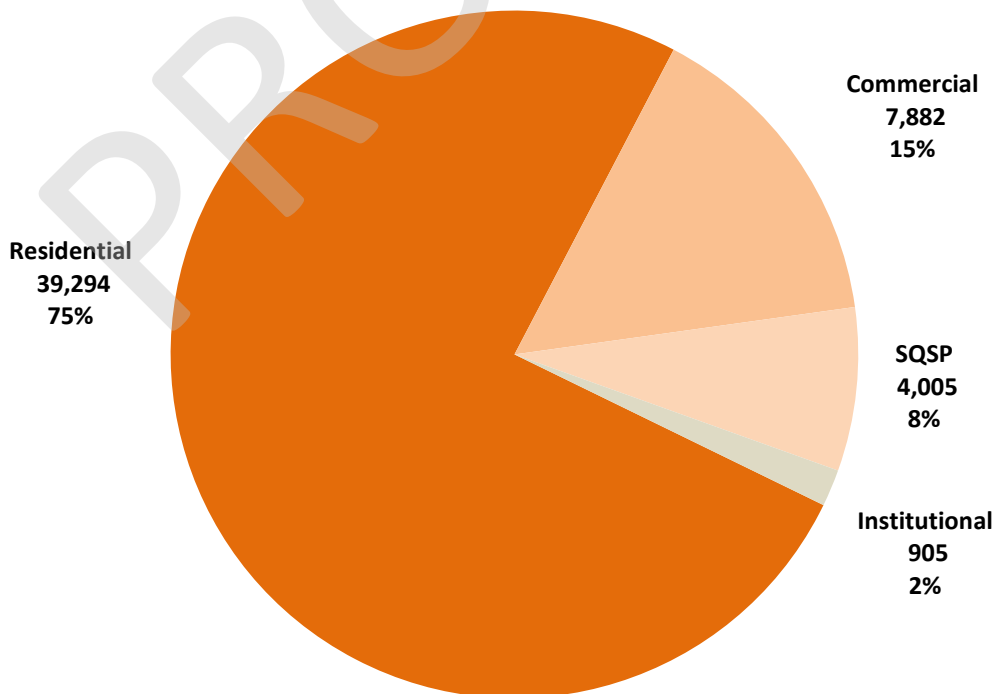
The table and chart below show the EDU count presented by connection type reported by participating JPA members. There are three types of connections: residential, commercial, and institutional. Institutional connections represent property tax exempt governmental entities (federal, state, county, city, and special district) that are billed separately because these institutions are not on the Marin County property tax rolls. EDU counts for these institutions are not included in county property tax reports.

**FY 2018-19 EDU Count by Connection Types**

	<b>San Rafael Sanitation District (SRSD)</b>	<b>Ross Valley Sanitary District (RVSD)</b>	<b>City of Larkspur (SD #1)</b>	<b>San Quentin State Prison (SQSP)</b>	<b>Sanitary District #2 (SD #2)</b>	<b>Total by Type</b>
<b>Residential</b>	15,747	16,467	2,631	-	4,449	<b>39,294</b>
<b>Commercial</b>	3,610	2,485	402	-	1,385	<b>7,882</b>
<b>Institutional</b>	208	496	27	4,005	174	<b>4,910</b>
<b>Total</b>	<b>19,565</b>	<b>19,448</b>	<b>3,060</b>	<b>4,005</b>	<b>6,008</b>	<b>52,086</b>

Source: Property Tax Reports, County of Marin

**FY 19 EDU by Connection Type and San Quentin State Prison as a Percentage of Total EDUs**







### SECTION 3. FACILITIES, WASTEWATER TREATMENT PROCESS, WORKLOAD, AND PERFORMANCE INDICATORS

**NOTE: Performance data highlighted in yellow in the tables and the accompanying charts will be updated with current data through June 30, 2018 for the FY 19 GFOA submission.**

#### Facilities

The CMSA wastewater treatment plant, pictured below, is a vital component of the central Marin wastewater management system. This extensive system includes over 70 pump stations, more than 450 miles of sewer pipelines located throughout the service area, as well as two major interceptors to transport the wastewater to the treatment plant, and a two-mile long outfall through which the treated wastewater is discharged into the San Francisco Bay. In full compliance with federal, state, and regional water pollution control laws and regulations, CMSA processes and disposes an average of 7.8 million gallons of wastewater a day during dry weather flows and 13 million gallons of wastewater per day during wet weather flows, and has treated in excess of 120 million gallons per day during peak rainfall periods.

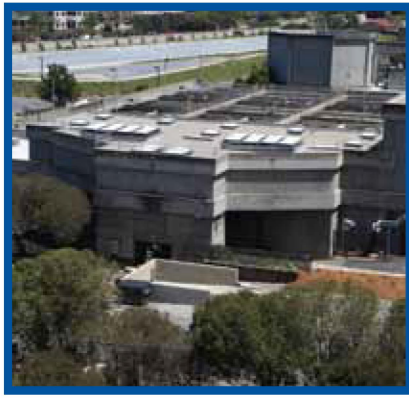


(Clockwise upper left to right): Effluent Storage Pond, Maintenance Annex (red roof behind the pond), Chlorination/Dechlorination Building, Chlorine Contact Tanks, Effluent Pump Station, Secondary Clarifiers, Organic Waste Receiving Facility, Solids Handling Building, Digesters and Digester Building, Aeration Tanks, Biotowers, Primary Clarifiers and Blending Channel, and Headworks. The two orange-roofed buildings in the lower left are the Maintenance Building (top) and the Administration Building (bottom).

#### Wastewater Treatment Process

The diagram on the following page depicts the wastewater treatment process.





### A Headworks

The wastewater influent flows through mechanical screens where large material is removed. The wastewater then enters the aerated grit chambers where grit, sand, gravel, and granular materials are removed, rinsed, and stored for future hauling to a landfill.



### B Primary Clarifiers

The flow of wastewater slows as it moves through the long narrow clarification tanks. At this stage, grease rises to the surface while heavier materials settle to the bottom of the tanks. Ferric chloride and polymer are sometimes added during high storm flows to increase removal of the solids. These solids are then scraped off the top and bottom of the tanks and pumped to the digesters for treatment.



### C Biotowers

The biotowers are the first stage of dual biological treatment. During this stage, water leaving the primary clarifiers is pumped to the top of tall biological towers where it trickles down through fixed media. When the water comes in contact with the air, the oxygen allows bacteria to grow on the media and consume some of the dissolved organic material.



### D Aeration Tanks

The activated sludge process is the second stage of biological treatment. Tiny air bubbles released from the bottom of the tank provide air for microorganisms to consume organic matter. The organisms form a floc which enables them to settle in the secondary clarifiers.



### E Secondary Clarifiers

The secondary clarifiers settle out the activated sludge from the aeration tanks. Some of this secondary sludge is reused in the dual biological process for continual reseedling, and the rest is sent to the digesters, where it is treated and used in the production of biogas.



### F Disinfectant Contact Tanks

A computer-controlled dose of sodium hypochlorite is mixed with the treated effluent to kill pathogens. To complete the disinfection treatment process, a sodium bisulfite solution is added to the treated final effluent to neutralize any residual chlorine to protect marine life prior to discharging it to the Bay.



### G Effluent Pump Station

The Effluent Pump Station will discharge treated effluent even when high plant flows and high tides coincide. It's fully automated and can start, stop and control pumps as needed during wet weather. There are five pumps – four primary pumps and one back-up pump. The high efficiency diesel pump engines passed a stringent Air Board review before they were permitted for use.



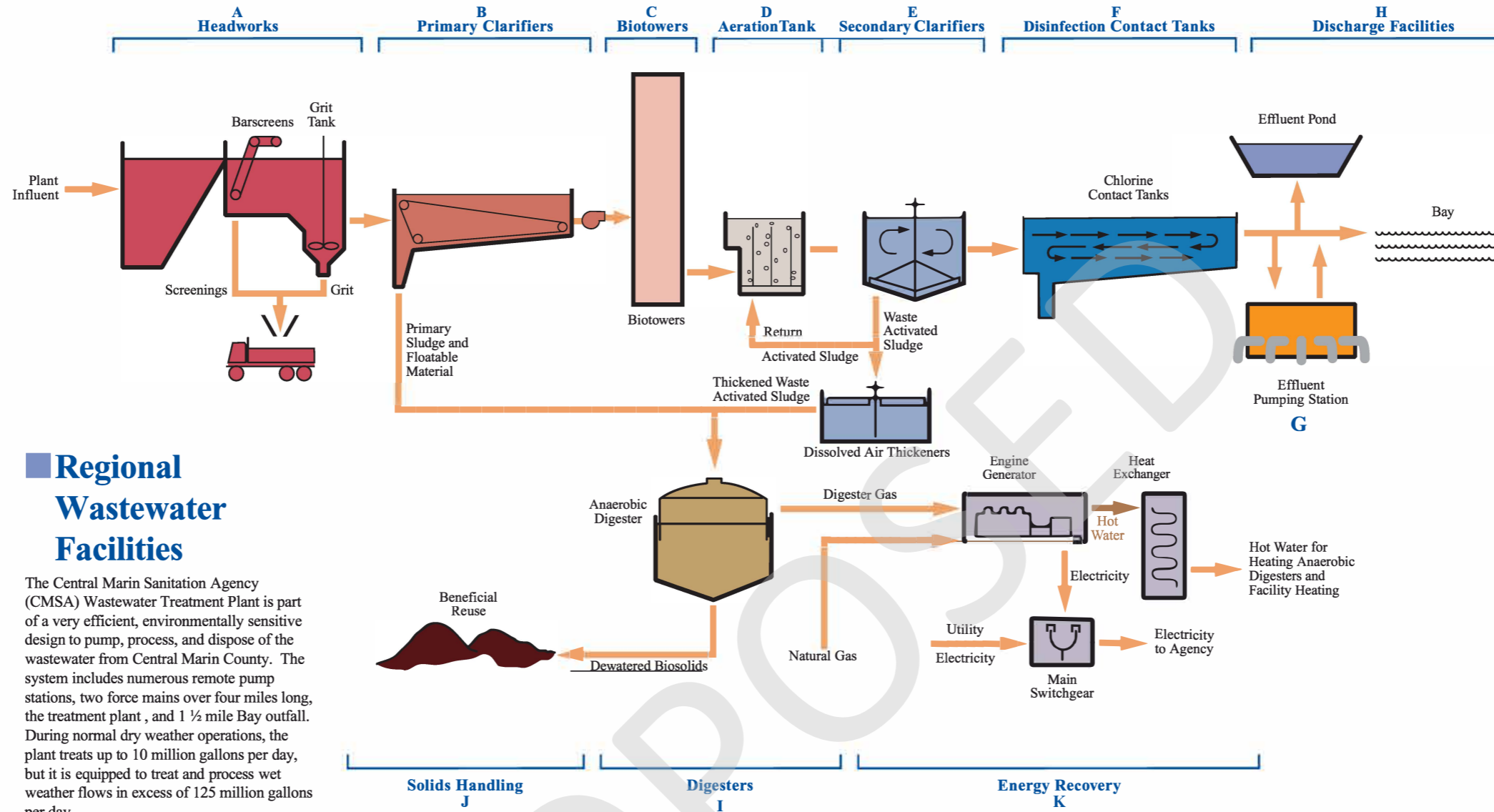
### H Discharge Facilities

Some of the treated wastewater is recycled and used for washdown and irrigation at the plant site. The remaining effluent is carried through an 84 inch pipeline more than a mile out into San Francisco Bay where it is discharged through 176 diffusers located 30 feet below the Bay surface.



### I Digesters

Solid materials (sludge and floatable material) removed in the primary and secondary clarifiers are heated so anaerobic bacteria can consume the organic matter. The digestion process reduces pathogens and odors and produces biogas. The treated product is called biosolids which are beneficially reused.

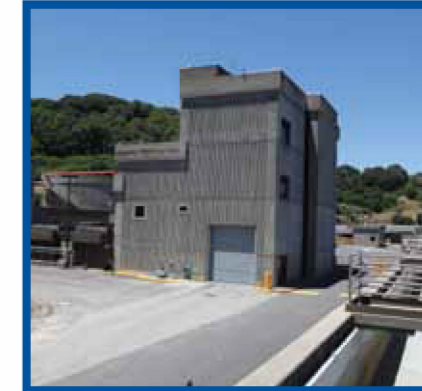


## Process Schematic



### K Energy Recovery

The biogas is produced in the digesters is used to heat plant process water and to generate electricity which supplies up to 95% of the Agency's power needs. When digester biogas is not available, the engine generator switches to natural gas.



### J Solids Handling

The digested biosolids are pumped to centrifuges where excess water is removed. The dewatered biosolids are hauled to a sanitary landfill for use as alternate daily cover, or utilized in a reuse process such as compost or land applied for agricultural use.



## Key Workload and Performance Indicators for FY 2017-18 and FY 2018-19 Projections

The following section summarizes the Agency's key workload and performance indicators for the July 1, 2017-June 30, 2018 fiscal period. The data presented is compiled from the *Performance Metric Report and NPDES, Process, and Maintenance Report* prepared for the monthly Board meeting agendas. These reports are publicly available in the consent calendar of the Board meeting agenda packets published on the CMSA website (<http://www.cmsa.us/board/agendas-and-minutes>).

The wastewater treatment plant was designed and built to remove pollutants from influent flows which are accomplished through physical and biological processes. While some of the reported performance metrics can be directly correlated to specific parts of the budget, the majority of the metrics reported below are accomplished through the interconnection of responsibilities amongst the operations, technical services, and maintenance departments that each have a duty to contribute to the successful operations of the wastewater facilities. The end goal of the total operating budget is to produce effluent wastewater that is 100% compliant with the Agency's NPDES permit requirements. The Agency had met all its NPDES permit requirements and did not have any NPDES Permit exceedances in the past twelve consecutive years through 2016. In February 2017, CMSA experienced its first NPDES permit exceedance, which was due to extremely high influent flows related to major winter storms making it essentially impossible to remove 85% of biochemical oxygen demand particulates from the highly diluted flows.

**A. Volume of Wastewater Treated (FY 18 Total Operating Expenditures \$11,801,600):** The Agency received and treated approximately **3,533.2** million gallons of wastewater during FY 18. The table below shows the monthly wastewater volume, in million gallons, received as influent flow from each satellite collection entity: SRSD, RVSD, SQSP, SD #2. The total treated flow volume was significantly lower in FY 18 due to milder storm events that occurred during the months of October through February. Flows outside of the wet weather period were similar to previous years. Future weather patterns are difficult to predict, therefore this statistic is not projected for FY 19. The total operating budget represents the total cost to treat the total influent flow into the treatment plant and discharging effluent flow into the San Francisco Bay that is in compliance with the Agency's NPDES permit requirements.

	SRSD			RVSD			SQSP			SD #2			TOTAL		
	FY 16	FY 17	FY 18	FY 16	FY 17	FY 18	FY 16	FY 17	FY 18	FY 16	FY 17	FY 18	FY 16	FY 17	FY 18
Jul	88.6	89.5	95.2	107.7	113.6	124.3	10.2	11.0	10.1	27.9	25.8	22.8	234.4	239.8	252.4
Aug	92.3	92.4	95.8	107.2	118.2	127.4	9.7	10.4	12.8	27.9	26.1	17.5	237.1	247.2	253.5
Sep	89.9	86.4	95.0	103.8	108.9	133.5	8.9	9.7	14.6	27.5	25.7	9.9	230.1	230.7	253.0
Oct	88.3	114.3	89.4	109.2	141.4	111.2	9.5	10.1	15.2	28.5	33.0	25.4	235.5	298.9	241.1
Nov	90.7	133.2	110.2	107.7	183.6	137.4	8.5	10.3	16.6	26.7	36.6	33.7	233.6	363.7	297.8
Dec	117.7	200.7	92.3	170.2	296.4	130.7	10.4	11.1	15.0	45.4	48.9	27.8	343.7	557.1	265.7
Jan	229.3	338.8	154.5	331.4	524.3	209.0	13.8	15.5	18.9	68.5	74.0	44.6	643.0	952.7	427.1
Feb	111.5	312.5	99.0	168.0	462.8	133.2	9.4	14.1	13.1	32.4	74.1	24.4	321.3	863.5	269.7
Mar	225.5	176.4	214.6	337.6	252.1	297.5	14.0	11.6	19.0	54.1	44.4	54.3	631.2	484.3	585.4
Apr	112.6	162.4	145.5	152.4	230.4	205.4	10.4	11.2	15.5	31.3	39.1	39.2	306.7	443.1	405.6
May	100.8	107.5	102.1	129.1	152.3	138.4	10.9	9.8	12.9	28.4	30.8	28.5	269.2	300.4	281.9
Jun	86.5	95.6	0.0	115.4	126.2	0.0	10.8	9.8	0.0	24.6	27.4	0.0	237.3	259.1	0.0
Total	1433.7	1909.7	3533.2	1939.7	2710.2	1747.9	126.5	134.6	163.7	423.2	485.9	328.1	3923.1	5240.5	3533.2
% Total Flow	36.5%	36.4%	36.6%	49.4%	51.7%	49.5%	3.2%	2.6%	4.6%	10.8%	9.3%	9.3%	100%	100%	100%

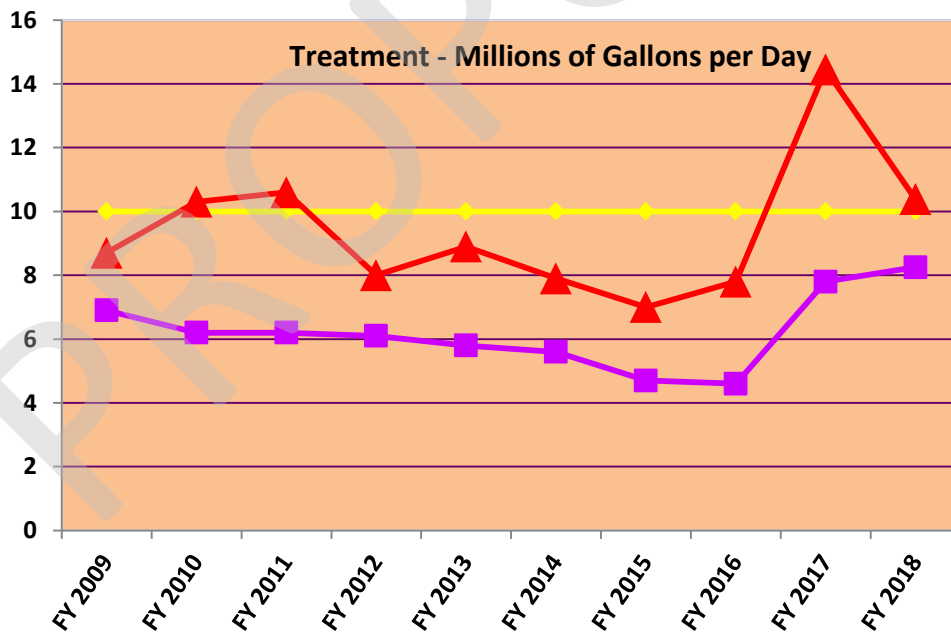
**Average Daily Effluent Flow.** The Agency’s permitted dry weather capacity is 10 million gallons per day. Below are the average daily dry weather flow, daily wastewater treated, and annual flows for the past six years.

MILLIONS GALLONS PER DAY	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19*
Dry Weather Flow (July-Sept)	5.8	5.6	4.7	4.6	7.8	8.3	8.3
Wastewater Treated	8.9	7.9	7.0	7.8	14.5	10.4	10.4
Total Annual Influent Flow Treated	3,988.4	3,738.7	3,929.7	3,923.1	5,240.5	3,533.2	5,228.7
TOTAL OPERATING BUDGET	\$9.5M	\$10.08M	\$10.1M	\$10.8M	\$11.6M	\$11.5M	\$11.8M

\*FY 19 has been projected to equal FY 18 annual flows

The graph below presents the average volume of wastewater treated and discharged into San Francisco Bay from FY 09 through FY 18.

- The yellow line is the Agency’s permitted dry weather flow, which has remained constant through several five-year NPDES permit cycles.
- The purple line shows the average dry weather flow each year during the months of July, August, and September.
- The red line represents the average annual daily wastewater treated and is higher than the purple line because it includes storm water that infiltrates into sewer pipelines during wet weather season rain events.



—◆— Treatment Plant Dry Weather Permitted Capacity

—■— Average Dry Weather Flow

—▲— Average Daily Wastewater Treated

The increases in the average daily flow are due to higher than normal seasonal rainfalls during the wet weather months, and the sharp declines during FY 12, FY 14, and FY 15 are indicative of dry winters. The decrease in average dry weather flow beginning in FY 13 is associated with lower water usage by our customers due to their increased water conservation efforts during the drought that included installation of high-efficiency water fixtures.

The Agency reclaims anywhere from 10-15% of its treated water for irrigating landscaping, cogeneration engine cooling, hosing down and washing tanks and equipment, and diluting chemicals used in the treatment process. Reclaimed water is also used to maintain a wildlife sanctuary habitat for an endangered turtle at Remillard Park in the City of Larkspur.

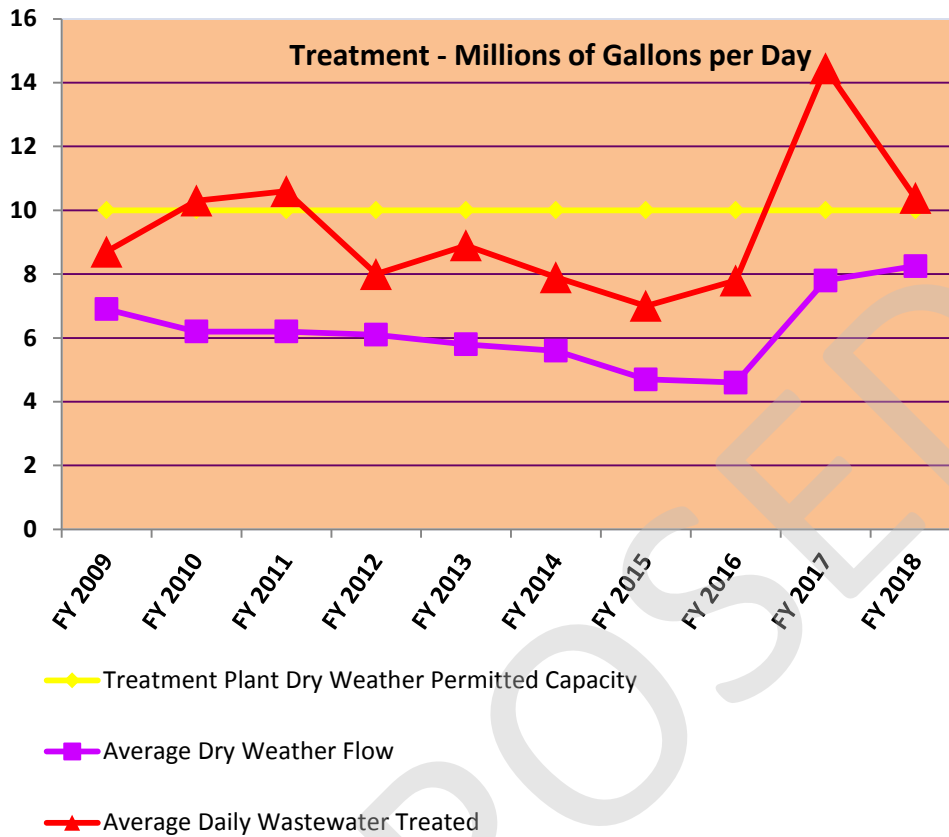
During FY 16, the Agency built a recycled water truck filling station. Our member agencies occasionally use the recycled water for sewer flushing within our service area.

**B. Biosolids Management Production:** Biosolids are renewable by-products of the wastewater treatment process. CMSA beneficially reuses biosolids as alternative daily landfill cover during the wet weather season in Marin County, as fertilizer and soil amendments on agricultural land during the dry weather season in Solano County, and as a feedstock at the Lystek bio-fertilizer production facility. To further diversify biosolids management options, the Agency has partnered with 16 wastewater agencies within the San Francisco Bay Area region to evaluate the feasibility of using biosolids as an alternative energy source or to produce a marketable product. The quantity in wet tons of biosolids reused is the performance measure for this budget.

REPORTED WET TONS:	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
<b>Total Biosolids Management Budget*</b>	\$266K	\$273K	\$276K	\$374K	\$388K	\$400K
<b>Total Biosolids Reuse</b>	5,450	5,882	6,231	6,645	6,027	6,645
<b>Landfill Alternative Daily Cover</b>	3,582	3,740	4,131	3,676	3,166	3,676
<b>Lystek Bio-fertilizer**</b>				1,306	1,068	1,306
<b>Fertilizer/Soil Amendment</b>	1,868	2,142	2,100	1,663	1,793	1,663

\*Reference: Technical Services Department Biosolids Management Budget

The FY 17 Total Biosolids Management budget increase was attributed to delivery of two loads per week to the Lystek bio-fertilizer production facility. The FY 19 budget increase includes cost index adjustments in the biosolids hauling and disposal contracts.



The bar chart above shows the annual volume of biosolids produced. High flows during wet weather can transport solids that had settled in the collection system to the treatment plant which increases biosolids production. Capital improvement projects at the treatment plant can also affect biosolids production. For example, the Digester Improvements Project in FY 13 required CMSA to operate with only one digester instead of two for several months which decreased biosolids production. The FY 14 reduction was due to drought conditions which resulted in more solid material settling in the sewer system pipes and therefore was not transported to the treatment plant.



**C. Odor Alerts and Complaints:** Odors are routinely generated in the wastewater collection system and in treatment processes. The Agency has implemented a multi-phased approach to manage odor generation that includes: (1) Introduction of a calcium nitrite solution into the collection system to control the production of hydrogen-sulfide by microorganisms; (2) the addition of 50% strength hydrogen peroxide into the wastewater prior to entry into the facility’s headworks; and (3) the use of odor control masking agents when treatment processes are removed or placed into service. We routinely perform odor monitoring, and odor alerts are posted on the Agency website (www.cmsa.us) to inform the public and other interested parties of the potential generation of odors due to process changes, warm weather, and other environmental or operational factors. The performance measure for the Odor Control Budget is the number of alerts issued and the number of complaints received from people outside the treatment plant. The table below shows the number of posted alerts and public complaints received over the past five years. The Agency’s annual goal is zero complaints.

	FY 14	FY15	FY16	FY 17	FY 18	FY 19
<b>Total Odor Control Budget*</b>	\$518K	\$474K	\$614K	\$610K	\$534K	\$521K
<b>Number of Odor Alerts Issued</b>	43	45	44	64	51	40+/-
<b>Number of Odor Complaints Received</b>	2	1	0	2	0	0

\*Reference: Operations Dept. line item budget-Chemicals: Nitrate, Hydrogen Peroxide, Odor Control accounts.

**D. Conventional Pollutants Removed:** The Agency’s NPDES permit contains specific requirements for the removal of conventional pollutants, wastewater solids and organic material, before the treated water is discharged into the San Francisco Bay. The table below shows the annual amount of conventional pollutants removed. This metric is an example where the operation, technical services, and maintenance department responsibilities and budgets interconnect to produce a desired outcome.

UNIT OF MEASURE: TONS	FY14	FY15	FY 16	FY 17	FY 18	FY 19
<b>Total Suspended Solids (TSS) Removed</b>	9,009	7,353	6,872	5,937	6,237	6,300
<b>Organics (Biological Oxygen Demand – BOD) Removed</b>	5,294	4,949	4,638	5,651	4,355	4,700

**E. Priority Pollutants Removal:** The Agency’s NPDES permit requires the removal of mercury and copper, as priority pollutants. The percentage of these pollutants removed from discharge into San Francisco Bay is shown in the table below. The Agency’s optimal goal is 100%, but a more realistic and achievable goal is between 90% and 95%. While the Technical Services Pretreatment Sampling budget monitors industrial waste, the Countywide Public Education Program budget supports programs that educate the public on ways they can contribute to the removal of mercury and copper.

MONTHLY AVERAGE	FY 14	FY15	FY 16	FY 17	FY 18	FY 19
<b>Mercury</b>	97%	99%	99%	96%	99%	93%
<b>Copper</b>	96%	95%	96%	93%	98%	93%

**F. Biogas and Energy Production:** Biogas is produced in the treatment plant’s anaerobic digesters. This renewable resource is used as fuel in a cogeneration system that generates electricity to power Agency facilities. The volume of natural gas purchased from outside suppliers is reduced in proportion to the amount of biogas that is generated. The organic waste receiving program that was launched in January 2014 has resulted in increased biogas production, and during the summer of 2016, the system ran nearly 24 hours per day over six weeks. This is reflected in the additional budgeted savings in natural gas purchases in FY 15 through FY 19. The estimated quantity of biogas and electrical energy produced and the economic value of natural gas savings is shown in the table below.

	FY 14	FY 15	FY 16	FY 17	FY18	FY19
<b>Total Natural Gas Budget*</b>	\$187K	\$121K	\$109K	\$80K	\$40K	\$37K
<b>Biogas – million cubic feet</b>	73	79	92	106	103	104
<b>Energy Produced - kilowatts</b>	4,367	4,998	5,534	4,781	5,336	6,000
<b>Value of Biogas Produced</b>	\$256,464	\$255,791	\$242,271	\$291,022	\$299,267	\$313,291

\*Reference: Operations Department line item budget.

**G. Work Orders Completed:** The Agency has over 4,000 assets that include the treatment facilities and systems, equipment, buildings, vehicles, computers, and other assets. These assets need to be proactively maintained (preventative work) and repaired, rehabilitated, or replaced as needed (corrective work). The Maintenance and Operations Department’s maintenance activities are scheduled and tracked using a computer-based asset management system. The table below shows number of work orders completed over the past five fiscal years. The number of work orders executed is a key performance measure of workplace productivity for the maintenance and operations departments.

BUDGET	FY14	FY 15	FY 16	FY 17	FY 18	FY 19
<b>Maintenance Department</b>	\$1.48M	\$1.66M	\$1.78M	\$1.88M	\$2.01M	\$1.91M
<b>Operations Department</b>	\$2.91M	\$2.87M	\$3.19M	\$3.17M	\$3.15M	\$3.24M
<b>TOTAL</b>	<b>\$4.40M</b>	<b>\$4.53M</b>	<b>\$4.98M</b>	<b>\$5.05M</b>	<b>\$5.16M</b>	<b>\$5.15M</b>

COMPLETED WORK ORDERS*	FY14	FY 15	FY 16	FY 17	FY 18	FY 19
<b>Preventative &amp; Corrective- # work orders</b>	1,225	1,830	1,694	1,747	1,750	1,750
<b>Preventative &amp; Corrective – total hours</b>	11,446	10,576	10,848	11,384	11,500	11,500
<b>Operational (Facilities, Safety, Housekeeping - # work orders</b>	257	451	446	371	400	400
<b>Operational (Facilities, Safety, Housekeeping – total hours</b>	3,345	8,039	22,038	24,376	24,500	24,500
<b>TOTAL # WORK ORDERS</b>	<b>1,482</b>	<b>2,281</b>	<b>2,140</b>	<b>2,118</b>	<b>2,150</b>	<b>2,150</b>
<b>TOTAL WORK ORDER HOURS</b>	<b>14,791</b>	<b>18,615</b>	<b>32,885</b>	<b>35,760</b>	<b>36,000</b>	<b>36,000</b>

\*Source: July Agenda consent item “Asset Management Program – Annual Report” available <http://www.cmsa.us/board/agendas-and-minutes>

The increasing number of work orders completed since FY 14 for various activities indicates the learning curve and time commitment associated with the build-up and successful implementation of the asset management database, and is a measure of the increased

reliability of reporting standards. The Maintenance and Operations budget represents the total cost, including salaries, equipment, tools, chemicals, and utilities expended to execute the work orders.

**H. Employee Training:** CMSA supports employee development. We strongly believe continued training is important to our employees' professional development and job satisfaction, as well as for the effective functioning of the organization. Training includes mandatory topics such as safety and employment law (diversity, discrimination, harassment and ethics) and job specific educational courses. Methods of training include attendance at seminars and conferences, as well as computer-based webinars. The hours employees spend in training and development sessions is the key performance measure for referenced training accounts below the table.

	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
<b>Total Meetings/Training Budget</b>	\$72K	\$82K	\$79K	\$85K	\$85K	\$82K
<b>Internal Hours</b>	807	575	1800	1432	1746	1500
<b>External Hours</b>	870	668	726	1160	925	1000

*Reference: Department budget accounts for Meetings/Training (6700-010), Conferences (6700-020), Outside Safety Training (6830-017-01)*

**I. Water Sample Analyses:** The Agency has a certified environmental laboratory where wastewater that enters (influent) and leaves (effluent) the plant is routinely sampled and analyzed for various compounds as required by the Agency's NPDES permit. Samples from numerous treatment processes are also analyzed to ensure that the treatment systems are operating properly. The performance measure for the Permit Testing & Monitoring Budget is the number of tests that are performed to monitor water quality and permit compliance. The chart below shows the number of water sample analyses the laboratory performed, and the projection for FY 19.

	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
<b>Total Permit Testing &amp; Monitoring Budget*</b>	\$123K	\$125K	\$128K	\$147K	\$150K	\$132K
<b>NPDES Compliance Analyses</b>	5,482	5,661	6,187	2,852	3,404	2,400
<b>Process Control Analyses</b>	12,643	16,661	16,317	7,639	7,997	6,000
<b>Quality Control Testing</b>	5,697	5,650	5,771	2,154	2,754	5,700

*\*Reference: Technical Services line item budget accounts (6300-000, 6310-030, 6320-010.)*

There is significant decline in the reported NPDES compliance and process control analyses from FY 16 to FY 17. This is related to a change in how analyses are counted. CMSA no longer counts automated readings from field instruments as laboratory samples allowing for a more accurate representation of the analyses that were conducted within the laboratory.

**J. Number of Inspections Performed and Permits Issued:** The U.S. Environmental Protection Agency and the State Regional Water Resources Control Board require wastewater agencies, such as CMSA, to regulate commercial and industrial businesses in their service areas to

ensure specific pollutants and materials are not discharged into the sanitary sewer system that can detrimentally affect the environment or wastewater treatment processes. Regulated businesses include restaurants, dental offices, car washes, dry cleaners, metal plating shops, auto repair facilities, manufacturing plants, and other business types that have the potential to produce environmentally harmful waste products. The Contract Service Revenues budget line items for FOG, Pollution Prevention, and the Mercury Source Control Programs recover costs to perform inspections and issue permits for other local agencies where CMSA has contract to perform these services. The number of inspections completed and permits issued are shown in the table below and are the key performance measures for the referenced revenue line items. Fluctuations in the number of inspections are dependent upon customer compliance and by the number of new and existing businesses in the service area. Permits are issued for 1-, 2- or 3-year periods and the cyclical pattern is reflected in the number of permits renewed from FY 14 through the FY 19 budget.

	FY 14	FY 15	FY 16	FY 17**	FY 18	FY 19
<b>Total FOG, Permit &amp; Inspections, and Mercury Source Revenue</b>	\$94K	\$95K	\$98K	\$99K	\$102K	\$59K
<b>Pretreatment and Pollution Prevention Inspections*</b>	332	333	374	224	240	240
<b>FOG Program Food Service Establishment Inspections*</b>	606	602	659	383	400	400
<b>Permits Issued and Renewed*</b>	77	198	50	106	68	68

\*Reference: Schedule of Revenues and Other Financing Sources budget accounts 4030/4031/4033/4034/4035/4036/4037/4038-000-00.

\*\*In FY 17, inspections decreased due to limited staff resources.

**K. Public Outreach and Education:** CMSA is the lead agency for a county-wide public education program. Staff and program participants utilize exhibits to educate the public about important environmental issues related to water quality, stormwater, and wastewater at many community-based events. Some of these include the Marin County Fair, local festivals, farmers’ markets, and Earth Day events. The program also hires a juggler to deliver educational and entertaining environmental messages to elementary school children. Attendance at public outreach and education events is a key performance measure for the Countywide Public Education budget. The Agency tracks the number of people who visit the public education booth and who take our environmental quiz, and the number of children who attend the educational school events. A calendar of events where CMSA will be in attendance is available on the Agency’s website [www.cmsa.us/localevents](http://www.cmsa.us/localevents).

	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
<b>Total Public Education Program Budget*</b>	\$36K	\$36K	\$38K	\$37K	\$33K	\$35K
<b>Public Education Event Visitors</b>	3,197	3,401	2,430	3,682	4,392	3,500
<b>School Education Events Student Attendance</b>	6,314	4,330	2,538	3,688	4,290	3,000

\*Reference: Technical Services Department budget account 6821-000-02.

## **SECTION 4. STRATEGIC BUSINESS PLAN**

The Strategic Business Plan (SBP) is a model to chart a strategic path to effectively maintain and improve Agency operations and services. CMSA's SBP has been constructed to set priorities, focus energy and resources, and guide fundamental decisions and actions that will shape the organization into the future.

In September 2015, the Board of Commissioners approved development of the Agency's current SBP, conceptual format, and schedule for the five fiscal years from 2016-17 to 2020-21. Commissioners participated in the strategic planning workshops and collaborated with Agency staff to review and revise the Agency Mission, Vision, and Goals statements, and prepare new Value statements. High-level strategic statements and a SBP template were approved by the Board at its June 2016 meeting. Using these Board actions and guidance, the Agency Strategic Planning Committee (ASPC) developed the FY 2018-19 Business Plan consisting of Objectives and Actions to achieve the Board adopted Goals and to align with the SBP Mission, Vision, and Values statements.

The Agency's budget is closely aligned with the SBP, as the majority of the SBP strategic actions were considered in the budget development process. The focus of the Business Plan for the FY 2018-19 will tentatively be on the activities listed below:

- Maintain high performance of treatment facility operations
- Manage the Agency's assets
- Research financial software for significant system upgrade
- Increase the Agency's energy efficiency
- Collaborate with Bay Area agencies to evaluate biosolids management alternatives
- Promote a culture of leadership and professional growth
- Improve Agency documents and file management
- Prepare for bond issuances in connection with the capital improvement program
- Improve methods of communication, e.g., Facebook presence, website upgrade

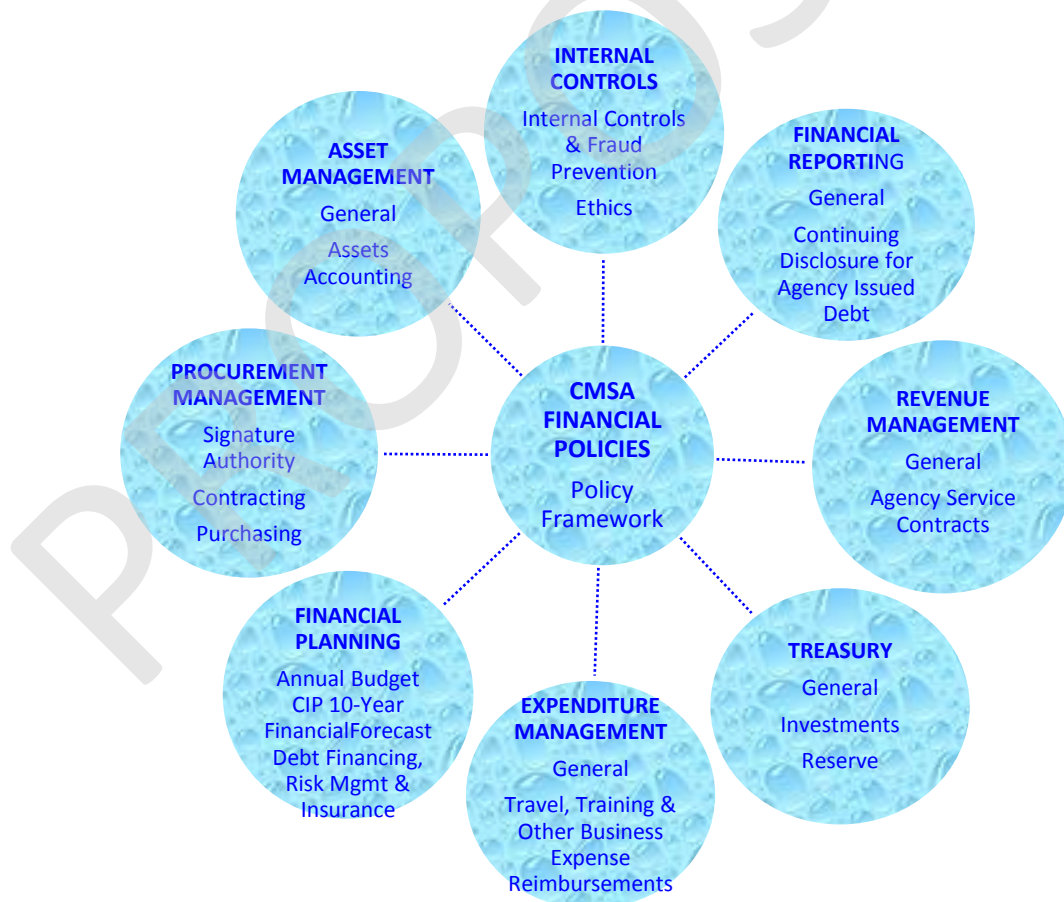
The Board reviews and accepts the Agency Strategic Business Plan for the following fiscal year, in this case the FY 2018-19, in July of each year and it is available on the Agency website thereafter.



## SECTION 5. FINANCIAL REPORTING AND FINANCIAL POLICIES SUMMARY

The Agency is a Joint Powers Authority and its activities are accounted for in a single enterprise fund. A comprehensive set of Board adopted financial policies provides direction to protect the Agency's assets and investments through sound financial management. The Agency uses the accrual method of accounting in accordance with generally accepted accounting principles (GAAP) to produce its financial statements. The accrual method records revenue when earned and records expenses when incurred. The cash basis of accounting is used to produce the budget which records revenue when cash is received and records expenses when actually paid. The primary difference is that economic events are recognized at the time the transaction occurs regardless of when cash transactions occur. CMSA's annual financial statements and the Agency's compliance with policies and internal controls are audited by an independent outside auditor in accordance with generally accepted governmental auditing standards, and the statements meet the State Controller's Minimum Audit Requirements for California Special Districts. The Agency's audited financial statements are filed with the State Controller's Office and the County of Marin Auditor-Controller, are provided to various bond rating agencies, and are available to the general public for review. CMSA's Financial Policies Manual is available on the CMSA website at [www.cmsa.us/documents/administrative](http://www.cmsa.us/documents/administrative).

### CMSA Financial Policies Table of Contents



*CMSA's values: "Sound financial practices to safeguard the Agency's assets."*

*"Effective asset management through appropriate short- and long-term planning and sustainable practices."*

## Financial Policies Summary

The Board adopted a comprehensive set of financial policies which are periodically reviewed and updated to align with GFOA best practices, recommendations from the Agency's independent auditors, and the latest GASB pronouncements. Since then, the Agency has undertaken a schedule to review one of its three major sets of policy documents annually on a rotating basis: Financial, Personnel, and Administrative. During FY 15, the Agency performed a thorough review of its financial policies making revisions as necessary. The policies that are included in the appendix were adopted by the Board in July 2015, are currently under review, and a revised policy manual is planned for presentation to the Board in July 2018.

Major policy areas are displayed in the graphic on the previous page and each specific policy is listed and summarized below. The framework of the financial policies governs the overall financial management and fiscal health of the Agency and promotes accountability to effectively direct the financial planning, management, and operations of the Agency. The General Manager and Administrative Services Manager are responsible for ensuring staff compliance with financial policies. A summary of each policy area is presented below:

- **Internal Controls:** Defines authorization levels, signatory requirements, segregation of duties, internal documentation requirements, monthly financial review, cash receipts, security, fiduciary responsibilities, and other internal control policies and procedures that Agency staff is required to follow.
- **Financial Reporting:** Defines the internal monthly Board reports and external financial reports required to be prepared by the Agency, including the annual financial report, Comprehensive Annual Financial Report (CAFR), financial and payroll reporting required by the IRS and the State of California, and debt reporting.
- **Revenue Management:** Provides direction on the funding requirements and management of Agency revenues, with respect to its organizational budgets, goals, and objectives. Defines the types of revenue sources, such as service charge allocations for the JPA member agencies, debt service charges, capacity charges, CMSA service contracts, and other forms of revenue.
- **Treasury:** Defines the roles and responsibilities of the General Manager and Treasurer, and includes comprehensive investment guidelines that cover how assets are to be invested to maintain safety, liquidity, and yield.
- **Expenditure Management:** Defines management of expenditures, including the required levels of approval and documentation, and accounting for transactions in the proper accounting period. Revenue Management and Expenditure Management policies form the cash basis of budgeting—where the money comes from (revenues) and where the money goes (expenditures).
- **Financial Planning:** Defines the balanced budget and specific planning documents required to be adopted by the Board of Commissioners, including the budget, the 10-year capital improvement program, and 10-year financial forecast, as well as monthly reporting requirements.
- **Procurement Management:** Defines the levels of authority for purchase orders, and signatory requirements for all types of procurement expenditures, such as professional service agreements, construction contracts, equipment purchases, and materials and supplies purchases. This policy also includes guidelines for petty cash and credit card purchases.
- **Asset Management:** Defines the type of assets and the capitalization dollar thresholds for assets to be capitalized, the proper accounting for assets, disposal guidelines, and requires on-going asset condition assessment programs to facilitate projected replacement(s) and budget planning.



**SECTION 6. BUDGET DEVELOPMENT: BALANCED BUDGET, BASIS OF BUDGETING, ACCOUNTING, DEVELOPMENT AND ADMINISTRATION**

The Board approves and adopts a balanced budget prior to the start of the fiscal year beginning July 1. The Board, General Manager, and Agency staff each have their respective Agency, departmental, and program responsibilities to develop a financially responsible budget each fiscal year. Budget development is guided by financial policies and procedures, the strategic business plan, long and short-term organizational goals and objectives, the economic climate, and other external factors.

**FY 2018-19 Budget Calendar – Development, Adoption, and Administration**



**Balanced Budget:** The Budget is balanced when revenues and other financing sources (uses) equal expenditures. When revenues exceed expenditures, surplus funds are transferred into designated reserve accounts in accordance with the Agency's Financial Reserves Policy.

**Cash Basis of Budgeting:** The Agency's annual budget and 10-year forecast are based on the cash method of accounting and exclude non-cash depreciation and amortization expenses. Revenues are budgeted according to what is expected to be collected during the budget year, and expenditures are budgeted according to what is expected to be spent during the fiscal year. The cash basis recognizes revenue when cash is received and recognizes expenses when cash is spent.

**Accrual Basis of Accounting:** The Agency is an enterprise fund and accounts for all its financial activity utilizing the accrual method of accounting in accordance with all applicable Government Accounting Standards Board (GASB) pronouncements for accounting, and recognizes revenues, expenses, assets, and liabilities in the proper fiscal year. The accrual method recognizes transactions and events when they occur, regardless of when cash is received or spent. One of the primary differences between the cash basis of budgeting and the accrual basis of accounting is the accrual method matches revenues to expenses which gives a more accurate picture of the Agency's financial condition.

#### **Development, Adoption, and Administration**

The annual budget development cycle begins with an analysis of the current year budget compared to projected annual expenditures and long-term capital improvement program funding, and serves as the baseline for the upcoming year's budget. During the course of budget development, the General Manager and Administrative Services Manager meet with the Board Finance Committee to review options to balance the budget including possible refining of expenditure budgets and/or appropriate funds from various designated reserves. A proposed budget is presented to the Board in May during a publicly noticed meeting where customers and other stakeholders in the service area are encouraged to provide input on the budget for Board consideration. Any direction provided by the Board in May is incorporated into the final proposed budget, which is presented to the Board in June at a publicly noticed meeting for consideration of adoption. Once adopted, the budget serves as the revenue collection and spending plan for the July 1 to June 30 fiscal period.

During the course of the fiscal year, finance staff prepares, and management staff reviews, detailed monthly budget performance reports and corresponding revenue and expenditure analyses. Finance staff also prepares a quarterly budget status report for Board review which details the financial performance of the Agency, describes billings and revenue collections, and analyzes operations and capital expenditures. The quarterly budget performance reports are available for public review and are included in the Board meeting agenda packets which are available on the Agency website at [www.cmsa.us/board/agendas-and-minutes](http://www.cmsa.us/board/agendas-and-minutes).

**SECTION 7. FY 2018-19 BUDGET - DISCUSSION AND ANALYSIS**

Budget development for the FY 2018-19 began in January 2018. During the course of its development, the General Manager and Administrative Services Manager reviewed the work in progress and sought guidance from the Board Finance Committee on the major components of the FY 2018-19 Budget that consist of: (1) operating revenues, expenses, and debt service; (2) capital improvement project (CIP) expenditures and the 10-year CIP projections (Section 8); and (3) the 10-Year Financial Forecast assumptions (Section 9).

The FY 2018-19 Budget is a balanced budget (revenues less expenditures and any balance transferred to/from reserves) and includes any changes made from the preliminary budget. The FY 2018-19 Budget incorporates employee compensation adjustments that resulted from the approved six-year labor agreements with the Agency’s two employee groups in August 2014. This section presents two components of the Budget for both revenues and expenditures. Section 8 presents the third component of the Budget for capital expenditures.

CMSA’s primary source of revenue in the FY 2018-19 Proposed Budget is sewer service charges received from JPA member agencies. In FY 14 the Agency transitioned from determining per unit treatment costs using Equivalent Dwelling Unit (EDU) to a cost structure based on the volume and strength of wastewater treated. This method is a fairer determination for the assignment of treatment costs, as it uses the cost-of-service principal in recognizing that each EDU does not produce the same volume and strength of wastewater. The Agency has now completed six years of calculating the wastewater strength from each JPA member’s flow and has incorporated 36-months of wastewater strength along with 36-months of wastewater volume in determining each JPA member’s FY 19 sewer service charges.

Table 1 shows the FY 17, FY 18, and FY 19 operating revenues and expenses, with surplus funds being transferred to the operating and unrestricted capital reserves. Major changes to FY 19 revenues and expenditures from FY 18 are discussed in the narrative following Table 1.

**Table 1: Overview of Operating Revenues and Expenditures for FY 17, 18 and 19**

	<b>FY 17 Adopted Budget</b>	<b>FY 18 Adopted Budget</b>	<b>FY 19 Proposed Budget</b>	<b>% Difference FY 19 to FY 18 Budget</b>
<b>Total Operating Revenues</b>	\$12,237,236	\$12,654,365	\$13,175,773	4.1%
<b>Total Operating Expenditures</b>	11,580,480	11,462,600	11,822,000	10.1%
<b>Surplus/(Deficit)</b>	<b>\$ 656,756</b>	<b>\$ 1,191,765</b>	<b>\$ 1,353,773</b>	

*Note: Budget surpluses are transferred to designated reserve funds per Financial Policy #532.*

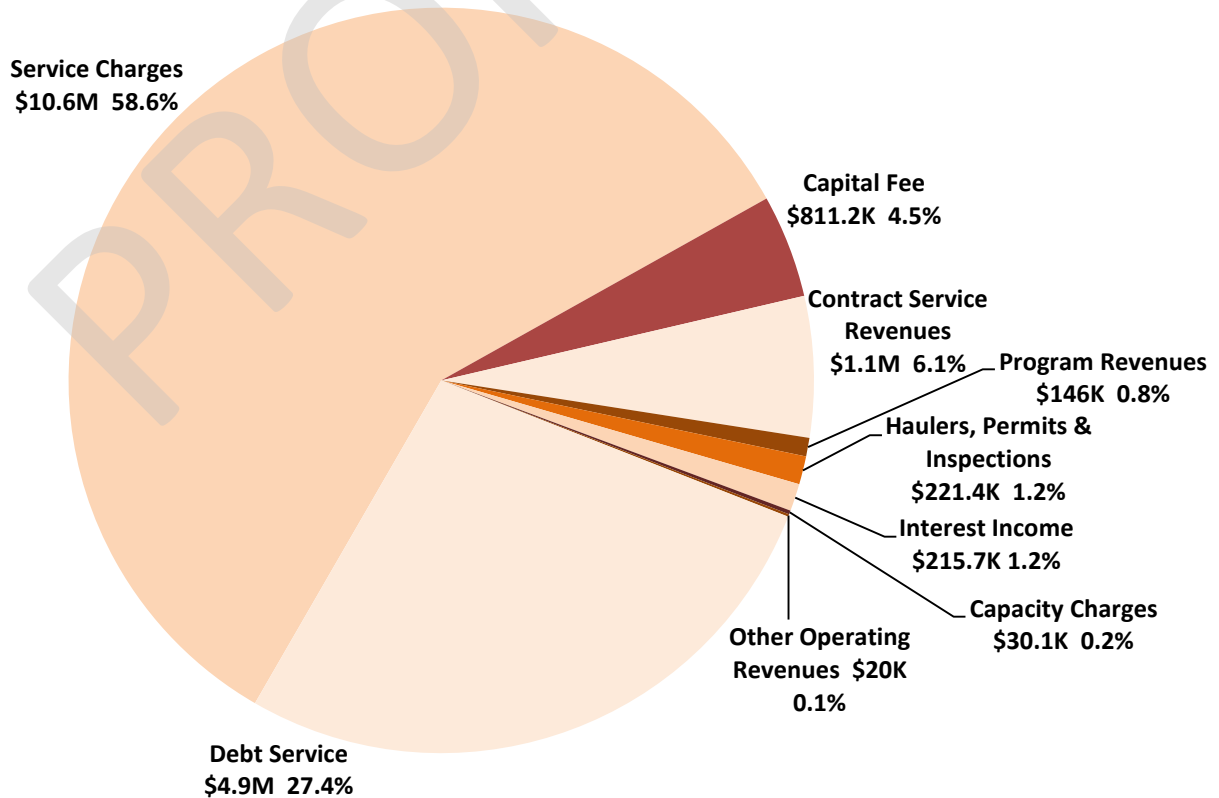
Total Operating Revenues increase by 4.1% and Total Operating Expenditures increase by 3%, and the expected surplus of \$1.37M includes \$811,258 designated for future capital projects.

**Proposed FY 19 Revenues:** Table 2 summarizes revenues by source for FY 17, FY 18, and FY 19. A brief analysis that describes the difference between FY 18 and FY 19 revenue categories follows the pie chart below.

**Table 2: Revenues by Source for FY 17, FY 18 Adopted , and FY 19 Proposed Budgets**

Revenue Sources by Category	FY 17 Adopted Budget	FY 18 Adopted Budget	FY 19 Proposed Budget	% Difference FY 19 to FY 18 Operating Budget	% Total Revenues
<b>Operating Revenues</b>					
Service Charges	\$ 9,865,358	\$10,263,165	\$10,622,376	3.5%	58.6%
Service Charge Capital Fee	530,000	630,000	811,258	28.8%	4.5%
Contract Service Revenues	1,425,138	1,228,950	1,108,808	-9.8%	6.1%
Program Revenues	128,990	143,200	146,030	2.0%	0.8%
Haulers, Permits & Inspection	211,250	226,250	221,450	-2.1%	1.2%
Interest Income	56,500	113,500	215,760	90.1%	1.2%
Capacity Charges	-0-	29,300	30,091	2.7%	0.2%
Other Operating Revenues	20,000	20,000	20,000	0.0%	0.1%
<b>Total Operating Revenues</b>	<b>\$12,237,236</b>	<b>\$12,654,365</b>	<b>\$13,175,773</b>	<b>4.1%</b>	<b>72.6%</b>
<b>Debt Service</b>	<b>4,960,117</b>	<b>4,952,382</b>	<b>4,966,508</b>	<b>0.3%</b>	<b>27.4%</b>
<b>TOTAL REVENUES</b>	<b>\$17,197,353</b>	<b>\$17,606,747</b>	<b>\$18,142,281</b>	<b>3.0%</b>	<b>100.0%</b>

**FY 19 Budget Revenues by Source  
(Where the Money Comes From)**



(A list of acronyms and their definitions used in the revenues and expenditures analyses can be found in Section 11 - Key Terms and Financial Glossary with Acronym Listing)

Service Charges: A fee collected for providing wastewater treatment service that is allocated to each JPA member based on wastewater flows and strength into CMSA from April 1, 2015 to March 31, 2018. Flow is measured in millions of gallons and strength factors are measured in pounds for mass of biological oxygen demand and mass of total suspended solids. The sewer service charges are budgeted to increase by 3.5% to fund increased operating expenses and to fund future capital projects as planned for in the 10-year financial forecast (Section 9).

Service Charge Capital Fee: A fee collected from JPA members to fund capital projects, the unspent residual of which, if any, flows into unrestricted capital reserves. The 18.9% had been planned for in past years in the Agency's 10-Year Forecast.

Contract Services: Revenues received for services provided by the Agency under contract to local agencies are expected to decrease by 9.8%.

- \$522,405 for SQSP wastewater services: 11.4% decrease in accordance with contract terms.
- \$111,570 for SQSP pump station maintenance: 3.2% increase for Bay Area CPI.
- \$45,297 for SQ Village: 9.3% decrease in accordance with planned projects and contract terms.
- \$394,536 for SD 2 Pump Station Maintenance: 2.2% decrease in accordance with contract terms and scheduled maintenance.
- \$10,000 for LGVSD FOG and Pollution Control Programs: 39.4% decrease due to services that will not be performed during FY 19.
- \$8,000 for RVSD FOG Program: 62.8% decrease from FY 18 decrease due to services that will not be performed during FY 19.
- \$10,000 for SRSD FOG Program: 60.9% decrease from FY 18 decrease due to services that will not be performed during FY 19.
- \$1,500 for TCSD FOG Program: 31.8% decrease from FY 18 decrease due to services that will not be performed during FY 19.
- \$2,500 for SD 2 FOG Program: 66.7% decrease due to services that will not be performed during FY 18.
- \$1,500 for Almonte SD FOG Program: No change from FY 18.
- \$1,500 for Novato SD Dental Amalgam Program: 50% decrease due to services that will not be performed during FY 19.

Program Revenues: Revenues received in accordance with agreements with program participants for the Health & Safety and Countywide Public Education programs. Revenues are expected to increase by a net 2%. The Health & Safety Program decreased by 5.4% due to NSD's decreased share of total program costs, while the Public Education program was increased by 15% to fund development of an educational video outreach program and to support the Marin Science and Environmental Leadership Program.

Haulers, Permits, and Inspection: Revenues received from charges for septage disposal at the CMSA facility from private waste haulers, permit fees for industrial waste dischargers, administrative costs for pollution prevention program inspections, and other services. Revenues are expected to decrease by 2.1% due to fewer loads received from FOG haulers. The Organic Waste Receiving Facility (OWRF) was placed into operation in January 2014 and revenues received for deliveries to the facility are the funding source for its operation and maintenance.

Interest income: Revenue received from LAIF and CAMP is expected to increase 90.1%. The Agency has recognized that interest rates are generally higher, and has assumed a 1.5% interest rate for FY 19, 87.5% higher than FY 18.

Capacity Charges: Revenue received from new construction or converting former septic system properties to public sewer to purchase capacity in the sanitary sewer system. Capacity charges when received may be used for capital purposes only. Due to little or no activity, the Agency has budgeted a nominal amount to serve as a placeholder.

The capacity charge fee for a single-family dwelling unit will increase 2.72% from \$5,932.85 to \$6,094.28 for the fiscal year 2018-19 as adjusted by the Engineering News Record (ENR) Construction Cost Index for the San Francisco Bay Area for the twelve month period from April to April. The Agency's capacity charge Fee Schedule Ordinance No. 2016-1 is available on the website at [www.cmsa.us/documents/ordinances](http://www.cmsa.us/documents/ordinances).

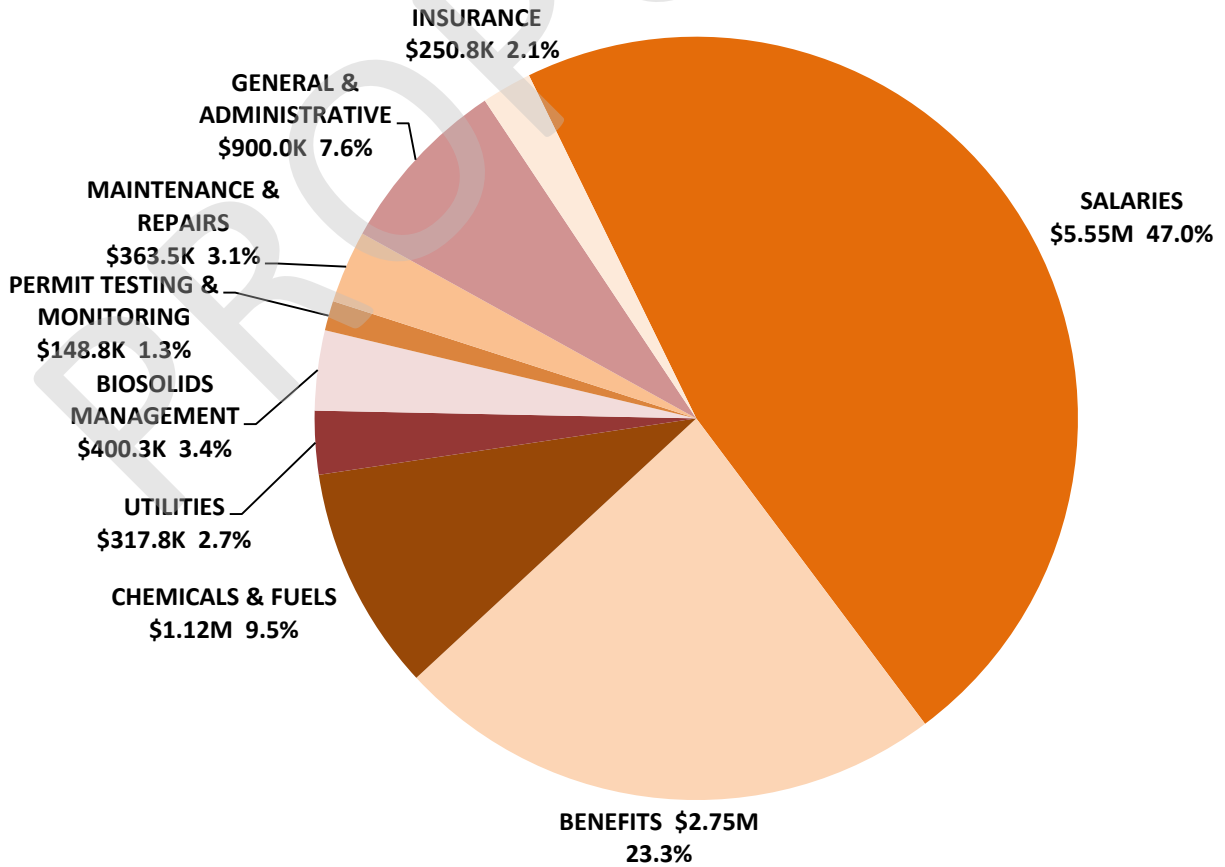
**Proposed FY 19 Operating Expenditures:** Over 90% of the budget is related to fixed operational expenses over which the Agency has limited control once agreements are in place, and include salaries, benefits, chemicals, biosolids hauling and disposal, permit sampling requirements, biosolids monitoring compliance, insurance, utilities, and several operating permits required by regulatory agencies. The remaining 9-10% represents professional affiliations, memberships, professional development, and general and administrative expenses that include a varying degree of funds available for discretionary use.

The Agency's FY 19 Proposed Budget is summarized in Table 3 on the next page, Budget by Category of Expenditures. The pie chart shows this information in a graphical display. A descriptive analysis for each expenditure category can be found following the pie chart.

**Table 3: Budget by Category of Expenditures for FY 17, FY 18 Adopted , and FY 19 Proposed Budgets**

Expenditures by Category	FY 17 Adopted Budget	FY 18 Adopted Budget		FY 19 Proposed Budget	% of FY 19 Budget	% Difference FY 19 to FY 18 Budget
Salaries	\$ 5,283,600	\$ 5,401,800		\$ 5,555,200	47.1%	2.8%
Benefits	2,575,700	2,561,100		2,758,700	23.4%	7.7%
Chemicals & Fuel	1,146,800	1,069,500		1,126,900	9.5%	5.4%
Utilities	372,600	350,500		317,800	2.7%	-9.3%
Biosolids Management	373,920	387,700		400,300	3.4%	-17.1%
Permit Testing & Monitoring	168,800	179,500		148,800	1.3%	-5.0%
Maintenance & Repairs	382,500	382,500		363,500	3.1%	3.2%
General & Administrative	1,000,660	868,800		900,000	7.6%	3.6%
Insurance	275,900	261,200		250,800	2.1%	-4.0%
<b>Total Expenditures</b>	<b>\$11,580,480</b>	<b>\$11,462,600</b>		<b>\$11,822,000</b>	<b>100.0%</b>	<b>3.1%</b>

**FY 19 Budget by Category of Expenditure  
(Where the Money is Spent)**



Salaries: Salaries are budgeted to increase by 2.8% due to a 3% COLA salary adjustment for Agency employees effective July 1, 2018, and other anticipated compensation adjustments for eligible staff. The Agency has started to stabilize salary growth as senior employees retire or as employees leave and new employees are appointed to the vacant position at the entry level salary step.

Benefits: Total employee benefit costs increase 7.7%. Employee benefits include costs for retirement pensions, medical, retiree medical, and other benefits. For retiree medical, the Agency contributes the full amount of the GASB 75 actuarially determined contribution of \$247,600 for direct medical costs and to fund the OPEB Trust. Retiree medical costs include Agency paid minimum insurance premiums to CalPERS medical for eligible retired employees, plus reimbursement amounts paid to retirees for the employee portion withheld from pension checks, and prefunding amounts paid to the retiree medical trust known as CERBT (California Employers Retirement Benefit Trust). Transfers to the trust are irrevocable. The trust is a Section 115 trust that holds and accumulates amounts to be used for the exclusive benefit of eligible retirees and their beneficiaries. The Agency is funding the trust in the amount of approximately \$50K for full funding in approximately ten years near or at which time benefits will be paid from the trust. The OPEB funding plan may be subject to change conditioned upon establishing a second 115 prefunding trust for future transfer of excess OPEP contributions, if any. Earnings of the trust will be self-supporting to pay benefit obligations from the trust.

Chemicals & Fuel: This category is budgeted to increase by 5.4% due to planned increased usage and increased chemical costs. Significant savings were achieved in FY 14 when the Agency joined the Bay Area Chemical Consortium (BACC), a regional chemical purchasing cooperative. Chemical suppliers agreed to supply chemicals to the members of the cooperative at lower unit costs than what the Agency would be able to obtain on its own. In FY 19, the Agency continues to benefit from reduced bid prices from the cooperative chemicals. While the Agency can develop projections for the quantity of chemicals used, the cooperative helps reduce the challenges and risks associated with estimating the future volatility of commodity unit prices.

Utilities: This category for electricity, natural gas, and other utilities is budgeted to decrease 9.3%. The Agency has achieved significant savings through the production of its own biogas. Prior to the OWRF being placed into service, CMSA produced enough biogas to power the Agency for approximately seven hours per day. Over the past few years, deliveries of food waste and organic liquid waste has increased, resulting in increased biogas production and power generation. In FY 19, we anticipate generating over 23 hours of reusable power per day. Garbage costs decreased 28% because Marin Sanitary Service is now responsible for cleaning the OWRF, saving the Agency \$27,500.

Biosolids Management: This category is budgeted to increase by 3.2 % due to contractual rate increases.

Permit Testing and Monitoring: This category is budgeted to decrease by a net 17%. There is a 100% decrease for testing the underground tank secondary containment to be performed every three years. The last test was during FY 18 and is not required by state regulation to be tested again until FY 21. There are also decreases in lab supplies and underground tank overfill containment test costs.



Maintenance & Repairs: This category is budgeted to decrease by a net 5%. Groundskeeping decreased 11% for landscape cost savings achieved through participation in the County of Marin Probation Department's Adult Offender Work Program (AOWP). California law allows an individual to receive one day jail credit for every 8 hours of manual labor performed for a nonprofit agency. Other savings are for reduced expenditures on fleet, centrifuge, ORWF, and Effluent Pump Station scheduled maintenance activities.

General & Administrative: This category is budgeted to increase 3.6% primarily due to anticipated recruitment costs.

Insurance: This category is budgeted to decrease 4% primarily due to reduced property insurance and general liability premiums and offset by recommendations received from California Sanitation Risk Management Authority (CSRMA) for potential premium increases for workers' compensation insurance premiums.

PROPOSED



## Adopted Operating & Capital Budget for Fiscal Year July 1, 2018 – June 30, 2019 and Overview

The following section is the FY 19 budget document in its entirety that will be submitted for adoption at the June 12, 2018 meeting of the Central Marin Sanitation Agency Board of Commissioners. The outline provided below summarizes the Agency’s primary sources and uses of funds, to give the reader an understanding of the budget and its organization. This overview also assists the reader in locating additional detail within the budget document.

### Revenues: Where the Money Comes From

Below is a listing of the budget documents which describe the Agency’s source of funds.

DOCUMENT TITLE	BUDGET PURPOSE	EXPLANATION
<b>Funding requirements and Sources Summary</b> Section 7	A snapshot summary.	Displays total expenditures and total revenues and summarizes anticipated reserve increases and uses, to estimate ending funding sources.
<b>Schedule of Revenues and Other Financing Sources</b> Section 7	Revenue budget requirements	A detailed revenue budget by category for all line items in each revenue category, including the use of reserves as a revenue source.

### Expenditures: Where the Money Is Spent

The budget documents listed below describe the Agency use of funds in greater detail.

DOCUMENT TITLE	BUDGET PURPOSE	EXPLANATION
<b>Summary of Expenditures by Departments and Category</b> Section 7	Summarizes total operating budget expenditures by departments and by category.	The summary compares the Budgets for FY 18 and FY 19. FY 17 audited actuals are presented next to the FY 18 Adopted Budget.
<b>Departmental Operating Budgets</b> Section 7	The departmental budget documents show in greater detail how each department expects to spend their budgeted dollars during FY 19.  *Administration *Maintenance *Operations *Technical Services *Cooperative Agreement (a cost center that tracks reimbursable expenses related to services provided to other local agencies)	Descriptions of each department and its core functions and responsibilities, including a summary of Expenditures by Category, an Authorized Positions head count for three fiscal years, and FY 19 Department Initiatives.  Operating Budget detailed by line items account for three fiscal years for each department.  The Budget Explanation by line item account number includes an account description that explains what the budgeted dollars are spent on. Additional notes and information that affected the development of the budget are also included.

DOCUMENT TITLE	BUDGET PURPOSE	EXPLANATION
<b>Capital Improvement Program</b> (Section 8)	The FY 18-19 Capital Improvement Program provides a summary of changes, the CIP FY 19 Proposed Budget and 10-Year Forecast, detailed information by account number, and descriptions and elements involved for planned projects.	<p>The FY 18-19 Capital Improvement Program - Summary of Changes compares the FY 18-19 Adopted Budget to the FY 17-18 Projected Actuals, and FY 19 Proposed Budget, and provides a narrative about significant changes in the budget.</p> <p>Capital Improvement Program FY 19 Budget and 10-Year Forecast. This schedule shows the FY 18 Adopted Budget and the FY 19 proposed Budget, and presents a projected 10-year forecast for planned activities by budget line item account.</p> <p>The Account/Project Descriptions and Full Page Project Descriptions are explanations of how the budget will be spent and provides additional detail about each project and future planned activities.</p>
<b>10-Year Financial Forecast</b> (Section 9)	Long-term strategic budgetary examination of future operations.	Projections for future planned operations provide decision-making guidance for the timing and needs for funding sources and requirements.
<b>Debt Obligation</b> (Section 10)	Debt Service payment to owners of the Agency's Refunding Revenue Bonds Series 2015.	This schedule shows total principal and interest due for debt service for each fiscal year through FY 32.

PROPOSED

## FUNDING REQUIREMENTS AND SOURCES SUMMARY

Funding Requirements	Actual 2016-17	Fiscal Year 2017-18	Year-End Projection 2017-18	Fiscal Year 2018-19	Amount Increase (Decrease)	Percent Increase (Decrease)
<i>Operating: (SCHED 2)</i>						
Salaries and Wages	\$ 5,347,208	\$ 5,401,800	\$ 5,102,952	\$ 5,555,200	\$ 153,400	2.8%
Employee Benefits	2,443,406	2,561,100	2,469,085	2,758,700	197,600	7.7%
Chemicals & Fuels	1,113,251	1,069,500	1,025,627	1,126,900	57,400	5.4%
Biosolids Management	353,400	387,700	379,908	400,300	12,600	3.2%
Permit Testing & Monitoring	110,973	179,500	165,751	148,800	(30,700)	-17.1%
Maintenance & Repairs	380,240	382,500	383,565	363,500	(19,000)	-5.0%
Utilities	318,900	350,500	277,490	317,800	(32,700)	-9.3%
Insurance	210,950	261,200	229,035	250,800	(10,400)	-4.0%
General & Administrative	697,499	868,800	604,115	900,000	31,200	3.6%
Operating before debt and capital	10,975,827	11,462,600	10,637,528	11,822,000	359,400	3.1%
Debt Service (SCHED 1)	4,109,744	3,961,906	3,961,906	3,973,206	11,300	0.3%
Operating before capital	15,085,571	15,424,506	14,599,434	15,795,206	370,700	2.4%
Capital Improvements	\$ 2,389,382	\$ 3,817,600	\$ 2,449,176	\$ 2,862,500	(955,100)	-25.0%
Total requirements	<u>\$ 17,474,953</u>	<u>\$ 19,242,106</u>	<u>\$ 17,048,610</u>	<u>\$ 18,657,706</u>	<u>\$ (584,400)</u>	-3.0%
Funding Sources (SCHED 1)	Actual 2016-17	Fiscal Year 2017-18	Year-End Projection 2017-18	Fiscal Year 2018-19	Amount Increase (Decrease)	Percent Increase (Decrease)
Service Charges	\$ 9,865,358	\$ 10,263,165	\$ 10,263,165	\$ 10,622,376	\$ 359,211	3.5%
Capital Fee	530,000	630,000	630,000	811,258	181,258	28.8%
Debt Service Charge	4,960,117	4,952,382	4,952,382	4,966,508	14,126	0.3%
Capacity Charges	330,079	29,300	141,000	30,091	791	2.7%
Contract Service Revenues	1,442,550	1,228,950	920,752	1,108,808	(120,142)	-9.8%
Program Revenues	134,324	143,200	79,235	146,030	2,830	2.0%
Haulers, Permits & Inspections	302,922	226,250	231,368	221,450	(4,800)	-2.1%
Other Revenues	26,003	20,000	28,470	20,000	-	0.0%
Interest Income	113,085	113,500	122,109	215,760	102,260	90.1%
Other Financing Sources	-	-	-	-	-	-
Subtotal funding sources	17,704,438	17,606,747	17,368,481	18,142,281	535,534	3.0%
Reserve (Increase) Usage	(229,485)	1,635,359	(319,871)	515,425	(1,119,934)	-68.5%
Total funding sources	<u>\$ 17,474,953</u>	<u>\$ 19,242,106</u>	<u>\$ 17,048,610</u>	<u>\$ 18,657,706</u>	<u>\$ (584,400)</u>	-3.0%

**SCHEDULE OF REVENUES AND OTHER FINANCING SOURCES**

Account #	Description	Actual 2016-17	Fiscal Year 2017-18	Fiscal Year 2018-19	Amount Increase (Decrease)	Percent Increase (Decrease)
<u>Service Charges to Members<sup>1</sup></u>						
4010-000-00	SRSD	\$ 4,231,633	\$ 4,249,977	\$ 4,340,303	\$ 90,326	2.1%
4010-000-00	RVSD	4,762,416	5,162,372	5,363,238	200,866	3.9%
4010-000-00	SD #2	871,309	850,816	918,836	68,020	8.0%
	Totals	<u>\$ 9,865,358</u>	<u>\$ 10,263,165</u>	<u>\$ 10,622,377</u>	<u>\$ 359,212</u>	3.5%
<u>Capital Fee to Members<sup>1</sup></u>						
4010-000-00	SRSD	\$ 227,337	\$ 260,883	\$ 331,480	\$ 70,597	27.1%
4010-000-00	RVSD	255,853	316,890	409,604	92,714	29.3%
4010-000-00	SD #2	46,810	52,227	70,174	17,947	34.4%
	Totals	<u>\$ 530,000</u>	<u>\$ 630,000</u>	<u>\$ 811,258</u>	<u>\$ 181,258</u>	28.8%
<u>Debt Service Cost to Members<sup>2</sup></u>						
4011-000-00	SRSD	\$ 1,852,642	\$ 1,859,855	\$ 1,865,160	\$ 5,305	0.3%
4011-000-00	RVSD	2,152,400	2,131,911	2,137,992	6,081	0.3%
4011-000-00	SD #2	575,641	579,510	581,163	1,653	0.3%
4011-000-00	SQSP	379,434	381,106	382,193	1,087	0.3%
	Totals	<u>\$ 4,960,117</u>	<u>\$ 4,952,382</u>	<u>\$ 4,966,508</u>	<u>\$ 14,126</u>	0.3%
<u>Capacity Charges</u>						
4020-010-00	SRSD	\$ 168,677	\$ 11,720	\$ 12,036	\$ 316	2.7%
4020-020-00	RVSD	52,769	11,720	12,036	316	2.7%
4020-030-00	SD #2	108,633	5,860	6,018	158	2.7%
	Totals	<u>\$ 330,079</u>	<u>\$ 29,300</u>	<u>\$ 30,091</u>	<u>\$ 791</u>	2.7%

Note 1: See flow-strength tables in appendix A

Note 2: See EDU allocation table in appendix A

**SCHEDULE OF REVENUES AND OTHER FINANCING SOURCES**  
**(Continued)**

Account #	Description	Actual 2016-17	Fiscal Year 2017-18	Fiscal Year 2018-19	Amount Increase (Decrease)	Percent Increase (Decrease)	Notes
<u>Contract Service Revenues</u>							
4601-000-00	San Quentin State Prison Wastewater Services	\$ 813,946	\$ 589,690	\$ 522,405	\$ (67,285)	-11.4%	O&M plus capital * 3.54% (see appendix)
4601-001-00	San Quentin State Prison Pump Station Maint	139,616	108,110	111,570	3,460	3.2%	Bay Area CPI Jan-Jan at 3.0%
4602-000-00	San Quentin Village Wastewater Services	68,500	49,950	45,297	(4,653)	-9.3%	FY18 budget to Marin County PW
4600-000-00	SD#2 Pump Stations	420,488	403,400	394,536	(8,864)	-2.2%	FY18 Corte Madera PS Budget
4031-000-00	LGVSD - FOG & pollution prevention	16,163	16,500	10,000	(6,500)	-39.4%	Source control service estimate
4033-000-00	RVSD - FOG	13,659	21,500	8,000	(13,500)	-62.8%	Source control service estimate
4034-000-00	SRSD - FOG	15,519	25,600	10,000	(15,600)	-60.9%	Source control service estimate
4035-000-00	TCSD - FOG	1,587	2,200	1,500	(700)	-31.8%	Source control service estimate
4036-000-00	SD #2 - FOG	5,558	7,500	2,500	(5,000)	-66.7%	Source control service estimate
4038-000-00	Almonte SD - FOG	1,270	1,500	1,500	-	0.0%	Source control service estimate
4037-000-00	Novato SD - Dental Amalgam	2,576	3,000	1,500	(1,500)	-50.0%	Source control service estimate
	Total contract service revenues	<u>\$ 1,498,882</u>	<u>\$ 1,228,950</u>	<u>\$ 1,108,808</u>	<u>\$ (120,142)</u>	<u>-9.8%</u>	
<u>Program Revenues</u>							
4070-000-00	Health & Safety Program	\$ 89,953	\$ 91,500	\$ 86,600	\$ (4,900)	-5.4%	Shared program with Novato Sanitary
4080-001-00	County-wide Public Education Program	44,371	51,700	59,430	7,730	15.0%	Multi-agency program budget
4080-002-00	Outside Safety Training	-	-	-	-	-	
	Total program revenues	<u>\$ 134,324</u>	<u>\$ 143,200</u>	<u>\$ 146,030</u>	<u>\$ 2,830</u>	<u>2.0%</u>	
<u>Haulers, Permits &amp; Inspection</u>							
4030-000-00	Permit and Inspection Fees	\$ 18,246	\$ 24,000	\$ 24,000	\$ -	0.0%	Permitting of regulated businesses
4050-010-00	Revenue from Haulers - Septic	84,762	70,000	75,000	5,000	7.1%	\$83.30 per 1,000 gal plus sampling fee
4050-020-00	Revenue from Haulers - RV	510	250	250	-	0.0%	\$10 per load
4050-030-00	Revenue from Haulers - FOG	94,889	90,000	75,000	(15,000)	-16.7%	Tiered pricing per fee ordinance
4050-035-00	Revenue from Haulers - Liquid Waste	506	2,000	4,200	2,200	110.0%	Price negotiated per truckload
4050-040-00	Revenue from Foodwaste Disposal	47,675	40,000	43,000	3,000	7.5%	Tipping fee from Marin Sanitary Service
	Total haulers, permits & inspection	<u>\$ 246,588</u>	<u>\$ 226,250</u>	<u>\$ 221,450</u>	<u>\$ (4,800)</u>	<u>-2.1%</u>	
<u>Interest Income</u>							
4910-002-00	Interest Income - LAIF	\$ 110,275	\$ 112,000	\$ 210,000	\$ 98,000	87.5%	LAIF yield at 1.5%
4910-011-00	Investment Interest - CAMP	2,810	1,500	5,760	4,260	284.0%	CAMP yield at 1.6%
	Total interest income	<u>\$ 113,085</u>	<u>\$ 113,500</u>	<u>\$ 215,760</u>	<u>\$ 102,260</u>	<u>90.1%</u>	
<u>Other Revenues</u>							
4990-000-00	Other non-operating revenue	\$ 21,758	\$ 20,000	\$ 20,000	\$ -	0.0%	Miscellaneous infrequent items
4990-011-00	CAMP non-operating revenue	-	-	-	-	-	
	Total other revenues	<u>\$ 21,758</u>	<u>\$ 20,000</u>	<u>\$ 20,000</u>	<u>\$ -</u>	<u>0.0%</u>	





**Central Marin Sanitation Agency  
Proposed FY 2018-19 Operating Budget**

Summary of Expenditures by Departments and Category

Operating Expenditures by Department	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	
ADMINISTRATION	4,083,893	4,554,500	4,734,400	3.9%	
MAINTENANCE	1,898,518	2,008,700	1,918,900	-4.5%	
OPERATIONS	3,014,720	3,150,600	3,243,100	2.9%	
TECHNICAL SERVICES	1,801,732	1,748,800	1,925,600	10.1%	
<b>TOTAL</b>	<b>\$ 10,798,862</b>	<b>11,462,600</b>	<b>11,822,000</b>	<b>3.1%</b>	

Operating Expenditures by Category	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	FY18 Adopted Budget	Proposed % of Budget
SALARIES	5,252,732	5,401,800	5,555,200	2.8%	47.0%
BENEFITS	2,405,934	2,561,100	2,758,700	7.7%	23.3%
<b>SUB-TOTAL</b>	<b>7,658,667</b>	<b>7,962,900</b>	<b>8,313,900</b>	<b>4.4%</b>	<b>70.33%</b>
CHEMICALS & FUELS	1,113,251	1,069,500	1,126,900	5.4%	9.5%
UTILITIES	292,642	350,500	317,800	-9.3%	2.7%
BIOSOLIDS MANAGEMENT	353,400	387,700	400,300	3.2%	3.4%
PERMIT TESTING & MONITORING	110,973	179,500	148,800	-17.1%	1.3%
MAINTENANCE & REPAIRS	355,653	382,500	363,500	-5.0%	3.1%
GENERAL & ADMINISTRATIVE	703,327	868,800	900,000	3.6%	7.6%
INSURANCE	210,950	261,200	250,800	-4.0%	2.1%
<b>SUB-TOTAL</b>	<b>3,140,195</b>	<b>3,499,700</b>	<b>3,508,100</b>	<b>0.2%</b>	<b>29.67%</b>
<b>TOTAL</b>	<b>10,798,862</b>	<b>11,462,600</b>	<b>11,822,000</b>	<b>3.1%</b>	<b>100.00%</b>

Benefit Expenditures	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	FY18 Adopted Budget	Benefits as a Percent of Total Revenue
					<b>\$ 18,657,706</b>
RETIREMENT (CALPERS CLASSIC, PEPRA, UAL)	947,873	1,030,600	1,195,000	16.0%	6.40%
<i>RETIREMENT - CALPERS CLASSIC</i>	496,917	493,498	523,151		2.80%
<i>RETIREMENT - CALPERS PEPRA</i>	47,258	55,400	74,100		0.40%
<i>RETIREMENT - CALPERS UNFUNDED ACCRUED LIABILITY</i>	403,697	481,702	597,749		3.20%
RETIREMENT - CALPERS SURVIVORS	2,219	2,700	2,700	0.0%	0.01%
RETIREMENT - SOCIAL SECURITY/MEDICARE	77,576	84,000	84,300	0.4%	0.45%
CALPERS MEDICAL - ACTIVE EMPLOYEES	886,849	908,500	983,600	8.3%	5.27%
DENTAL - ACTIVE EMPLOYEES	103,890	117,000	123,100	5.2%	0.66%
LIFE INSURANCE, AD&D, LTD - ACTIVE EMPLOYEES	23,322	25,100	28,700	14.3%	0.15%
VISION - ACTIVE EMPLOYEES	10,826	11,600	12,500	7.8%	0.07%
MARA - ACTIVE EMPLOYEES	29,035	34,600	46,300	33.8%	0.25%
CALPERS MEDICAL - RETIRED EMPLOYEES	167,958	198,200	204,500	3.2%	1.10%
ANNUAL OPEB CONTRIBUTION	116,455	107,400	43,100	-59.9%	0.23%
BENEFIT ADMINISTRATION FEES	5,508	6,400	7,900	23.4%	0.04%
<b>TOTAL *</b>	<b>2,371,510</b>	<b>2,526,100</b>	<b>2,731,700</b>	<b>8.1%</b>	<b>14.64%</b>

\* Benefit line items for administration fees, uniforms and unemployment benefits are excluded from the Benefit Expenditures FY 18-19 table.



## **Discussion: Comparison between FY 17-18 Adopted to FY 18-19 Proposed Budget**

### **Salaries**

- Salary increase of 3% for represented and unrepresented employees in accordance with the 2014 Memorandum of Understanding and the Compensation and Benefits for Unrepresented Employees.
- 11 Employees eligible to receive step advancement.
- One open Safety Specialist/Manager position budgeted at a higher salary than the previous year, one new Laboratory Analyst position and one new Assistant Operations Supervisor position.
- Eliminated E/I Assistant Maintenance Supervisor position and replaced with entry level Electrical/Instrumentation Tech I position.
- Compensatory time, vacation, and holiday time cash-outs included in the budget.

### **Benefits**

- Employer retirement contributions increased for both Classic (12.212%) and PEPRA (6.842%) employees. The Classic employer rate also includes \$597K for the required unfunded accrued liability (UAL) contribution.
- PEHP (Post-Employment Health Plan) benefits increased with new hire position replacements and the creation of the new Laboratory Analyst position.
- Agency Other Post Employee Benefit (OPEB) annual required contribution is \$50K lower as a result of new calculation requirements in the most recent GASB 75 Actuarial Valuation as of January 1, 2018. GASB 75 replaced GASB 45 which had more complicated calculation requirements.
- CalPERS medical costs are budgeted at the applicable family rate for all employees and are budgeted to increase 4.5% in 2019.

### **Chemicals**

- Increase in chemical procurement costs (ferric chloride, hydrogen peroxide, sodium hypochlorite, sodium bisulfate) due to increased unit costs established by the Bay Area Chemical Consortium, and projected increased usage for some chemicals.

### **Biosolids Management**

- Biosolids management costs expected to increase by a 3.2% San Francisco Bay Area CPI adjustment.
- Hauling costs expected to increase a total of 3.2% using the annual San Francisco Bay Area Consumer Price Index.

### **Permit Testing and Monitoring**

- 24% decrease for laboratory supplies for several one-time purchases in FY 18 and an allocation adjustment for good laboratory practice requirements.
- County requirements for the monthly inspection of the underground tank overfill containment will decrease 59%. The reduction from the previous year is due to removing CUPA costs from this account.

- Secondary containment testing for the Agency's two underground fuel tanks takes place every three years and took place in FY 18 and is not budgeted for FY 19. The next test is scheduled for FY 21.

### **Utilities**

- Reduction in natural gas procurement due to increased biogas production from organic waste program expecting 94% uptime running the cogeneration system.
- 28% decrease due to Marin Sanitary Service absorbing the quarterly cleaning costs for the organic waste receiving facility.

### **Maintenance and Repairs**

- Fleet maintenance costs decrease with the expectation less maintenance will be required on newer vehicles and electric carts purchased over the past few years.
- Plant pumps increase 39% to refurbish two TWAS pumps and two septage receiving station pumps.
- Centrifuge maintenance decreases 50% due to the three centrifuge units not being scheduled for replacement until FY 21.

### **Insurance**

- Property and general liability insurance are estimated to be 5%-11% lower by applying the CSRMA recommended increase to the current year's actual premium.
- Workers' Compensation insurance decreased due to a reduction in the experience modification factor, known as the X-mod factor, from a previous factor of 1.03 to 0.82, for a 20% drop. This is due to no lost-time accidents over the previous year.

### **General & Administrative**

- This category has increased 3.6% due to recruitment costs related to anticipated retirements. Agency staff negotiated an upgrade to the internet and telephone services for an overall price increase of approximately \$60 per month and a speed increase from 15mbs to 100mbs.

**Administration**

The Administration Department provides administrative, financial, human resources, and information technology related services for the Agency. The Board of Commissioners appoints the General Manager who is the chief administrative official responsible for the overall operations and management of the Agency.

The Department is responsible for the following functions:

- Provides administrative support to the Board of Commissioners
- Represents the Agency on legal and regulatory matters
- Maintains intergovernmental relations with the four JPA member agencies, local governments in Marin County, and government agencies in the region
- Communicates Agency initiatives to stakeholders and the public
- Develops, implements, and manages the Agency’s annual budget
- Manages the Agency’s finances and investments
- Provides human resource services to departments and employees
- Ensures the safety of agency employees and assets through insurance protection and risk management programs provided by the CSRMA
- Administers the Health & Safety Program
- Maintains the Agency’s communication and information technology systems

<b>Administration Expenditures by Category</b>	<b>FY 16-17 Audited Actuals</b>	<b>FY 17-18 Adopted Budget</b>	<b>FY 18-19 Proposed Budget</b>
<b>SALARIES</b>	\$1,065,511	\$1,222,000	\$1,233,000
<b>BENEFITS</b>	2,405,934	2,561,100	2,758,700
<b>SUBTOTAL</b>	<b>\$3,471,446</b>	<b>\$3,783,100</b>	<b>\$3,991,700</b>
<b>INSURANCE</b>	210,950	261,200	250,800
<b>GENERAL &amp; ADMINISTRATIVE</b>	401,496	510,200	491,900
<b>SUBTOTAL</b>	<b>\$ 612,447</b>	<b>\$ 771,400</b>	<b>\$ 742,700</b>
<b>TOTAL</b>	<b>\$4,083,893</b>	<b>\$4,554,500</b>	<b>\$4,734,400</b>

<b>Authorized Positions</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>
General Manager	1	1	1
Administrative Assistant	1	1	1
Treatment Plant Manager	1	1	1
Administrative Services Manager	1	1	1
Financial Analyst	1	1	1
Personnel and Accounting Technician	1	1	1
Information Systems Analyst*	-	1	1
Safety Specialist/Manager	-	-	1
Health and Safety Manager	-	1	-
Safety Director	1	-	-
<b>TOTAL</b>	<b>7</b>	<b>8</b>	<b>8</b>

\*Transferred from Technical Services



**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

GM General Manager  
 ASM Administrative Services Manager  
 OS Operations Supervisor  
 ISA Information Systems Analyst  
 AE Assistant Engineer  
 AA Administrative Assistant

**ADMINISTRATION**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
<b>SALARIES &amp; BENEFITS</b>							
5010-010-01	Salaries, Wages & Compensation	ASM	1,059,297	1,214,500	1,224,400	0.82%	Salaries for eight full-time employees and CMSA's 60.25% share of the Health & Safety Manager salary. FY19 increases are for a 3% COLA salary increase, one step adjustment, and leave balance cash-outs.
5010-020-01	Overtime	GM	6,214	7,500	8,600	14.67%	Authorized overtime to complete special activities or assignments, and employee compensatory time leave balance cash-outs.
<b>Subtotal Salaries &amp; Wages</b>			<b>1,065,511</b>	<b>1,222,000</b>	<b>1,233,000</b>	<b>0.90%</b>	
5020-020-01	Retirement CalPERS - Classic	ASM	900,614	975,200	1,120,900	14.94%	Employer contributions for CalPERS 2.7% @ 55 for Classic employee retirement program. The FY 19 employer contribution rate is 12.212% for Classic employees and FY 19 includes a \$598K UAL (unfunded accrued liability) payment. The 8% Employer Paid Member Contribution (FPMC) was eliminated from the FY 18 Budget.
5020-021-01	Retirement CalPERS-PEPRA	ASM	47,258	55,400	74,100	33.75%	Employer contributions for CalPERS 2% @ 62 retirement program for PEPRA employees hired after January 1, 2013. The FY 19 employer PEPRA contribution rate is 6.842%.
5020-022-01	Retirement CalPERS-Survivors	ASM	2,219	2,700	2,700	0.00%	Annual Survivors Benefit premium.
5020-030-01	Retirement - SS / Medicare	ASM	77,576	84,000	84,300	0.36%	Employer's 1.45% share of Medicare for all employees.
5030-010-01	Benefits-CalPERS Medical	ASM	886,849	908,500	983,600	8.27%	Budget based upon current CalPERS Kaiser family rate effective January through December 2018, and an estimated 4.5% premium increase for January through June 2019.
5030-001-01	Benefits-Dental	ASM	103,890	117,000	123,100	5.21%	Employer paid dental benefits.
5030-003-01	Benefits-Life Insurance, AD&D, LTD	ASM	23,322	25,100	28,700	14.34%	Employer paid life, accidental death & dismemberment, and long-term disability insurances.
5030-004-01	Benefits-Vision	ASM	10,826	11,600	12,500	7.76%	Employer paid vision benefits.
5030-015-01	Benefits-PEHP	ASM	29,035	34,600	46,300	33.82%	PEHP: Post Employment Health Plan. Employer contribution of 1.5% of base salary for 24 employees (FY 18 was 20 employees). Budget increase is a function of salary adjustments, and is offset by the administrative fee being included in the Benefit Administrative Fees account 5050-001-01.
5030-020-01	Retired Employees Medical Benefits	ASM	167,958	198,200	204,500	3.18%	Medical benefits for retired employees at the SF-Bay Area PERS Kaiser single rate. The spouses of four former SRSD employees who transferred to CMSA also receive medical benefits. In FY 18, there was one new and four anticipated retirees. The increase is offset by two additional retirees turning age 65 with a consequent enrollment in the lower cost Medicare supplement plans.
5030-025-01	Annual OPEB Contribution	ASM	116,455	107,400	43,100	-59.87%	Prefunding of the Agency's post-employment health benefit obligations for current retirees and employees. The prefunding amount is the annual FY 19 estimated OPEB expense in the Agency's January 1, 2018 GASB 75 actuarial report minus retiree medical premiums.
5050-000-01	Unemployment Benefits Claimed	ASM	17,527	10,000	10,000	0.00%	An allowance for unemployment benefits paid to State Employment Development Department (EDD) for claims filed by separated employees.
5050-001-01	Benefit Administration Fees	ASM	5,508	6,400	7,900	23.44%	Administrative fees charged for medical, MARA, and NAVIA Flex 125 plans.
5060-000-01	Uniforms	AE	16,897	25,000	17,000	-32.00%	Contracted service to provide uniforms, jackets, fire resistant clothing, and miscellaneous related work clothing for staff, and towel and floor mat cleaning services.
<b>Subtotal Benefits</b>			<b>2,405,934</b>	<b>2,561,100</b>	<b>2,758,700</b>	<b>7.72%</b>	
<b>Total Salaries &amp; Benefits</b>			<b>3,471,446</b>	<b>3,783,100</b>	<b>3,991,700</b>	<b>5.51%</b>	

**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

GM General Manager  
 ASM Administrative Services Manager  
 OS Operations Supervisor  
 ISA Information Systems Analyst  
 AE Assistant Engineer  
 AA Administrative Assistant

**ADMINISTRATION**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
<b>INSURANCE</b>							
6800-010-01	Property Insurance	ASM	52,023	58,400	55,000	-5.82%	Annual property insurance coverage from the CSRMA for all Agency buildings and structures. The decrease is based on FY 18 actual plus 10% per CSRMA's recommendation.
6800-020-01	General Liability & Auto Insurance	ASM	42,767	48,700	43,200	-11.29%	CSRMA pooled insurance coverage for general, automobile, and error and omission liability premiums. FY 19 decrease is based on FY 18 actual plus a 5% increase recommended by CSRMA.
6800-030-01	Pollution Liability Insurance	ASM	967	1,100	1,100	0.00%	CSRMA pollution liability insurance for cleanup costs resulting from underground fuel storage tank system leaks and releases and other pollution caused losses.
6800-040-01	Employee/Commissioner's Bonds	ASM	1,339	2,200	2,200	0.00%	CSRMA public official bonds for four Agency employees who are authorized to sign Agency checks, and includes employees who handle agency funds such as petty cash.
6800-050-01	Commercial Crime Insurance	ASM	-	800	800	0.00%	This insurance provides coverage for dishonest public employees, loss of money orders, depositor's forgery, or counterfeit currency. It is intended to cover all employees not covered under the employee/public official bonds.
5040-000-01	Workers' Compensation Insurance	ASM	113,855	150,000	148,500	-1.00%	CSRMA workers' compensation (WC) insurance for Agency employees.
<b>Subtotal Insurance</b>			<b>210,950</b>	<b>261,200</b>	<b>250,800</b>	<b>-3.98%</b>	
<b>GENERAL ADMINISTRATIVE</b>							
6700-010-01	Meetings/Training	GM	3,388	5,200	5,200	0.00%	Expenses associated with staff travel, training, and attendance at single-day professional meetings and seminars. Includes allowed expenses pursuant to the Agency's travel expense reimbursement policy.
6700-020-01	Conferences	GM	21,716	25,000	25,000	0.00%	Expenses associated with staff attendance at multi-day professional conferences, seminars, and training events outlined in the Agency's travel expense reimbursement policy.
6710-010-01	Commissioners Meeting Fees & Conferences	GM	6,200	11,600	10,000	-13.79%	Pursuant to Commission compensation policy, CMSA Commissioners receive \$100 per day of service. There is an allowance for Commissioners conference attendance.
6805-000-01	Professional Affiliation Memberships	ASM	4,071	4,400	4,400	0.00%	Professional memberships, license, and registration requirements for department staff.
6805-001-01	BACWA Membership	GM	7,960	8,000	8,100	1.25%	Annual membership dues to the Bay Area Clean Water Agencies (BACWA). BACWA is comprised of 5 members and over 25 associate members, such as CMSA.
6805-011-01	BACWWE Education Program	GM	8,000	8,000	8,000	0.00%	Agency sponsorship for the Bay Area Consortium for Water & Wastewater Education Program. The consortium is comprised of 20 partner agencies.
6805-002-01	NBWA Membership	GM	5,936	6,000	6,000	0.00%	Annual membership dues to the North Bay Watershed Association (NBWA), which is comprised of 23 governmental agencies from the North San Pablo Bay watershed.
6805-003-01	CASA Membership	GM	15,834	16,000	16,100	0.63%	Annual membership dues to the California Association of Sanitation Agencies (CASA).
6805-004-01	NACWA Membership	GM	12,333	12,500	11,000	-12.00%	Annual membership dues to the National Association of Clean Water Agencies (NACWA). NACWA represents the wastewater industry nationwide on regulatory and legislative issues.
6805-005-01	Bay Area Biosolids to Energy Coalition	GM	6,500	12,500	11,000	-12.00%	Agency membership for Bay Area Biosolids-to-Energy Coalition, which is comprised of 19 regional wastewater agencies.



**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

GM General Manager  
 ASM Administrative Services Manager  
 OS Operations Supervisor  
 ISA Information Systems Analyst  
 AE Assistant Engineer  
 AA Administrative Assistant

**ADMINISTRATION**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
6815-000-01	Office Expenses	AA	31,184	29,500	35,000	18.64%	Costs associated with the Agency's administrative operations, including office supplies, copier leases, office furniture, office equipment service and repairs, and other related expenses.
6815-001-01	Safety Supplies	OS	20,639	37,300	27,800	-25.47%	Annual expenses for safety training, first aid and emergency supplies, defibrillator and fire extinguisher testing, various one-time purchases and safety assessment expenses to correct workplace hazards.
6815-002-01	Information Technology Equipment & Software	ISA	99	26,400	37,200	40.91%	Expenses related to Information Technology equipment and software licenses and upgrades.
6820-000-01	Printing & Publications	AA	2,770	3,000	2,000	-33.33%	Expenses associated with newspaper subscriptions, publication of notices, and copy services at local print shops.
6830-001-01	General Professional Services	GM	107,128	51,000	71,000	39.22%	Expenses for general governmental and human resource services such as recruitments, background reference checks, and employment law staff training and development.
6830-002-01	Regulatory Services	GM	52,734	51,000	10,000	-80.39%	Consultation and advice on regulatory compliance and permit issues.
6830-005-01	Finance & Audit Services	ASM	25,626	25,300	28,000	10.67%	Expenses for professional services related to the financial operations of the Agency: annual audit of financial statements; annual maintenance fee for financial software license renewal and financial software support; GFOA Award program fees; actuarial, financial and operational analyses.
6830-010-01	Labor Relations Consulting	GM	9,068	9,400	9,800	4.26%	IDEA annual fee for labor relations and negotiations services. Budget adjusted to align with actual anticipated expenses.
6830-015-01	Legal Services	GM	13,369	30,000	30,000	0.00%	Expenses for general, employment law, and construction/contract legal services.
6830-016-01	Health & Safety Program, CMSA Share	ASM	7,847	36,300	38,000	4.68%	This account represents the Agency's share (60.25%) of the Health & Safety Program non-salary costs. The remaining 39.75% of the Health & Safety Program budget is included in Non-Agency Expenses. The budget also includes CMSA's equally shared cost of the NSD's .25 FTE equivalent Administrative/Risk Services & Safety Officer.
6830-017-01	Outside Safety Training Services	ASM	4,869	13,100	5,600	-57.25%	Training expenses for required safety programs that include hearing tests, first-aid/CPR, incident command training, traffic control, defensive driving, and many other Cal/OSHA programs that facilitate a safe work environment. Budget decrease is for fewer planned trainings during FY 19.
6830-025-01	Employee Assistance Services	AA	908	2,000	4,500	125.00%	Confidential professional counseling benefit provided to employees. The fee is increased annually.
6830-060-01	Employee Health Maintenance Services	AA	1,316	2,500	3,000	20.00%	Expense for workplace safety related physicals, pre-employment exams, and urgent care at Medical Center of Marin.
6840-010-01	Internet & Telephone Service	ISA	26,259	23,900	28,700	20.08%	Expenses associated with telephone, internet and email services, including cell phones, portable radios, and data plan expenses for Agency staff.
6855-000-01	Postage/Shipping	AA	3,692	5,900	2,500	-57.63%	Postage, delivery, and overnight shipping expense.
6859-000-01	Bank Fees & Analysis Charges	ASM	1,459	2,300	1,500	-34.78%	Bank fees and investment expenses for California Asset Management Program and Westamerica Bank accounts. Finance charges and late payment fees.
6859-000-10	Bank Fees - Revenue Bond	ASM	2,425	2,100	2,500	19.04%	Bank fees for the Refunding Revenue Bonds Series 2015.
6860-000-01	Trade Discounts	ASM	(1,896)	-	-	0.00%	Account used to record vendor payment discounts received and taken for paying bills within payment terms.
6890-010-01	Contingency	GM	-	50,000	50,000	0.00%	Funds available for transfer to other operating budget accounts for unplanned and unanticipated activities. Transfers from this account require GM approval.

**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

GM General Manager  
 ASM Administrative Services Manager  
 OS Operations Supervisor  
 ISA Information Systems Analyst  
 AE Assistant Engineer  
 AA Administrative Assistant

**ADMINISTRATION**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
6990-000-01	Other Non-Operating Expenses	ASM	64	-	-	0.00%	No budget. Account used for accounting adjustments such as general ledger account reconciliations, prior year audit adjustments, and expenditures associated with prior year activities such as unexpected bills received for prior fiscal year goods and services as well as service charge refunds.
<b>Subtotal General &amp; Administrative</b>			<b>401,496</b>	<b>510,200</b>	<b>491,900</b>	<b>-3.59%</b>	
<b>Subtotal (excluding Salary and Benefits)</b>			<b>612,447</b>	<b>771,400</b>	<b>742,700</b>	<b>-3.72%</b>	
<b>Total Administration</b>			<b>4,083,893</b>	<b>4,554,500</b>	<b>4,734,400</b>	<b>3.95%</b>	

PROPOSED

**Maintenance**

The Maintenance Department is responsible for maintaining Agency facility assets which include buildings, grounds, vehicles, and treatment plant specific facilities and associated equipment. Certified mechanical technicians and utility workers perform a wide variety of preventative and corrective maintenance and repair work on all Agency assets. The Electrical and Instrumentation group is responsible for maintaining the Agency’s process control systems, electrical and instrumentation equipment, and various electro-mechanical systems, and supports maintenance of communication systems, and information technology infrastructure. The department utilizes an enterprise asset management system for scheduling corrective and preventive maintenance, to manage its fixed assets, and to track repairs and maintenance activities with their associated costs.

Under contractual service agreements with the California Department of Corrections (San Quentin), County of Marin, and Sanitary District #2 of Marin, the department maintains collection system assets such as pump stations, force mains, and gravity sewers.

<b>Maintenance Expenditures by Category</b>	<b>FY 16-17 Audited Actuals</b>	<b>FY 17-18 Adopted Budget</b>	<b>FY 18-19 Proposed Budget</b>
<b>SALARIES</b>	\$1,525,598	\$1,609,500	\$1,534,300
<b>SUBTOTAL</b>	<b>\$1,525,598</b>	<b>\$1,609,500</b>	<b>\$1,534,300</b>
<b>LUBRICANTS, PROPANE, OTHER</b>	5,536	6,000	6,000
<b>MAINTENANCE &amp; REPAIRS</b>	350,117	376,500	357,500
<b>GENERAL &amp; ADMINISTRATIVE</b>	17,267	16,700	21,100
<b>SUBTOTAL</b>	<b>\$ 372,920</b>	<b>\$ 399,200</b>	<b>\$ 384,600</b>
<b>TOTAL</b>	<b>\$1,898,518</b>	<b>\$2,008,700</b>	<b>\$1,918,900</b>

<b>Authorized Positions</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>
Maintenance Supervisor	1	1	1
Assistant Maintenance Supervisor	1	1	1
Maintenance Lead	1	1	1
Maintenance Repair	1	1	-
Mechanical Technician	4	4	5
Utility Worker	3	3	3
Assistant Maintenance Supervisor-(E/I)**	1	1	-
Electrical/Instrumentation Tech	2	2	3
<b>TOTAL</b>	<b>14</b>	<b>14</b>	<b>14</b>

\* The Maintenance Repair position was replaced with an additional Mechanical Technician position

\*\* The Assistant Maintenance Supervisor-(E/I) retired in FY 18 and the position is being replaced by an additional Electrical/Instrumentation Tech



**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

ASM Administrative Services Manager  
 TPM Treatment Plant Manager  
 MS Maintenance Supervisor  
 EIT Electrical Instrumentation Technician

**MAINTENANCE**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
<b>SALARIES &amp; WAGES</b>							
5010-010-03	Salaries, Wages & Compensation	ASM	1,461,866	1,554,300	1,476,300	-5.02%	Salaries for 14 full-time employees. FY19 includes a 3% COLA salary increase for represented and unrepresented employees, seven step adjustments and leave balance cash-outs. Decrease due to one retirement replaced with entry level position.
5010-103-10	Transfer to CIP	ASM	(26,014)	(33,300)	(33,300)	0.00%	Transfer of salary expenses for staff assigned to CIP funded projects (.32 FTE).
5010-020-03	Overtime	TPM	39,066	33,300	34,400	3.30%	Authorized overtime to complete unexpected maintenance activities or assignments that require work after an employee's regularly scheduled shift. Budget increase due to salary adjustments plus anticipated comp-time cashed out.
5010-021-03	Stand-by Duty	TPM	50,681	55,200	56,900	3.08%	24/7 Stand-by duty for qualified maintenance staff to respond to emergency repair work and equipment failures. Employees are paid to remain fit for duty and to respond within one hour when called. Sanitary District #2 funds one half of this expense. FY 19 increase is function of salary and step increases.
<b>Subtotal Salaries &amp; Wages</b>			<b>1,525,598</b>	<b>1,609,500</b>	<b>1,534,300</b>	<b>-4.67%</b>	
<b>MAINTENANCE &amp; REPAIRS (M&amp;R)</b>							
6400-030-03	Lubricants, Propane, Other	MS	5,536	6,000	6,000	0.00%	Lubricants used for facility assets and equipment (cogeneration and stand-by power systems excluded), propane for the forklift, and welding and calibration gases.
6500-000-03	Utility Supplies	MS	6,598	7,000	7,000	0.00%	Janitorial and general facility maintenance cleaning supplies.
6510-001-03	Outside Services & Parts	TPM	30,672	30,000	30,000	0.00%	Service repair costs performed by outside providers for machining, fabrication, vacuum services, specialty repair work, and related parts, equipment, and supplies.
6510-004-03	Fleet Maintenance	MS	20,996	20,000	15,000	-25.00%	This account is for preventative, predictive, and corrective maintenance on the Agency's fleet vehicles, and includes purchases of batteries, oil, tires, and other consumables. The Agency's fleet consists of 10 vehicles, two forklifts, a skid steer loader, 15 electric carts, and 7 bicycles.
6510-007-03	Hazardous Waste Disposal Service	MS	21,394	25,000	25,000	0.00%	Safe disposal of wastes such as oils, greases, oil and air filters, coolants, paints, solvents, light bulbs, batteries, and air purification medias (siloxane, hydrogen sulfide, and activated carbon).
6510-008-03	Facilities Maintenance	MS	19,575	20,000	22,000	10.00%	Planned preventive and corrective repairs to maintain non-process specific facility structures such as roof and gutter systems, doors and door hardware, flooring, and painted surfaces. This budget also includes funds for facility pest control services.
6510-009-03	Electrical Equipment	EIT	26,252	23,000	23,000	0.00%	Allowance for procurement of routine electrical equipment such as conduit, wiring, electrical connectors, fittings, consumable electrical supplies, and facility lighting (light bulbs, tubes, LED lights).
6510-010-03	Plant Pumps	MS	15,144	18,000	25,000	38.89%	Allowance for routine consumable parts and equipment such as impellers, gasket material, and volutes.
6510-011-03	Process Tank Maintenance	MS	8,387	20,000	20,000	0.00%	Allowance for routine consumable parts and equipment for facility process tanks and the primary heat exchanger (excludes heat exchangers utilized by the cogeneration system).
6510-012-03	Centrifuge Maintenance	MS	19,924	20,000	10,000	-50.00%	Consumable items for annual preventative and corrective maintenance for three centrifuges and their system components.
6510-013-03	Process (Filter) Media Replacement	MS	23,200	25,000	25,000	0.00%	Biogas and air purification media for facility equipment. Budget is for the purchase of media for one sulfatreat vessel, one siloxane filter, and one activated carbon odor scrubber replacement per year.
6510-014-03	Organic Waste Receiving Facility (OWRF)	MS	46,408	45,000	40,000	-11.11%	Allowance for consumable items required for maintaining the (OWRF). The FY 19 budget assumes performing two complete mixing pump impellor/cutter bar changeouts, purchasing one set of paddle finisher screens, six spare hoses, glycerin, rock trap grinder parts, and other critical spare inventory items.

**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

ASM Administrative Services Manager  
 TPM Treatment Plant Manager  
 MS Maintenance Supervisor  
 EIT Electrical Instrumentation Technician

**MAINTENANCE**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
6510-015-03	Boilers and Hot-water Systems	MS	5,524	8,000	8,000	0.00%	Consumable items required for maintaining two dual fueled hot water boilers and the hot water recirculation systems. Budget includes annual specialized boiler system inspection work to examine the brick and burner assemblies, the fuel regulating systems, and associated pumps and piping.
6510-016-03	Effluent Pump Station	MS	7,929	8,000	5,000	-37.50%	Allowance for parts and consumable items within the Effluent Pump Station and its above ground diesel tank. Includes pump and engine parts, driveshafts, fuel conveyance, diesel storage tanks, motor controls, and fire protection systems.
6510-020-03	Cogen/Emergency Generator Maintenance	MS	51,062	50,000	50,000	0.00%	Routine parts and equipment for scheduled cogeneration system and standby diesel generator maintenance. The budget assumes four 2,000 hour maintenance procedures on the cogeneration system and one annual maintenance procedure on the emergency standby diesel generator.
6520-000-03	Groundskeeping	MS	34,517	45,000	40,000	-11.11%	Facility landscaping services and supplies to maintain the Agency's property. Services include fire-defensible space maintenance, weed abatement, and clean-up project work. In FY18, CMSA began participating in the CoM AOWP. This line has been reduced in FY19 as services that normally would be completed by contractors will now be performed by program participants.
6530-000-03	Small Tools & Equipment	MS	12,536	12,500	12,500	0.00%	Purchase and repair of hand, power, and pneumatic tools utilized in the day-to-day maintenance of assets and equipment.
<b>Subtotal Maintenance &amp; Repairs</b>			<b>355,653</b>	<b>382,500</b>	<b>363,500</b>	<b>-4.97%</b>	
<b>GENERAL &amp; ADMINISTRATIVE</b>							
6700-010-03	Meetings/Training	TPM	3,837	4,000	4,000	0.00%	Expenses associated with attendance at single-day meetings, seminars, technical certification courses, and professional development. Includes allowed expenses pursuant to the Agency's expense reimbursement policy.
6700-020-03	Conferences	TPM	9,380	8,000	12,500	56.25%	Expenses associated with multi-day professional conferences, seminars, and training events outlined in the Agency's travel and expense reimbursement policy.
6805-000-03	Professional Affiliation Memberships	TPM	3,771	4,400	4,400	0.00%	Professional memberships and annual certification renewal fees for 14 maintenance and electrical/instrumentation technicians.
6830-030-03	Underground Service Alert (USA)	MS	279	300	200	-33.33%	Annual Underground Service Alerts fee to identify utility locations prior to any type of digging or excavation work.
<b>Subtotal General &amp; Administrative</b>			<b>17,267</b>	<b>16,700</b>	<b>21,100</b>	<b>26.35%</b>	
<b>Subtotal (excluding Salary and Benefits)</b>			<b>372,920</b>	<b>399,200</b>	<b>384,600</b>	<b>-3.66%</b>	
<b>Total Maintenance</b>			<b>1,898,518</b>	<b>2,008,700</b>	<b>1,918,900</b>	<b>-4.47%</b>	

**Operations**

The Operations Department performs various activities essential to the day-to-day operation and process control of the Agency’s National Clean Water Agency (NACWA) recognized Class V regional wastewater treatment facility. The treatment, reuse, and disposal of wastewater is in full compliance with state and federal National Pollutant Discharge Elimination System (NPDES) permit requirements.

The department is responsible for the following functions:

- Monitor and adjust treatment processes
- Ensure facilities are operated to achieve and exceed permit compliance
- Monitor local agency pump stations and related assets
- Order treatment chemicals and maintain inventories
- Conduct pilot testing and studies to improve and/or optimize treatment
- Monitor and operate systems to control the generation of wastewater odors
- Track the performance of all treatment and energy generation systems
- Operate an organic waste receiving facility
- Operate a power generation system
- Oversee and operate the Agency’s recycled water truck fill station

<b>Operations Expenditures by Category</b>	<b>FY 16-17 Audited Actuals</b>	<b>FY 17-18 Adopted Budget</b>	<b>FY 18-19 Proposed Budget</b>
<b>SALARIES</b>	\$1,572,245	\$1,678,600	\$1,734,400
<b>SUBTOTAL</b>	<b>\$1,572,245</b>	<b>\$1,678,600</b>	<b>\$1,734,400</b>
<b>CHEMICALS &amp; FUELS</b>	1,113,251	1,069,500	1,126,900
<b>UTILITIES</b>	292,642	350,500	317,800
<b>GENERAL &amp; ADMINISTRATIVE</b>	36,582	52,000	64,000
<b>SUBTOTAL</b>	<b>\$1,862,963</b>	<b>\$1,472,000</b>	<b>\$1,508,700</b>
<b>TOTAL</b>	<b>\$3,435,209</b>	<b>\$3,150,600</b>	<b>\$3,243,100</b>

<b>Authorized Positions</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>
Operations Supervisors	2	2	2
Assistant Operations Supervisor*	-	-	1
Lead Operators	2	2	1
Operators (Trainee, I-III)	9	9	9
<b>TOTAL</b>	<b>13</b>	<b>13</b>	<b>13</b>

\* The Board approved the Assistant Operations Supervisor position in FY 17-18 to allow implementation of the Operations Department’s succession plan.





**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

ASM Administrative Services Manager  
AOS Assistant Operations Supervisor  
OS Operations Supervisor  
TPM Treatment Plant Manager

**OPERATIONS**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
<b>SALARIES &amp; WAGES</b>							
5010-010-04	Salaries, Wages & Compensation	ASM	1,439,975	1,554,300	1,613,600	3.82%	Salaries for 13 full-time employees. Includes a COLA increase of 3% for represented and unrepresented employees, six step adjustments, and leave balance cash-outs. Increase due to adding Assistant Operations Supervisor and step adjustments.
5010-104-10	Transfer to CIP	ASM	-	(16,700)	(16,700)	0.00%	Transfer of salary expenses for staff assigned to CIP funded projects (.14 FTE).
5010-020-04	Overtime	OS	118,998	122,200	126,000	3.11%	Authorized overtime to ensure facilities are properly staffed 24 hours/day and to complete specified activities or assignments.
5010-022-04	OPS Wet Weather Stand-by Duty	TPM	13,273	18,800	11,500	-38.83%	24/7 stand-by duty provided by qualified operations staff during the wet weather season (November-April). Employees are paid to remain fit for duty and must respond within one hour after being called in for emergency situations.
<b>Subtotal Salaries &amp; Wages</b>			<b>1,572,245</b>	<b>1,678,600</b>	<b>1,734,400</b>	<b>3.32%</b>	
<b>CHEMICALS &amp; FUEL</b>							
6100-010-04	Ferric Chloride	OS	69,673	65,800	81,500	23.86%	Ferric chloride is used to improve settling in the primary clarifiers during storm related flow events, inhibits hydrogen sulfide production in the digesters, reduces struvite formations in pipelines, and is used as a coagulant in the biosolids dewatering process.
6100-020-04	Polymer-Cationic	OS	99,131	104,800	110,000	4.96%	Polymer is added to centrifuge feed sludge to enhance the efficiency of solids removal, and is also injected into the flow stream for sludge thickening units to increase solids capture which reduces hydraulic loading in the digesters. The increase in this line is attributed to the actual usage of polymer which has increased to three deliveries per year.
6100-030-04	Odor Control	OS	19,160	19,000	15,000	-21.05%	A chemical agent used to mask odorous compounds produced by some wastewater processes. Odorants are delivered in 55 gallon barrels.
6100-040-04	Calcium Nitrate	OS	264,766	294,900	200,000	-32.18%	Calcium nitrate salts are the first of a two-phase odor control system used in the collection system upstream of the wastewater treatment plant. Nitrate injection in strategic locations inhibits hydrogen sulfide formation.
6100-050-04	Hydrogen Peroxide	OS	210,517	220,000	306,000	39.09%	Hydrogen peroxide is the second phase of the odor control system. It is injected into the system interceptors upstream of the headworks.
6100-060-04	Sodium Hypochlorite	OS	159,030	168,000	204,400	21.67%	Sodium hypochlorite is used for effluent and recycled water disinfection, and in three treatment plant odor control scrubbers.
6100-070-04	Sodium Bisulfite	OS	277,521	180,200	195,000	8.21%	Sodium bisulfite is used to neutralize the chlorine residual in the effluent prior to its discharge into the San Francisco Bay.
6400-020-04	Gasoline, Diesel, Oil, & Fuel	OS	13,453	16,800	15,000	-10.71%	Gasoline for vehicles and landscaping equipment, diesel for emergency diesel-fueled generators and the effluent pump station pumps.
<b>Subtotal Chemicals &amp; Fuel</b>			<b>1,113,251</b>	<b>1,069,500</b>	<b>1,126,900</b>	<b>5.37%</b>	
<b>UTILITIES</b>							
6835-010-04	Natural Gas	OS	23,312	40,000	37,300	-6.75%	Supplemental fuel for the cogeneration system, and fuel for the boilers when the cogen system is offline, typically 2 hours a day. The cogeneration system typically operates at approximately 22+ hours a day on Agency produced biogas.
6835-020-04	Electricity	OS	189,859	204,000	201,000	-1.47%	Electricity to supplement the cogeneration system output and to supply power when the cogenerator is offline for maintenance a few days each month.
6835-030-04	Water	AOS	8,827	9,000	9,500	5.56%	Potable water for CMSA and the San Quentin junction box odor control facility. The Marin Municipal Water District has announced a series of 5% rate increases over the next several years.
6835-040-04	Garbage	AOS	70,645	97,500	70,000	-28.21%	Solid waste disposal for garbage, green waste, recycling, and debris box disposal of headworks screenings, grit, and non-recyclable wastes. Expenses associated with the quarterly cleaning, debris removal, of the OWRF were absorbed by MSS this past calendar year. The adjusted budget line reflects that change and also accounts for a 5.57% rate increase as of January 1, 2018.
<b>Subtotal Utilities</b>			<b>292,642</b>	<b>350,500</b>	<b>317,800</b>	<b>-9.33%</b>	
<b>GENERAL &amp; ADMINISTRATIVE</b>							

**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

ASM Administrative Services Manager  
AOS Assistant Operations Supervisor  
OS Operations Supervisor  
TPM Treatment Plant Manager

**OPERATIONS**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
6210-000-04	Operations - General	TPM	3,948	6,000	6,000	0.00%	Small tools, equipment, parts, and other miscellaneous supplies.
6215-000-04	Process Control Consumable Supplies	AOS			10,000	0.00%	Chemical reagents are substances used in a chemical reaction to detect, measure, examine, or produce other substances. CMSA uses chemical reagents to verify and/or determine the concentration of chlorine in treated wastewater. These chemicals are also use to assist in field instrument calibration, determine peroxide concentrations in wastewater, measure pH, and measure sulfide levels in biogas.
6700-010-04	Meetings/Training	TPM	5,984	5,000	5,000	0.00%	Expenses associated with attendance at single-day professional meetings, seminars, and certification trainings. Includes allowed expenses pursuant to the Agency's expense reimbursement policy.
6700-020-04	Conferences	TPM	2,413	4,500	4,500	0.00%	Expenses associated with multi-day professional conferences, seminars, and training events outlined in the Agency's travel and expense reimbursement policy.
6805-000-04	Professional Affiliation Memberships	TPM	5,990	6,500	5,000	-23.08%	Professional memberships and certification renewal requirements for operators. The budget includes 13 annual membership renewals and 14 treatment plant operator certification renewal fees.
6810-010-04	BAAQMD Permit	TPM	15,418	20,000	18,500	-7.50%	Bay Area Air Quality Management District (BAAQMD) permit fees for the cogeneration engine, emergency engine, five effluent pump station engines, and fuel dispensers.
6830-001-04	Professional Services: Process Control	TPM	2,829	10,000	15,000	50.00%	Professional wastewater consulting services for evaluation of process control options for reliability, efficiency, and other improvements, and advice on process control issues, training of staff on process analysis, and conducting special studies. The increase in this budget line is for specialized Secondary System (Activated Sludge) Training. Assumes two full training days.
<b>Subtotal General &amp; Administrative</b>			<b>36,582</b>	<b>52,000</b>	<b>64,000</b>	<b>23.08%</b>	
<b>Subtotal (excluding Salary and Benefits)</b>			<b>1,442,475</b>	<b>1,472,000</b>	<b>1,508,700</b>	<b>2.49%</b>	
<b>Total Operations</b>			<b>3,014,720</b>	<b>3,150,600</b>	<b>3,243,100</b>	<b>2.94%</b>	

**Technical Services**

The Technical Services Department provides full engineering support for the Agency and is responsible for all regulatory compliance activities required by the Agency’s National Pollutant Discharge Elimination System (NPDES) permit. Technical Services is responsible for the following functions:

- Design small maintenance and capital projects and oversee the design of larger projects outsourced to engineering consulting firms.
- Manage construction contracts and projects and associated engineering construction records.
- Assist with operational studies, and energy efficiency and greenhouse gas emission evaluations.
- Negotiate and administer the Agency’s service and commodity contracts for employee uniforms, biosolids hauling and reuse, natural gas supply, and procurement of chemicals used in the wastewater and biosolids treatment processes.
- Chairs the Agency’s Capital Improvement Planning Committee which develops, implements, and manages the Agency’s 10-year Capital Improvement Program (CIP) and prepares the annual CIP budget with the 10-year forecast.
- Assist with Underground Service Alert (U.S.A) utility locating services.
- Regulate commercial and industrial disposal of wastewater into the collection and treatment systems.
- Operates an accredited laboratory which performs the majority of routine testing required in the Agency’s NPDES permit and oversees specialized outside analytical testing services.
- Provides regulatory enforcement and program administration services under contract with wastewater and other local agencies in Marin County for source control programs; and storm water enforcement.
- Lead the Wastewater Treatment Agencies of Marin County Public Education Program.

<b>Technical Services Expenditures by Category</b>	<b>FY 16-17 Audited Actuals</b>	<b>FY 17-18 Adopted Budget</b>	<b>FY 18-19 Proposed Budget</b>
<b>SALARIES</b>	\$1,089,378	\$ 891,700	\$1,053,500
<b>SUBTOTAL</b>	<b>\$1,089,378</b>	<b>\$ 891,700</b>	<b>\$1,053,500</b>
<b>BIOSOLIDS DISPOSAL</b>	353,400	387,700	400,300
<b>PERMIT TESTING &amp; MONITORING</b>	110,973	179,500	148,800
<b>GENERAL &amp; ADMINISTRATIVE</b>	247,981	289,900	823,000
<b>SUBTOTAL</b>	<b>\$ 712,354</b>	<b>\$ 857,100</b>	<b>\$ 872,100</b>
<b>TOTAL</b>	<b>\$1,801,732</b>	<b>\$1,748,800</b>	<b>\$1,925,600</b>

<b>Authorized Positions</b>	<b>FY 16-17</b>	<b>FY 17-18</b>	<b>FY 18-19</b>
Technical Services Manager	1	1	1
Associate Engineer	-	-	1
Assistant Engineer	2	2	1
Information Systems Analyst*	1	-	-
Environmental Services Manager**	1	-	-
Laboratory Director**	-	1	1
Environmental Laboratory Administrator	1	1	1
Laboratory Analyst***	-	-	1
Environmental Services Analyst (I-II)	3	3	3
<b>TOTAL</b>	<b>9</b>	<b>8</b>	<b>9</b>

\* Transferred to Administration department.

\*\* The Engineering and Environmental Services departments were reorganized during FY 16-17 into Technical Services. The Laboratory Director position was created to replace the eliminated Environmental Services Manager position.

\*\*\* To comply with the new environmental laboratory accreditation standards, the Board authorized creating a new Laboratory Analyst position in FY 17-18.

PROPOSED

**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

GM General Manager  
 ASM Administrative Services Manager  
 TSM Technical Services Manager  
 LD Lab Director

**TECHNICAL SERVICES**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
<b>SALARY &amp; WAGES</b>							
5010-010-05	Salaries, Wages & Compensation	ASM	1,025,041	1,010,000	1,178,700	16.70%	Salaries for nine full-time employees and includes a 3% COLA salary increase of for employees, 3-step adjustments, one potential promotion, one new laboratory analyst, and leave balance cash-outs. FY 18 under budget due to extended medical leave for two employees.
5010-105-10	Transfer to CIP	GM	47,898	(135,200)	(135,200)	0.00%	Transfer of salary expenses for staff assigned to CIP funded projects (.61 FTE).
5010-020-05	Overtime	TSM	13,808	9,700	7,500	-22.68%	Authorized overtime to complete special activities or assignments including activities supporting the public education program, and employee compensatory time leave balance cash-outs.
5010-022-02	Wet Weather Stand-by Duty	TSM	2,632	7,200	2,500	-65.28%	Stand-by duty is assigned to a laboratory analyst during wet weather events when there is a reasonable potential that a blending event may occur during the weekend. This account balance has been reduced significantly from previous fiscal years because past practice was to authorize stand-by duty for the entire wet weather season.
<b>Subtotal Salary &amp; Wages</b>			<b>1,089,378</b>	<b>891,700</b>	<b>1,053,500</b>	<b>18.15%</b>	
<b>BIOSOLIDS MANAGEMENT</b>							
6200-010-02	Biosolid Reuse Fees	TSM	256,077	275,000	283,900	3.24%	Biosolids are beneficially reused at Redwood Landfill for alternative daily cover, land application sites in Sonoma and Solano counties for soil augmentation, and at the Lystek facility for further processing into a fertilizer. Each of these facilities charges fees to accept biosolids.
6200-050-02	Biosolids Hauling	TSM	97,323	112,700	116,400	3.28%	Approximately one load per day of biosolids is hauled from CMSA to one of the biosolids reuse sites.
<b>Subtotal Biosolids Management</b>			<b>353,400</b>	<b>387,700</b>	<b>400,300</b>	<b>3.25%</b>	
<b>PERMIT TESTING &amp; MONITORING</b>							
6300-000-02	Lab Supplies	LD	44,356	74,700	57,000	-23.69%	Laboratory and source control program supplies including all chemicals, glassware, reagents, consumables, disposable containers, filters, bioassay, and other supplies. The budget is higher than normal for FY 18 and FY 19 due to one-time equipment purchase.
6310-030-02	Biosolids Monitoring: Contract Lab Services	LD	5,336	10,100	9,500	-5.95%	Laboratory analysis cost associated with biosolids monthly and semiannual regulatory monitoring requirements. Decrease based upon aligning the budget to past actual expenditures.
6320-010-02	NPDES Permit Sampling & Testing	LD	46,913	65,200	65,200	0.00%	Outsourced laboratory analysis cost associated with NPDES permit compliance orders. Includes monthly, quarterly, semiannual, annual, and permit period monitoring requirements.
6320-020-02	Pretreatment Sampling	TSM	12,484	14,300	14,300	0.00%	Contract for lab analysis of pretreatment samples and monitoring industrial waste.
6330-010-02	Underground Tank Testing: Overfill Containment	TSM	1,884	6,900	2,800	-59.42%	Annual testing and monitoring of underground gasoline and diesel tank over-fill and secondary. The Agency has determined it is more time efficient and cost effective to outsource this regulatory requirement.
6330-020-02	Underground Tank Testing: Secondary Containment	TSM	-	8,300	-	-100.00%	Testing of underground tank secondary containment every three years as required by state regulation. Testing will be scheduled during FY 21, the last testing occurred in FY 18.
<b>Subtotal Permit Testing &amp; Monitoring</b>			<b>110,973</b>	<b>179,500</b>	<b>148,800</b>	<b>-17.10%</b>	

**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

GM General Manager  
 ASM Administrative Services Manager  
 TSM Technical Services Manager  
 LD Lab Director

**TECHNICAL SERVICES**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
<b>GENERAL &amp; ADMINISTRATIVE</b>							
6510-008-05	Facilities Maintenance					0.00%	Expenses for service contracts to maintain laboratory equipment including the deionized water system, vacuum pump, and bioassay pH pump control. Expenditures were previously paid for out of the lab supplies account which was decreased by an equivalent amount to this budget.
6700-010-05	Meetings/Training	TSM	1,326	4,500	4,500	0.00%	Expenses associated with single-day professional meetings and training seminars. Includes allowed expenses pursuant to the Agency's expense reimbursement policy.
6700-020-05	Conferences	TSM	8,605	15,800	15,800	0.00%	Expenses associated with multi-day professional conferences, seminars, and training events per the Agency's expense reimbursement policy.
6805-000-05	Professional Affiliation Memberships	TSM	3,600	4,000	3,700	-7.50%	Professional society memberships and registration fees mostly related to Water Environment Association (WEF) and California Water Environment Association (CWEA) memberships.
6810-000-02	Annual NPDES Permit	TSM	48,522	55,000	55,000	0.00%	Annual renewal fee for SWRCB administration of the NPDES permit and pre-treatment program fee. The State Water Board has not reported its FY 19 NPDES permit fee structure.
6810-040-02	ELAP Certification	TSM	2,170	6,700	11,000	64.18%	Fees for annual renewal of the laboratory certification, inspections, required testing, certificates, and ELAP operating costs. DMRQA testing, previously expended from other accounts, is now included in this line item as it is a certification requirement.
6810-050-02	Regional Monitoring Program SFEI	TSM	26,216	30,000	30,000	0.00%	CMSA's NPDES permit requires participation in the Regional Monitoring Program (RMP) for the San Francisco Bay, which is administered by the San Francisco Estuary Institute.
6810-051-02	Clean Bay Collaborative Fees	TSM	24,140	25,500	25,500	0.00%	SF Bay NPDES dischargers are required to perform regional monitoring tests and perform studies to determine impacts to the bay. Organization participants conduct studies and tests related to TMDL development, nutrients, mercury, and PCB permit work that focus on Bay Area Clean Water Agencies (BACWA) priorities to protect the SF Bay.
6810-060-02	CUPA Fees	TSM	2,120	4,200	4,900	16.67%	Certified Unified Program Agency fees are paid to the County of Marin for the Agency's underground storage tanks and hazardous materials storage.
6810-070-02	Stormwater Annual	TSM	641	1,800	1,800	0.00%	SWRCB permit for the Agency's industrial site stormwater permit.
6810-080-02	BAPPG Membership	TSM	838	1,800	1,800	0.00%	Bay Area Pollution Prevention Group pollution prevention and pretreatment program sponsorship as required in the Agency's NPDES permit.
6810-090-02	eNPDES Software	TSM	-	1,300	-	-100.00%	Annual electronic reporting software maintenance fee that includes support and filing updates required by the State Water Board and EPA.
6815-002-02	Source Control	TSM	12,000	12,000	40,000	233.33%	The existing software database used to manage the Agency's Pretreatment and Pollution Prevention Programs will be replaced with a software program that is better suited for source control program management with lower annual maintenance fees and better support.
6821-000-02	Public Education Program: CMSA portion	GM	27,464	32,500	35,000	7.69%	CMSA's share of the Countywide Public Education Program for expenses associated with participating in public outreach events, hosting school programs, and educational materials for the program.
6815-000-05	Office Expenses	TSM	381	500	500	0.00%	Office supplies: ink cartridges, paper for large-format printer/plotter, and other miscellaneous office expenses.
6815-002-05	Information Systems	TSM	-	700	2,000	185.71%	Allowance for engineering productivity and project management software. One-time allowance to purchase a program to replace the software used for bioassay results. The current software requires Excel 2003 that is unsupported.
6815-003-05	Software License & Support	TSM	17,045	-	-	100.00%	No Budget: Licensing fees for Nexgen (CMMS), Ignition( SCADA), AutoCAD (drafting), and virtual server maintenance software have been moved to Administrative Services.

**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

GM General Manager  
 ASM Administrative Services Manager  
 TSM Technical Services Manager  
 LD Lab Director

**TECHNICAL SERVICES**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
6820-000-05	Printing & Publications	TSM	267	1,000	1,000	0.00%	Allowance for printing/shipping/advertising expenses for documents not assigned to specific CIP project contracts and for mailing expenses related to maintaining CMSA's list of prequalified contractors.
6830-001-05	Professional Svcs - Special Studies	GM	-	45,000	45,000	0.00%	A consultant will continue the gap analysis of the current CMMS system and provide basic asset management training engineering and maintenance staff. An allowance is included for the pilot scale digester testing program.
6830-002-05	Cathodic Protection	TSM	6,220	7,600	5,500	-27.63%	Periodic cathodic protection monitoring of the land portion of the marine outfall, sections of the Ross Valley interceptor, the San Rafael interceptor, various buried pipelines on Agency property, San Rafael Sanitation District Simms Force Main, and the South Francisco casing. Annual costs will vary from year to year due to monitoring frequencies for different facilities.
6830-019-05	Professional Svcs - Engineering Support	GM	66,426	40,000	40,000	0.00%	This account is used to fund engineering consultant services including a study to determine the necessary analyzers to automate control of various treatment processes.
<b>Subtotal General &amp; Administrative</b>			<b>247,981</b>	<b>289,900</b>	<b>323,000</b>	<b>11.42%</b>	
<b>Subtotal (excluding Salary and Benefits)</b>			<b>712,354</b>	<b>857,100</b>	<b>872,100</b>	<b>1.75%</b>	
<b>Total Engineering</b>			<b>1,801,732</b>	<b>1,748,800</b>	<b>1,925,600</b>	<b>10.11%</b>	





**Cooperative Agreement Expenses - CMSA Services Provided Under Contract to Other Local Agencies**

The Agency provides contract services to other local agencies for wastewater treatment services, pump station and collection system maintenance, administration of Pollution Prevention or Source Control Programs, and a Dental Amalgam Reduction Program. The Agency also serves as the lead agency to administer the cooperative Health & Safety Program and the County-wide Public Education Program.

With the exception of the Health & Safety Program, the budget in this cost center tracks the non-employee compensation portion of the contract expenses incurred on behalf of the contracting agencies. Each contracting agency has agreed to reimburse CMSA the costs of services rendered by CMSA in accordance with the terms of their respective contracts.

The tables below illustrate the relationship between the amount of projected revenues from each contracting agency in FY 18-19 and estimated expenses incurred by CMSA for its services.

Cooperative Agreement Services	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget
<b>CONTRACT SERVICE REVENUES</b>			
San Quentin State Prison Wastewater Services	\$ 813,946	\$ 589,690	\$ 522,405
San Quentin State Prison Pump Station Maintenance	139,616	108,110	111,570
San Quentin Village Wastewater Services	68,500	49,950	45,297
SD#2 Pump Stations	420,488	403,400	394,536
LGVSD - FOG & Pollution Prevention	16,163	16,500	10,000
SD #1 – FOG	13,659	21,500	8,000
SRSD – FOG	15,519	25,600	10,000
TCSD – FOG	1,587	2,200	1,500
SD #2 – FOG	5,558	7,500	2,500
Almonte SD – FOG	2,576	1,500	1,500
Novato SD - Dental Amalgam	1,270	3,000	1,500
<b>SUBTOTAL CONTRACT SERVICE REVENUES</b>	<b>\$1,498,883</b>	<b>\$1,228,950</b>	<b>\$1,108,808</b>
Health & Safety Program	89,953	91,500	86,600
County-wide Education Program	44,371	51,700	59,430
<b>SUBTOTAL PROGRAM REVENUES</b>	<b>\$ 134,324</b>	<b>\$ 143,200</b>	<b>\$ 146,030</b>
<b>TOTAL CONTRACT SERVICE REVENUES</b>	<b>\$1,633,207</b>	<b>\$1,372,150</b>	<b>\$1,254,838</b>

<b>COOPERATIVE AGREEMENT SERVICE EXPENDITURES (EXCLUDING ADMINISTRATIVE OVERHEAD CHARGES)</b>			
San Quentin State Prison Wastewater Services	\$ 816,946	\$ 589,690	\$ 522,405
San Quentin State Prison Pump Station Maintenance	128,095	96,110	98,747
San Quentin Village Wastewater Services	64,406	45,473	40,820
SD#2 Pump Stations	372,657	356,946	348,082
LGVSD - FOG & Pollution Prevention	13,249	13,525	8,197
SD #1 - FOG	12,417	19,545	7,273
SRSD - FOG	14,108	23,273	9,091
TCSD - FOG	1,301	1,803	1,230
SD #2 - FOG	5,053	6,818	2,273
Almonte SD – FOG	2,342	1,364	1,364
Novato SD - Dental Amalgam	1,041	2,459	1,230
<b>SUB-TOTAL COOPERATIVE AGREEMENT EXPENDITURES</b>	<b>\$1,428,615</b>	<b>\$1,157,006</b>	<b>\$1,040,710</b>
Health & Safety Program	83,625	89,271	84,200
County-wide Education Program	38,584	44,957	51,678
<b>SUB-TOTAL PROGRAM EXPENDITURES</b>	<b>\$ 122,208</b>	<b>\$ 134,228</b>	<b>\$ 135,878</b>
<b>TOTAL COOPERATIVE AGREEMENT EXPENDITURES</b>	<b>\$1,550,823</b>	<b>\$1,291,233</b>	<b>\$1,176,588</b>



**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

ASM Administrative Services Manager  
 GM General Manager  
 HSM Health & Safety Manager  
 LD Lab Director  
 MS Maintenance Supervisor  
 TPM Treatment Plant Manager

**COOPERATIVE AGREEMENT EXPENSES: CMSA Services Provided Under Contract to Other Local Agencies**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
<b>ADMINISTRATION - HEALTH &amp; SAFETY PROGRAM</b>							
5010-010-06	Salaries, Wages & Compensation	ASM	68,461	46,600	48,900	4.94%	Novato Sanitary District's (NSD) share of the Safety Specialist/Manager position salary is 39.75% and includes car allowance and leave cash-outs. The increase is due to budgeting the mid-salary range. The Agency's share is 60.25% and is allocated to the Administration Budget.
5020-020-06	CalPERS Retirement	ASM	7,312	10,239	11,700	14.27%	Employer and employer-paid employee contributions for CalPERS 2.7% @ 55 retirement program.
5020-030-06	SS / Medicare	ASM	806	700	800	14.28%	Employer's 1.45% share of Medicare.
5030-010-06	Employee Health Benefits	ASM	10,083	4,600	11,700	154.33%	Employer-paid contributions for employee benefits includes insurance coverage for health, dental, vision, life, accident and disability. Budget increase is due to family health benefit coverage (FY 18 was employee only coverage).
5030-015-06	Employee Benefits-PEHP	ASM	850	700	700	0.00%	PEHP is a post employment health plan employer-paid contribution totaling 1.5% of base salary and \$180 per year administration fee.
5030-020-06	Retiree Health Benefits	ASM	2,461	2,700	2,600	-3.70%	Medical benefits for one retired employee and one surviving spouse.
5065-000-06	Shoes	ASM	-	100	-	-99.58%	Shoes are now included in program expenses account 6830-016-06.
6830-016-06	Health & Safety Manager Program Expenses	HSM	2,894	8,500	8,200	-3.53%	Professional services, materials, supplies, and memberships to administer the Safety Program for two participating agencies. NSD's program share is 39.75% of program costs. CMSA's 60.25% share is budgeted to 6830-016-01.
6830-017-06	Prof'l Service: Outside Safety	HSM	-	11,200	4,600	-58.93%	Training expenses for required safety programs that include hearing tests, first-aid/CPR, incident command training, traffic control, defensive driving, and many other Cal/OSHA programs that facilitate a safe work environment.
<b>Subtotal Administration</b>			<b>92,867</b>	<b>85,339</b>	<b>89,200</b>	<b>4.52%</b>	
<b>TECHNICAL SERVICES</b>							
6821-000-06	Countywide Public Education Program	GM	42,188	45,000	52,000	15.56%	Program expenditures to administer the County Wide Education Program for five participating agencies such as promotional materials, booth registration fees, public outreach program costs, sponsorships, supplies, and memberships. CMSA's 40.6% share of the program cost is budgeted to Technical Services account 6821-000-02. Increase is due to funding RxSafe Marin and Marin Science and Environmental Leadership programs.
<b>Subtotal Technical Services</b>			<b>42,188</b>	<b>45,000</b>	<b>52,000</b>	<b>15.56%</b>	

**Central Marin Sanitation Agency**  
**Proposed FY 2018-19 Operating Budget**

Line Item Accounts

**\*Position Code**

ASM Administrative Services Manager  
 GM General Manager  
 HSM Health & Safety Manager  
 LD Lab Director  
 MS Maintenance Supervisor  
 TPM Treatment Plant Manager

**COOPERATIVE AGREEMENT EXPENSES: CMSA Services Provided Under Contract to Other Local Agencies**

Account #	Account Name	*By	FY 16-17 Audited Actuals	FY 17-18 Adopted Budget	FY 18-19 Proposed Budget	% Change FY19 Proposed Budget from FY18 Adopted Budget	Budget Account Description
<b>MAINTENANCE</b>							
6600-000-06	SD-2 Pump Stations	MS	115,660	117,200	120,900	3.16%	SD#2 pump station maintenance costs for repair services, parts, supplies, equipment and recommended maintenance and capital expenditures. The decrease is attributable to fewer planned maintenance projects.
6600-001-06	SQP Pump Station Maintenance	TPM	107,517	44,300	110,000	148.31%	SQP pump station maintenance costs include labor, mileage, repair services, parts, supplies, equipment, and recommended maintenance and capital expenditures.
6600-002-06	SQ Village WW System Maintenance	TPM	48,420	25,700	20,300	-21.01%	SQV wastewater maintenance costs include labor, mileage, repair services, parts, supplies, equipment, and recommended maintenance and capital expenditures.
<b>Subtotal Maintenance</b>			<b>271,597</b>	<b>187,200</b>	<b>251,200</b>	<b>34.19%</b>	
<b>Total Cooperative Agreement Expenses</b>			<b>406,651</b>	<b>317,539</b>	<b>392,400</b>	<b>23.58%</b>	

**SECTION 8. CAPITAL IMPROVEMENT PROGRAM**

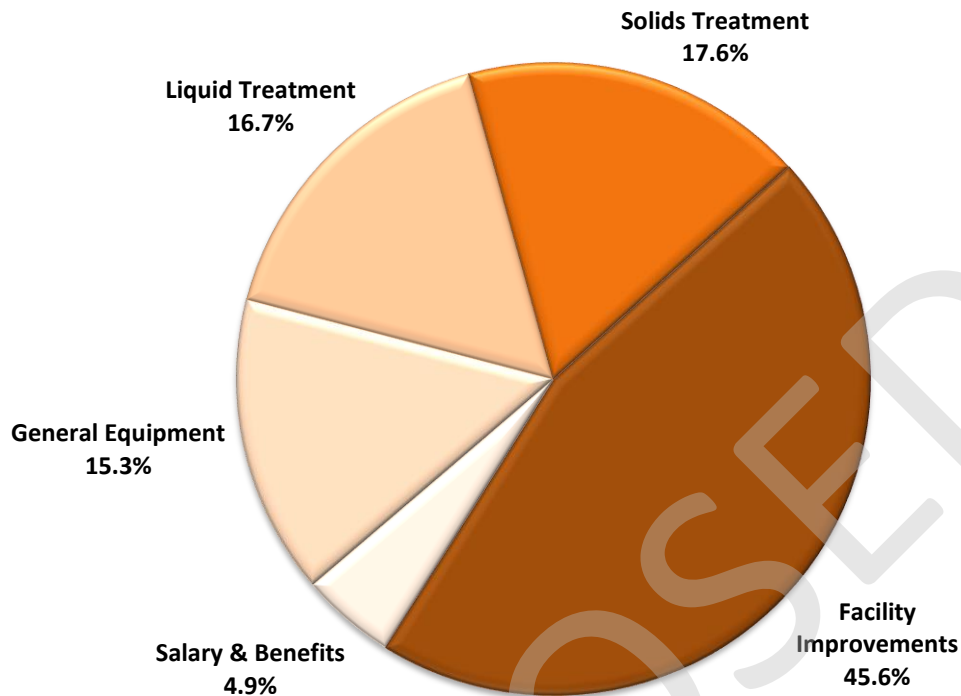
The treatment and disposal of wastewater and its beneficial reuse of by-products is a highly regulated enterprise that requires significant capital infrastructure. CMSA operates an around-the-clock wastewater facility, and the various assets and equipment necessary for the treatment processes are subjected to heavy use in a sometimes harsh operating environment. These assets are subjected to constant contact with wastewater and chemicals used in the treatment process. Agency staff monitors the development of new technologies and considers processes that may improve treatment methods, save energy, reduce chemical usage, and assist with meeting changing regulatory requirements. The maintenance, replacement, and addition of capital assets are an essential part of the Agency’s Capital Improvement Program (CIP) budget.

The CIP identifies capital expenditures over the next ten years so that the Agency may develop appropriate funding plans to implement future capital activities. The 10-Year CIP includes the replacement and rehabilitation of existing capital assets, as well as the acquisition or construction of new capital assets. Included within the 10-Year CIP is the FY 19 budget for capital projects and asset repair and replacement activities shown in the table below. These initiatives are organized into five categories: 1) Salary and Benefits for CIP Management, 2) Facility Improvements, 3) General Equipment, 4) Liquid Treatment Equipment and Systems, and 5) Solids Treatment and Energy Generation Equipment and Systems.

Capital expenditures are cash transactions made by the Agency that result in the acquisition or construction of a capital asset. A capital asset is any asset valued over \$5,000 with a useful life of over five years. Examples include land, buildings, machinery, vehicles, and equipment. All capital assets that the Agency plans to acquire or construct are included in the FY 19 CIP.

	<b>FY 16-17 Adopted Budget</b>	<b>FY 17-18 Adopted Budget</b>	<b>FY 18-19 Proposed Budget</b>	<b>FY 19 Projects</b>
<b>CIP Categories:</b>				
1. Salary & Benefits for CIP Management	\$ 181,800	\$ 185,200	\$ 185,200	
2. Facility Improvements	1,335,500	1,740,600	557,500	6
3. General Equipment	368,400	584,300	454,600	7
4. Liquid Treatment Equipment and Systems	1,283,800	635,700	1,220,200	11
5. Solids Treatment and Energy Generation Equipment and Systems	1,023,500	671,800	445,000	7
<b>TOTAL CIP PROJECTS</b>	<b>\$4,193,000</b>	<b>\$3,817,600</b>	<b>\$2,862,500</b>	<b>31</b>

## FY 18-19 Capital Improvement Program



### Major Capital Projects

The 10-Year CIP includes many important projects to maintain or improve the operation of the Agency's facilities. Within the CIP, several projects have additional Detailed Project Descriptions that further explain the scope, schedule, and budget for the project. Two major projects in FY 19 are:

- **Primary Clarifier Gates Actuator System:** The five original primary clarifiers have several large gates that control flow into the tanks from the headworks. Plant operations staff uses hydraulic system to open and close primary clarifier gates. The hydraulic system was installed when the plant was constructed in 1985 and can only be operated with levers located at each gate. This project will replace the hydraulic gate operators with an electronic actuator system that can be operated through CMSA's Supervisory control and data acquisition (SCADA). This will increase reliability and will allow plant operations staff to remotely open and close the gates.
- **Secondary Clarifiers Rehabilitation:** There are four secondary clarifiers in the treatment plant. The 2018 Facilities Master Plan recommends a project for each clarifier to repair corrosion on mechanical equipment, metal structural components, and pipes inside the clarifier, resurfacing the effluent trough concrete, retrofitting the catwalk with FRP grating, and repairing corrosion on piping in the sumps in the pump room (Master Plan Project 08-1). While each clarifier is out of service, the large drive turntables in Clarifiers 1, 3, and 4 will be replaced. The turntable drive for Clarifier No. 2 was replaced in 2011. This a multi-

year project that includes the design of the improvements in FY 19 with construction of the improvements occurring in the FY 20, FY 21, and FY 22 summers.

### **10-Year Capital Improvement Program Planning and Funding**

The Agency annually updates its 10-Year CIP as part of the budget development process. The FY 19 CIP Budget and 10-year CIP schedule were prepared by an interdisciplinary CIP team comprising managers and supervisors from the Technical Services and Operations and Maintenance departments. The CIP team is responsible for developing and managing the annual CIP Budget, determining the appropriate delivery method for each project and activity, and monitoring and reporting of CIP activities. The General Manager and Administrative Services Manager are responsible for working with the Board Finance Committee to develop long-term funding options for the 10-Year CIP.

The plan undergoes several levels of review. Each project or activity included in the CIP is individually evaluated to 1) determine its operational necessity, 2) ascertain if there is a less expensive alternative, 3) identify opportunities to reduce energy consumption and/or greenhouse gas emissions, and 4) create a project development schedule. Depending on the scale of the project, large, multi-year construction projects will typically have evaluation, study, and/or pre-design elements incorporated into the CIP. Costs for large projects are estimated by engaging consulting engineers to prepare cost estimates, while cost estimates for smaller scale projects are determined by either surveying other public agencies or by utilizing costs from similar projects conducted by CMSA. Once the budget has been adopted, the Agency is required to comply with the California Uniform Public Construction Cost Accounting Act to acquire the assets and deliver the project. All construction and professional service contracts and purchases that are over the dollar threshold set by the aforementioned Act and CMSA policies require Board approval at an open public meeting.

The total cost of the CIP over the next ten years is approximately \$48 million. This 10-year CIP scope focuses primarily on replacing aging infrastructure and assets, and is funded by capacity charges and capital reserves (which include capital charges and debt service coverage revenues). By the end of the FY 19 the Agency will have accumulated approximately \$5.5 million in capital reserves to finance higher priority projects of the current 10-Year CIP. The Agency plans to address the remaining 10-Year CIP funding requirements and newly identified projects from the Facilities Master Plan in the development of the Agency's next Five-Year Revenue Plan for the period from the fiscal year 2019-20 to the fiscal year 2022-23.

### **Other Sources of Capital Funding**

When there is a new connection to the sanitary sewer system from a home or business in the CMSA service area, the Agency receives a capacity charge. The intent of the charge is to ensure that all new users pay their fair share of the wastewater treatment and disposal systems costs. The charge is based on the idea that wastewater services and capacity are available on a first-come-first-serve basis. Each JPA Member agency charges a separate collection system connection fee. For a new connection, the JPA member agency collects the combined connection fee and capacity charge from the property owner/developer, and the capacity charge portion of the fee is remitted to CMSA. Central Marin County is a well-developed region with very little large scale residential or commercial expansions generally occurring in the

combined CMSA service area. The Agency previously did not budget for capacity charges as there were little or no charges collected. However, the Agency now budgets a nominal amount of capacity charges as a placeholder for the fees. Capacity charges received during the fiscal year are accounted for per requirements of the California Government Code that CMSA disclose the amount of capacity charges collected within 180 days after the fiscal year and identify the public improvements or projects that were funded by the capacity charges. The amount of capacity charges that the Agency has received each fiscal year and the capital improvements funded by these charges can be found in the Agency's Comprehensive Annual Financial Report which is available on the Agency's website: <http://www.cmsa.us/finance/budget>.

### **Refining Capital Infrastructure Planning and Budgetary Impacts**

Over the last several years, the Agency invested in the development and use of a computerized asset management system. An important aspect of an asset management system is the ability to schedule maintenance and monitor operating performance of capital assets. The system database accumulates information on each asset, and the data is used to determine when it is no longer economically feasible to maintain an asset and when a replacement should be considered.

In the last five GFOA Budget presentations, the Agency had attempted to address the impact of CIP investments on future operating budgets. Most capital projects are approved to replace existing assets. Once a decision has been made to replace an existing asset, the Agency incorporates elements of operational savings such as energy efficiency, reduced chemical usage, or improved operational reliability, into the selection of the new asset. When capital assets are placed in service, the savings or increased operating costs are quantified and incorporated into the planning of the annual budget to the extent possible.

### **Fiscal Year 19 and 10-Year CIP Budget Documents**

Refer to the following documents for detailed information on the 10-Year CIP:

- 10 Year Capital Improvement Program Schedule. The schedule shows the Agency's planned capital activities for the next ten fiscal years. Included in this display are the Projected Expenditures for FY 18 projects and the proposed FY 19 CIP project budgets.
- Capital Improvement Program – Account/Project Descriptions. Each project, initiative, and activity in the 10-Year CIP expenditure plan is described by budget account number and serves to guide Agency staff in the execution of budgeted activities. The document identifies replacement schedules for equipment and assets and is a reference when assigning account numbers for purchase orders and payment of goods and services.
- Detailed Project Descriptions. Each large or multi-year initiative has a dedicated planning level document which describes the major capital project by its scope, justification, costs by fiscal year and activity, and includes photograph(s) of the project being described. Capital investments made in these projects during FY 19 may have a direct impact on the FY 19 operating budget.



**Proposed FY 18-19 Capital Improvement Program – Summary of Changes**

<b>Category</b>	<b>FY 17-18 Adopted Budget</b>	<b>FY 17-18 Projected Actuals</b>	<b>FY 18-19 Proposed Budget</b>	<b># of Activities</b>
Facility Improvements	\$ 1,740,600	\$ 1,084,786	\$ 557,500	6
General Equipment	584,300	474,313	454,600	7
Liquid Treatment Equipment and Systems	635,700	462,977	1,220,200	11
Solids Treatment and Energy Generation	671,800	203,000	445,000	7
Staff Costs	185,200	185,200	185,200	2.0 FTE
<b>Total</b>	<b>\$3,817,600</b>	<b>\$2,410,276</b>	<b>\$2,862,500</b>	<b>31</b>

**FY 17-18 Projected Actuals**

Projected total spending is expected to be 64% of the adopted budget amount. Of the \$1.37 million in unexpended budgeted funds, most is associated with the Hillside Slope Stabilization project delay caused by the retirement of the FEMA project manager (\$350K), PG&E Interconnection Agreement Modification study reimbursement allowance not needing to be fully utilized (\$425K), and the Facility Paving (\$148K) and Industrial Coating (\$55K) projects being deferred to summer projects in FY19.

**FY 18-19 Priority Projects**

- 1) Industrial Coatings (\$215K): Rehabilitate epoxy coatings in the SBS chemical storage room and SBS and hypochlorite spill vaults. Also in a separate contracts, seal cracks in the underground gallery walls and apply new epoxy paint in chlorine contact tanks 5 & 6.
- 2) PG&E Interconnection Agreement Modifications (\$100K): Complete the PG&E interconnection agreement modification process and install electrical equipment to allow for power export.
- 3) Hillside Slope Stabilization (\$35K): Design and construction of retaining walls to repair the landslides in the hillside adjacent to Andersen Drive. FEMA has approved funding to repair the slope failures, and is currently evaluating the pre-design geotechnical report. The FY 19 budget is net of the anticipated FEMA reimbursement.
- 4) Pavement Rehabilitation Project (\$175K): Bid, award, and construction of pavement repair and rehabilitation in the vicinity of the solids handling building, maintenance covered parking area, and new maintenance storage building.

5) Gates Rehabilitation (\$436K): Replace the hydraulic system used to open and close primary clarifier gates with an electronic actuator system that will be operated with CMSA's SCADA system.

6) Secondary Clarifier Rehabilitation (\$325K): Repair corrosion on mechanical equipment, metal structural components and pipes inside a clarifier, and replace the turntable drive. This is the first year of a four year program to rehabilitate all four secondary clarifiers.

7) Process Piping (\$190K): Perform an interior inspection of large diameter buried pipelines in the treatment plant. The project potentially includes internal sealing of some or all of the elastomeric joints and other external pipe repairs, based on inspection results.

8) Cogeneration System Maintenance (\$145K): Onsite cogeneration engine upper end rebuild and replacement of turbo chargers, and an allowance to survey potential cogeneration technologies for the planned design of a new cogeneration system.

PROPOSED

**Central Marin Sanitation Agency  
Capital Improvement Program  
FY 18 Proposed Budget and 10-Year Forecast**

GL Account Number	PM*	Delivery Method	Prior FYs' Costs	Adopted Budget For FY 18	Projected FY 18 Actuals	10-year CIP											Project Totals	
						1 Proposed FY 19	2 FY 20	3 FY 21	4 FY 22	5 FY 23	6 FY 24	7 FY 25	8 FY 26	9 FY 27	10 FY 28	Total FY 19 - FY 28		
<b>Facility Improvements</b>																		
7300-103-10	TSM	Effluent Storage Pond Rehabilitation	FB	-	-	-	-	-	38,700	1,225,700	-	-	-	-	-	-	1,264,400	1,264,400
7300-700-10	TSM	Agency Facilities Master Plan (3)	PSA	260,000	250,000	30,000	-	-	-	-	-	-	-	-	-	-	30,000	280,000
7300-956-00	TSM	Industrial Coatings & Concrete Rehabilitation	IB/MC	65,000	10,000	215,000	194,100	99,200	21,000	147,100	24,500	25,100	25,900	140,300	27,500	-	919,700	
7300-987-00	TSM	Outfall Inspection & Repairs	IB/MC	32,200	32,000	33,000	34,000	423,200	36,100	37,200	38,300	39,500	40,700	41,900	43,200	43,200	767,100	
7400-103-10	TSM	Maintenance Facility Modifications (3)	FB	161,740	800,000	701,548	-	-	-	-	-	-	-	-	-	-	-	863,288
7400-945-00	TSM	Facility Improvements	IB	-	-	44,000	-	-	-	-	35,000	-	-	-	-	40,300	119,300	
7400-956-00	TSM	Facility Paving/Site Work	IB/MC	148,400	-	200,000	135,900	11,200	11,500	145,100	12,100	12,400	167,800	13,000	13,400	-	722,400	
7400-600-00	TSM	Hillside Slope Stabilization	FB	400,000	50,000	35,500	-	-	-	-	-	-	-	-	-	-	35,500	
7400-960-00	TSM	Facility Roofs Rehabilitation	MC/IB/FB	35,000	41,238	-	78,100	953,600	-	9,900	-	-	-	-	-	-	1,041,600	1,082,838
7400-967-00	TSM	SHB Elevator Control Replacement	IB	-	-	-	-	-	-	103,500	-	-	-	-	-	-	103,500	103,500
7400-963-00	TSM	Facility Structures Seismic Study	PSA	-	-	-	207,000	-	-	-	-	-	-	-	-	-	207,000	207,000
<b>Subtotal - Facility Improvements</b>				<b>1,740,600</b>	<b>1,084,786</b>	<b>557,500</b>	<b>649,100</b>	<b>1,487,200</b>	<b>107,300</b>	<b>1,565,000</b>	<b>109,900</b>	<b>77,000</b>	<b>234,400</b>	<b>195,200</b>	<b>124,400</b>	<b>5,210,500</b>		
<b>General Equipment</b>																		
7300-672-00	ISA	Process Control	M/MC	37,900	20,000	30,000	31,600	48,800	34,000	34,200	35,100	51,000	36,900	37,900	39,000	-	378,500	
7300-672-10	TSM/ISA	Security / Fire Systems	MC	13,900	-	25,000	4,100	-	4,300	-	4,600	-	4,900	-	5,200	-	48,100	
7300-683-00	MS/TSM	Fuel Storage Tanks	IB/MC	35,000	12,140	-	-	116,300	-	-	-	-	133,900	-	-	-	250,200	
7410-851-00	ISA	IT Hardware and Communication Equip	M	56,900	43,000	66,200	44,900	15,300	50,700	16,200	16,600	17,000	17,500	17,900	18,400	-	280,700	
7420-701-00	MS	Agency Vehicle Replacement	IB/PO	51,000	41,573	95,400	40,000	70,000	6,000	41,400	73,100	54,400	181,500	82,100	84,600	-	728,500	
7430-958-00	LD	Laboratory Equipment	PO	166,600	166,600	85,000	90,000	62,500	40,000	120,000	45,000	46,400	47,800	49,200	50,700	-	636,600	
7450-002-00	MS	Electrical Equipment	M/IB	120,100	95,000	100,000	120,000	100,000	109,000	98,000	94,000	85,000	87,600	90,300	93,000	-	976,900	
7450-002-10	MS	Plant Lighting	IB	26,000	26,000	22,000	14,000	15,000	16,000	10,000	-	-	-	-	-	-	77,000	
7450-102-00	MS	Process Instrumentation	M	51,900	45,000	31,000	40,000	25,000	25,800	26,600	27,400	28,200	29,100	30,000	30,900	-	294,000	
7450-105-00	MS	Electrical Distribution System Rehabilitation	PSA/FB	25,000	25,000	-	-	1,204,800	-	194,500	-	203,800	-	216,200	-	-	1,819,300	1,844,300
<b>Subtotal - General Equipment</b>				<b>584,300</b>	<b>474,313</b>	<b>454,600</b>	<b>384,600</b>	<b>1,657,700</b>	<b>285,800</b>	<b>540,900</b>	<b>295,800</b>	<b>485,800</b>	<b>539,200</b>	<b>523,600</b>	<b>321,800</b>	<b>5,489,800</b>		
<b>Liquids Treatment Equipment and Systems</b>																		
7300-685-00	TSM	Bio-Tower Rotary Distributor Replacement	IB	-	-	-	-	-	-	-	988,000	-	-	-	-	-	988,000	988,000
7300-700-00	MS	Plant Pumps	MC/M	74,800	70,000	63,300	80,000	66,100	67,600	69,100	70,700	71,500	73,900	76,100	78,400	-	716,700	
7300-719-00	MS	Chemical Pumps	M	113,000	65,000	80,600	77,600	155,200	181,000	67,000	56,400	57,200	59,200	61,600	62,800	-	858,600	
7300-720-00	MS	Gates Rehabilitation	M/IB	35,000	32,000	436,400	77,500	79,400	81,100	83,600	437,700	85,800	88,700	92,300	95,500	-	1,558,000	1,590,000
7300-727-00	MS	Headworks Equipment	M	50,000	65,000	27,400	28,900	32,100	30,400	361,100	32,100	255,600	1,056,200	34,700	35,800	-	1,894,300	1,959,300
7300-981-00	TSM	Odor Control System Improvements (3)	PSA/FB	112,420	28,500	2,825	-	-	-	-	2,003,600	-	2,276,800	1,546,800	-	-	5,827,200	5,942,445
7300-983-00	MS	Process Tank Maintenance	M/IB	85,000	30,000	70,000	60,000	535,800	63,600	65,500	67,500	69,500	71,600	73,800	76,000	-	1,153,300	
7400-965-00	TSM/MS	Primary Clarifiers Rehabilitation	MC/M	33,400	25,000	40,000	-	-	347,800	358,300	369,200	760,800	-	161,200	167,800	-	2,205,100	2,230,100
7300-990-00	MS	Secondary Clarifiers Rehabilitation	PSA/IB	-	33,152	150,000	507,100	401,800	227,800	-	-	-	-	-	-	-	1,286,700	1,319,852
7300-991-00	TSM	RAS/WAS Pump Replacement	TSM	-	-	-	-	389,700	779,500	779,500	-	-	-	-	-	-	1,948,700	1,948,700
7300-995-00	TPM	Aeration System Rehabilitation	M/IB	20,100	20,000	20,000	-	-	-	-	40,000	-	-	-	-	-	60,000	
7400-966-00	TSM	Process Piping Inspection/Repairs/Replacement	PSA	97	-	190,000	-	-	-	-	-	779,300	113,800	163,400	-	-	1,246,500	1,246,597
7430-855-00	MS	Chemical Tanks	M/IB	40,000	40,000	45,000	65,100	69,400	100,000	37,200	44,400	2,600	46,600	56,100	58,100	-	524,500	
7430-857-00	MS	Piping, Valves & Operators	M	130,900	80,000	72,500	58,300	59,600	60,900	62,200	63,600	64,400	71,100	74,000	76,600	-	663,200	
7430-859-00	TSM	CCT Valve Rehabilitation	TSM	-	-	-	-	-	-	-	-	-	-	335,300	-	-	335,300	
7450-104-10	TSM	Influent Flow Meter Improvement	PSA	25,000	-	25,000	207,000	-	-	-	-	-	-	-	-	-	232,000	
<b>Subtotal - Liquids Treatment Equipment and Systems</b>				<b>635,700</b>	<b>462,977</b>	<b>1,220,200</b>	<b>1,161,500</b>	<b>1,789,100</b>	<b>1,939,700</b>	<b>1,883,500</b>	<b>4,173,200</b>	<b>2,146,700</b>	<b>3,857,900</b>	<b>2,675,300</b>	<b>651,000</b>	<b>21,498,100</b>		

**Central Marin Sanitation Agency  
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FY 18 Proposed Budget and 10-Year Forecast**

GL Account Number	PM*	Delivery Method	Prior FYs' Costs	Adopted Budget For FY 18	Projected FY 18 Actuals	10-year CIP											Project Totals	
						1 Proposed FY 19	2 FY 20	3 FY 21	4 FY 22	5 FY 23	6 FY 24	7 FY 25	8 FY 26	9 FY 27	10 FY 28	Total FY 19 - FY 28		
<b>Solids Treatment and Energy Generation Equipment and Systems</b>																		
7300-678-00	TSM	Emergency Generator Assessment & Improvement	PSA/FB	-	-	-	-	-	-	-	-	-	80,300	499,700	1,499,200	-	2,079,200	
7300-691-00	TSM	Digester Inspection, Cleaning & Cover Replacement	FB	-	-	-	-	-	886,500	906,200	-	-	-	-	-	-	1,792,700	
<b>7300-715-00</b>	<b>TSM/MS</b>	<b>Centrifuge Maintenance</b>	<b>PSA/FB</b>	<b>3,139</b>	<b>-</b>	<b>40,000</b>	<b>-</b>	<b>500,000</b>	<b>2,703,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3,243,000</b>	<b>3,246,139</b>
<b>7300-722-00</b>	<b>MS</b>	<b>Cogeneration Maintenance (3)</b>	<b>M/IB/FB</b>	<b>86,300</b>	<b>50,000</b>	<b>145,000</b>	<b>449,600</b>	<b>2,011,000</b>	<b>1,694,700</b>	<b>64,900</b>	<b>66,300</b>	<b>68,000</b>	<b>77,300</b>	<b>80,400</b>	<b>83,200</b>	<b>83,200</b>	<b>4,740,400</b>	
7300-724-00	MS	Hot Water Systems	M/PSA	34,000	32,000	14,900	15,200	15,500	15,800	16,100	16,500	17,400	17,400	18,100	18,700	18,700	165,600	
<b>7300-728-00</b>	<b>TSM</b>	<b>Digester Mixing Pump Study</b>	<b>PSA</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100,000</b>	
7300-725-00	MS	Boilers and Gas Processing Equipment	IB	-	-	74,500	-	-	-	-	-	538,600	-	-	-	-	613,100	
7300-977-00	MS	Sludge Recirculating Pump Grinders	M	18,000	18,000	18,900	19,400	19,800	20,300	20,700	21,100	21,400	22,100	23,100	23,900	23,900	210,700	
7300-978-00	MS	Biosolids Hoppers Maintenance	M	8,500	3,000	-	9,300	-	9,600	-	10,000	-	10,900	-	11,600	-	51,400	
<b>7300-980-00</b>	<b>MS</b>	<b>Organic Waste Receiving Facility Equipment</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>51,700</b>	<b>54,500</b>	<b>55,900</b>	<b>57,400</b>	<b>58,900</b>	<b>60,400</b>	<b>62,100</b>	<b>63,600</b>	<b>65,400</b>	<b>67,700</b>	<b>67,700</b>	<b>597,600</b>	
7300-660-00	TSM	PG&E Interconnection Agreement Modification	PSA/IB	525,000	100,000	100,000	-	-	-	-	-	-	-	-	-	-	100,000	
7300-661-00	TSM	FOG/F2E Vault Relining	M/MC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Subtotal - Solids Treatment and Energy Generation Equipment and Systems</b>				<b>671,800</b>	<b>203,000</b>	<b>445,000</b>	<b>648,000</b>	<b>2,602,200</b>	<b>5,387,300</b>	<b>1,066,800</b>	<b>174,300</b>	<b>787,800</b>	<b>691,000</b>	<b>1,686,200</b>	<b>205,100</b>	<b>13,693,700</b>		
<b>CMSA Staff Costs for CIP (2)</b>				<b>185,200</b>	<b>185,200</b>	<b>185,200</b>	<b>190,800</b>	<b>196,600</b>	<b>202,600</b>	<b>208,700</b>	<b>215,000</b>	<b>221,600</b>	<b>228,300</b>	<b>235,200</b>	<b>242,300</b>	<b>242,300</b>	<b>2,126,300</b>	
<b>Annual CIP Totals</b>				<b>3,817,600</b>	<b>2,410,276</b>	<b>2,862,500</b>	<b>3,034,000</b>	<b>7,732,800</b>	<b>7,922,700</b>	<b>5,264,900</b>	<b>4,968,200</b>	<b>3,718,900</b>	<b>5,550,800</b>	<b>5,315,500</b>	<b>1,544,600</b>	<b>48,018,400</b>		

\* PM indicates the project manager for the account.

(1) BOLD items are individual Capital Improvement Projects, or larger, nonrecurring maintenance projects.

(2) CMSA Staffing costs (compensation and benefits) for identified CIP projects.

(3) CIP Projects in FY 17 that will have staff time charged to the CIP.

Delivery Methods	
M	Maintenance project, self performed
MC	Maintenance Contract
PO	Purchase Order, equipment only
PSA	Professional Services Agreement
IB	Informally Bid
FB	Formally Bid

<b>Projected Annual Escalation Rate:</b>	<b>3.03%</b> (rolling 5-year average of ENR San Francisco Construction Cost Index (CCI) annual changes 12/2013-07/2017).
<b>Escalation Factors</b>	1.0303    1.0616    1.0938    1.1269    1.1611    1.1963    1.2326    1.2700    1.3085

<b>2016 to 2017 CCI % Change</b>	<b>3.49%</b> 1.0349
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**CENTRAL MARIN SANITATION AGENCY  
CAPITAL IMPROVEMENT PROGRAM - ACCOUNT / PROJECT DESCRIPTIONS  
PROPOSED FY 19 BUDGET AND 10-YEAR PROJECTION**

<b>Facility Improvements</b>		
<b>ACCOUNT NUMBER</b>	<b>ACCOUNT / PROJECT TITLE</b>	<b>ACCOUNT / PROJECT DESCRIPTION</b>
7300-103-10	Effluent Storage Pond Rehabilitation	See Full Page Description.
7300-700-10	Agency Facilities Master Plan	See Full Page Description.
7300-956-00	Industrial Coatings & Concrete Rehabilitation	<p>Scheduled industrial coating rehabilitation program for process structures and metal equipment, and treatment plant deck traffic coatings. Coating rehabilitation will be included as part of a larger project when appropriate. The condition of concrete structures will be periodically assessed and projects will be added as needed.</p> <p>FY 19 – Complete construction projects to seal cracks in the gallery system with epoxy injection (Master Plan Project 00-4) and to repair failing epoxy coating the Sodium Bisulfite (SBS) Room and SBS and hypochlorite drain vaults. Apply new epoxy paint on the chlorine contact tanks 5 &amp; 6 piping and repair the concrete cold joints.</p> <p>FY 20 – Replace headworks structural metal (skylights, pipe supports, etc.) and apply new epoxy coating on the new metal and the grit tank handrails.</p> <p>FY 21 – Repair wear coating on the Headworks deck and install wear coating on CCTs 1-4.</p> <p>FY 22 – Allowance for industrial coatings as needed.</p> <p>FY 23 – Repair the saw cut floor area in the digester basement (Master Plan Project 13-2).</p> <p>FY 24-26 – Allowance for industrial coating as needed.</p> <p>FY 27 – Repair cracked concrete in the ferric storage room and recoat the floor (Master Plan Project 04-5).</p> <p>FY 28 – Allowance for industrial coating as needed.</p>
7300-987-00	Outfall Inspection & Repairs	<p>On-going underwater inspection and maintenance of the marine outfall diffuser section. Activities include diver inspections of diffusers and risers, survey of diffuser check valve levels above shifting bay floor sediments, extending or replacing risers and diffuser check valves as needed, and periodic monitoring and removal of solids deposition inside outfall pipe.</p> <p>FY 19 – Inspect the diffuser section of the outfall, and includes an allowance to replace up to five broken diffusers if found during the inspection.</p> <p>FY 20 – Routine inspection and riser extension or replacement (assumed 5 total), as needed.</p> <p>FY 21 – Allowance for outfall diffuser section interior cleaning. If the previous year’s interior solids monitoring indicates the solids accumulation is minor, it will be deferred until a future year based on the solids accumulation rate from FY 14 to FY 20. Cost estimate based on escalating the \$300,000 costs from FY 09.</p> <p>FY 22-28 – Routine inspection and riser extension or replacement (assumed 5 per year), as needed.</p>

**CENTRAL MARIN SANITATION AGENCY  
CAPITAL IMPROVEMENT PROGRAM - ACCOUNT / PROJECT DESCRIPTIONS  
PROPOSED FY 19 BUDGET AND 10-YEAR PROJECTION**

<b>Facility Improvements</b>		
<b>ACCOUNT NUMBER</b>	<b>ACCOUNT / PROJECT TITLE</b>	<b>ACCOUNT / PROJECT DESCRIPTION</b>
	Facility Improvements	This new account is for various building improvements that are not incorporated into other capital projects. FY 19 – Relocate the operations control room and create new work spaces in the Administration Building, install roll-up doors on the new annex building, and install new secondary containment system for the hazardous materials storage. FY 24 – Allowance for building improvements. FY 28 – Allowance for building improvements.
7400-956-00	Facility Paving/ Site Work	This account is for minor paving repairs and associated site work on internal facility roads, walkways, parking lots, and other pavement, and for re-grading, cleaning, and replacing gravel in drainage ditches. FY 19 – Complete construction of a major plant paving project around the solids handling building, maintenance building canopy, and the new annex building concrete approach pad. FY 20 – Allowance for a major plant slurry seal and striping project (plant road from gate to OWRF). FY 23 – Allowance for a major plant paving project (employee parking area). FY 26 – Allowance for a major plant paving project (plant road from primary clarifiers to solids handling building).
7400-600-00	Hillside Slope Stabilization	Several significant landslides occurred on the hillside adjacent to Andersen Drive this past winter. These slope failures will require geotechnical design to recommend the appropriate construction measures required to stabilize the hillside. The budget allowance is based on a previous geotechnical report for a similar, but smaller, slope failure that occurred several years ago. CMSA submitted a request for FEMA funding to repair the slope failures and received approval of our Request for Public Assistance. FEMA funds are limited to 75% of the total eligible costs for the permanent repairs. Cal OES will also provide funding for up to 18.75% of the total cost, leaving CMSA’s share at 6.25%. While the total estimated budget to construct the hillside improvements is \$568,000, only CMSA’s share is in the budget.
7400-960-00	Facility Roofs Rehabilitation	See Full Page Description.
7400-967-00	SHB Elevator Control Replacement	See Full Page Description.
7400-963-00	Facility Structures Seismic Study	See Full Page Description.

**CENTRAL MARIN SANITATION AGENCY  
CAPITAL IMPROVEMENT PROGRAM - ACCOUNT / PROJECT DESCRIPTIONS  
PROPOSED FY 19 BUDGET AND 10-YEAR PROJECTION**

General Equipment		
ACCOUNT NUMBER	ACCOUNT / PROJECT TITLE	ACCOUNT / PROJECT DESCRIPTION
7300-672-00	Process Control	<p>Allowances for on-going replacement, upgrades, and improvements to the Agency's process control system including new instruments, servers, and computers; and Programmable Logic Controllers (PLCs) and Human Machine Interface (HMI) hardware and software. Annual allowance is based on escalated costs from previous years. Actual cost estimates are used for specifically identified equipment.</p> <p>FY 19-20 – Routine PLC and HMI hardware replacement. Identify and purchase critical spares.</p> <p>FY 21 – Routine PLC and HMI hardware replacement. Identify and purchase critical spares. Battery replacement at hilltop repeater.</p> <p>FY 22 – Routine PLC and HMI hardware replacement and replace SCADA workstations. Identify and purchase critical spares.</p> <p>FY 23-24 – Routine PLC and HMI hardware replacement. Identify and purchase critical spares.</p> <p>FY 25 – SCADA system software review and potential upgrades.</p> <p>FY 26-28 – Routine PLC and HMI hardware replacement.</p>
7300-672-10	Security/ Fire Systems	<p>Allowance for projects related to the Agency's physical security and fire protections systems, and includes a biannual allowance to purchase replacement equipment as needed.</p> <p>FY 19 – Inspect existing fire protection systems and address deficiencies as needed.</p>
7300-683-00	Fuel Storage Tanks	<p>Allowance to replace the existing underground fuel storage tanks with above ground storage tanks. This replacement would be triggered by one of the underground tanks failing or by a change in regulatory requirements. It is expected that any regulatory change would provide sufficient time for the replacement to occur in the fiscal year following the change.</p>
7410-851-00	IT Hardware and Communication Equip	<p>Routine repair and regular replacement of Information Technology hardware and software, such as office computers, printers, scanners, digital telephone equipment and its supporting servers, and voice radio equipment used by Agency staff.</p> <p>FY 19 – Allowance for equipment listed above and upgrade 21 business computers hardware, purchase four new desktops, five laptops, and upgrade software on remaining 18 business workstations.</p> <p>FY 20 – Allowance for equipment listed above and upgrade/replacement of plant fiber runs.</p> <p>FY 21 – Allowance for equipment listed above.</p> <p>FY 22 – Allowance for equipment listed above and replacement of the data servers on which all Agency business and SCADA virtual servers run.</p> <p>FY 23-28 – Allowance for equipment listed above.</p>

**CENTRAL MARIN SANITATION AGENCY  
CAPITAL IMPROVEMENT PROGRAM - ACCOUNT / PROJECT DESCRIPTIONS  
PROPOSED FY 19 BUDGET AND 10-YEAR PROJECTION**

<b>General Equipment</b>		
<b>ACCOUNT NUMBER</b>	<b>ACCOUNT / PROJECT TITLE</b>	<b>ACCOUNT / PROJECT DESCRIPTION</b>
7420-701-00	Agency Vehicle Replacement	<p>Purchase new vehicles or equipment for passenger vehicles, trucks, forklift, bicycles, and electric carts as they reach or exceed their expected useful lives.</p> <p>FY 19 – Replace daily round pump station truck, Toyota Highlander, and two electric carts.</p> <p>FY 20 – Replace one carpool vehicle and one electric cart.</p> <p>FY 21 – Replace one carpool vehicle, one forklift, and one electric cart.</p> <p>FY 22 – Replace tires on all-terrain forklift and environmental services tri-cycle.</p> <p>FY 23 – Replace F150 environmental services truck.</p> <p>FY 24 – Replace skid steer loader and replace batteries for administration Prius.</p> <p>FY 25 – Replace Ford E250 van.</p> <p>FY 26 – Replace F450 flatbed with a mechanic’s truck, and one electric cart.</p> <p>FY 27 – Replace a maintenance vehicle and one electric cart.</p>
7430-958-00	Laboratory Equipment	<p>This account includes allowances for scheduled replacement of laboratory equipment such as autoclaves, pumps, collection/sampler systems, washers, incubators, bioassay system, etc.</p> <p>FY 19 – Replace BOD incubator, centrifuge, sample refrigerator, primary and secondary process samplers and an automated BOD testing system.</p> <p>FY 20 – Replace and potentially relocate the bioassay system to the final effluent vault or end residual room, and replace temperature monitors.</p> <p>FY 21 – Replace ammonia distillation system, chlorine titrators, biotower sampler, and microscope.</p> <p>FY 22 – Replace the SD2 vault sampler and microbiological incubators.</p> <p>FY 23 – Purchase a FIA-IC system to measure ammonia, nutrients, and other constituents.</p> <p>FY 24-28 – Allowance to replace equipment as need or purchase new equipment.</p>



**CENTRAL MARIN SANITATION AGENCY  
CAPITAL IMPROVEMENT PROGRAM - ACCOUNT / PROJECT DESCRIPTIONS  
PROPOSED FY 19 BUDGET AND 10-YEAR PROJECTION**

General Equipment		
ACCOUNT NUMBER	ACCOUNT / PROJECT TITLE	ACCOUNT / PROJECT DESCRIPTION
7450-002-00	Electrical Equipment	<p>This account includes allowances for planned maintenance, upgrading, and replacement of Agency electrical components: individual motor controls and equipment panels, electric sluice gate operators, variable frequency drives, and electrical equipment to support process equipment.</p> <p>FY 19 – Replace two valve actuators on the SBS tank piping system.</p> <p>FY 20 – Replace five valve actuators on the hypochlorite tank piping system.</p> <p>FY 21 – Purchase a spare actuator for the 66-inch effluent valve.</p> <p>FY 22 – Replace Control Room uninterruptible power source and purchase a spare actuator for the 72-inch gate.</p> <p>FY 23 – Purchase a spare actuator for the 84-inch gate.</p> <p>FY 24 – Purchase spare actuators for 4-inch to 8-inch valves.</p> <p>FY 25-28 – Allowance for replacement of equipment as determined by condition assessment.</p>
7450-002-10	Plant Lighting	<p>This account includes allowances to replace low efficiency lights with LED lighting that consumes less power and reduces light pollution. Each project is grouped by lighting fixture type and will be completed by staff or an electrical contractor.</p> <p>FY 19 – Replace HPS lighting in Galleries C, L, and M, the headworks, solids handling building, and the digester pump mixing room.</p> <p>FY 20 – Replace HPS lighting in the grit loading bay, solids loading bay, and the secondary clarifier and effluent pump station wall packs.</p> <p>FY 21 – Replace HPS lighting in the bollards around the administration building and on light poles by the above ground diesel storage tank, 66-inch valve vault, OWRF, and sulfatreat vessels.</p> <p>FY 22 – Replace HPS lighting on primary clarifiers 6 &amp; 7, chlorine contact tanks 5 &amp; 6, and polymer station.</p> <p>FY 23 – Allowance to replace any remaining HPS lighting.</p>
7450-102-00	Process Instrumentation	<p>This account includes allowances for on-going repair, replacement, or upgrading of 4 to 6 obsolete meters, sensors, and transmitters per year, and to provide local process status information and transmit it to the treatment plant's SCADA system. Annual allowance is based on equipment costs from previous years and has been escalated to current and future dollars.</p> <p>FY 19 – Allowance for above equipment, plus replace two pressure transmitters on chlorine contact tanks 5 and 6. Purchase a spare laser level for the digester covers.</p> <p>FY 20 – Allowance for above equipment, plus replace portable gas monitors and install a new radar level measurement system in the OWRF.</p> <p>FY 21-28 – Allowance for above equipment.</p>

**CENTRAL MARIN SANITATION AGENCY  
CAPITAL IMPROVEMENT PROGRAM - ACCOUNT / PROJECT DESCRIPTIONS  
PROPOSED FY 19 BUDGET AND 10-YEAR PROJECTION**

<b>General Equipment</b>		
<b>ACCOUNT NUMBER</b>	<b>ACCOUNT / PROJECT TITLE</b>	<b>ACCOUNT / PROJECT DESCRIPTION</b>
7450-105-00	Electrical Distribution System Rehabilitation	See Full Page Description.

<b>Liquid Treatment Processes and Equipment</b>		
<b>ACCOUNT NUMBER</b>	<b>ACCOUNT / PROJECT TITLE</b>	<b>ACCOUNT / PROJECT DESCRIPTION</b>
7300-685-00	Bio-Tower Rotary Distributor Replacement	See Full Page Description.
7300-700-00	Plant Pumps	<p>Scheduled replacement of centrifugal, positive displacement and chopper pumps. These pumps transport primary sludge, waste activated sludge, contact tank scum, and other liquids throughout the Agency facilities. This account includes the digester mixing pumps.</p> <p>FY 19 – Replace two digester basement chopper pumps, four primary sludge pumps, and trays.</p> <p>FY 20 – Replace three carrier water pumps.</p> <p>FY 21 – Refurbish one biotower pump. Replace two primary scum pumps and two plant sump pumps.</p> <p>FY 22 – Refurbish three recycled water pumps and one scum pump. Replace one headworks sample pump and two sump pumps.</p> <p>FY 23 – Replace two sump pumps and two secondary scum pumps. Allowance to replace additional pumps identified by condition assessments.</p> <p>FY 24 – Refurbish two digester mix pumps. Allowance to replace additional pumps identified by condition assessments.</p> <p>FY 25-28 – Allowance to replace pumps identified by condition assessments.</p>

**CENTRAL MARIN SANITATION AGENCY  
CAPITAL IMPROVEMENT PROGRAM - ACCOUNT / PROJECT DESCRIPTIONS  
PROPOSED FY 19 BUDGET AND 10-YEAR PROJECTION**

**Liquid Treatment Processes and Equipment**

ACCOUNT NUMBER	ACCOUNT / PROJECT TITLE	ACCOUNT / PROJECT DESCRIPTION
7300-719-00	Chemical Pumps	<p>This account includes an allowance for regular refurbishment or replacement, based on a condition assessment, of pumps and related equipment for the delivery of specific chemicals at various treatment unit processes. Chemical pumps include those for ferric chloride, hydrogen peroxide, calcium nitrate, sodium hypochlorite, emulsion polymer, and sodium bisulfite.</p> <p>FY 19 – Above allowances, plus add one high flow sodium bisulfite metering pump, one solids handling polymer activation unit, and one chemical induction mixer.</p> <p>FY 20 – Replace eight nitrate solution metering pumps and replace one chemical induction mixer.</p> <p>FY 21 – Replace five disinfection (chlorine solution) metering pumps and one chemical induction mixer.</p> <p>FY 22 – Replace five sodium bisulfite metering pumps, two chemical transfer pumps, and one chemical induction mixer.</p> <p>FY 23 – Refurbish one polymer feed pump and one chemical induction mixer. Replace two headworks ferric chloride metering pumps.</p> <p>FY 24-28 – Above allowances to replace chemical pumps based on condition assessment.</p>
7300-720-00	Gates Rehabilitation	See Full Page Description.
7300-727-00	Headworks Equipment	See Full Page Description.
7300-981-00	Odor Control System Improvements	See Full Page Description.
7300-983-00	Process Tank Maintenance	<p>Refurbishment and replacement of mechanical equipment such as drive mechanisms, media vessels, and blowers in all process tanks and systems throughout the treatment facility.</p> <p>FY 19 – Allowance for above equipment, plus install safe access gates onto four secondary clarifiers, two chlorine contact tanks, six headworks locations, and four in Primary Clarifiers #6 &amp; #7.</p> <p>FY 20 – Allowance for above equipment, plus refurbish or repair reclaimed water piping which supports tank wash down equipment.</p> <p>FY 21 – Replace original blowers and associated diffusers in the aerated grit tanks (Master Plan Project 04-3).</p> <p>FY 22 – Allowance for above equipment, plus perform a condition assessment of siloxane media vessels, hydrogen sulfide media vessels, and appurtenances.</p> <p>FY 23-28 – General tank related replacement of equipment as determined by condition assessment.</p>
7400-965-00	Primary Clarifiers Rehabilitation	See Full Page Description.

**CENTRAL MARIN SANITATION AGENCY  
CAPITAL IMPROVEMENT PROGRAM - ACCOUNT / PROJECT DESCRIPTIONS  
PROPOSED FY 19 BUDGET AND 10-YEAR PROJECTION**

<b>Liquid Treatment Processes and Equipment</b>		
<b>ACCOUNT NUMBER</b>	<b>ACCOUNT / PROJECT TITLE</b>	<b>ACCOUNT / PROJECT DESCRIPTION</b>
7300-990-00	Secondary Clarifiers Rehabilitation	See Full Page Description.
7300-991-00	RAS/WAS Pump Replacement	See Full Page Description.
7300-995-00	Aeration System Rehabilitation	This new account includes replacement and rehabilitation of aeration system equipment. FY 19 - Replace aeration channel air diffusers. FY 24 - Replace aeration diffuser membranes in all four tanks.
7400-966-00	Process Piping Inspection/Repairs/Replacement	See Full Page Description.
7430-855-00	Chemical Tanks	Replacement of chemical storage tanks used throughout the treatment plant and in the collection system as they approach the end of their service lives. Tanks include five sodium hypochlorite, two sodium bisulfite, two hydrogen peroxide, two polymer, four calcium nitrate, and three ferric chloride tanks. The replacement schedule is subject to change based on annual condition assessment inspection results. FY 19 – Replace the West Railroad nitrate tank. FY 20 – Replace one sodium hypochlorite tank and the Greenbrea nitrate tank. FY 21 – Replace one sodium hypochlorite tank and the Paradise nitrate tank. FY 22 – Replace the North Francisco nitrate tank and assess the headworks bulk ferric chloride storage tanks. FY 23 -24 – Allowance for an unspecified tank replacement. FY 24 – Replace a sodium bisulfite tank. FY 25 – Perform an assessment on the effluent pump station’s convault diesel storage tank. FY 26-28 – Allowance for an unspecified tank replacement.

**CENTRAL MARIN SANITATION AGENCY  
CAPITAL IMPROVEMENT PROGRAM - ACCOUNT / PROJECT DESCRIPTIONS  
PROPOSED FY 19 BUDGET AND 10-YEAR PROJECTION**

**Liquid Treatment Processes and Equipment**

ACCOUNT NUMBER	ACCOUNT / PROJECT TITLE	ACCOUNT / PROJECT DESCRIPTION
7430-857-00	Piping, Valves & Operators	<p>There are over 750 plug valves in the treatment plant's process systems, ranging in size up to 12" in diameter. This account includes annual allowances for routine maintenance and periodic replacement of these valves, their operators, and associated piping. This allowance may change as on-going condition assessments are completed.</p> <p>FY 19 – Replace fourteen 6-inch and four 4-inch expansion joints in Gallery B process piping system.</p> <p>FY 20 – Replace six 4-inch Gallery A and nine 6-inch in Gallery C expansion joints.</p> <p>FY 21 – Fire protection pipeline and valve system replacement in selected location in the galleries.</p> <p>FY 22 – Replace valves associated with Digester #1.</p> <p>FY 23 – Replace valves associated with Digester #2.</p> <p>FY 24 – Replace the hot water pipe system into the Administration Building.</p> <p>FY 25-28 – Allowance for repairs as determined by future condition assessments.</p>
7430-859-00	CCT Valve Rehabilitation	<p>The telescoping valves in the Chlorine Contact Tanks (CCT) 1 through 4 are used to remove debris floating on the water surface. There is also a motor operated bar screen that removes debris from effluent that is diverted for recycled water usage.</p> <p>FY 27 – The 2018 Facilities Master Plan recommends replacing the telescoping valves in Chlorine Contact Tanks (CCT) 1 through 4. An option that will be explored is to replace the telescoping valves with rotating pipe skimmers with motorized actuators. This project also includes replacing the recycled water screen.</p>
7450-104-10	Influent Flow Meter Improvement	<p>Both the 45" San Rafael Interceptor and the 54" Ross Valley Interceptor were fitted with insertion magnetic-type meters in FY 11. Having both the original ultrasonic meters plus the magnetic meters can improve their accuracy in measuring large flow variations.</p> <p>FY 19 – Conduct a flow meter technology study to improve large diameter pipeline flow measurement accuracy.</p> <p>FY 20 – Allowance to install new flow meter technology pending the results of the flow meter technology survey.</p>

**CENTRAL MARIN SANITATION AGENCY  
CAPITAL IMPROVEMENT PROGRAM - ACCOUNT / PROJECT DESCRIPTIONS  
PROPOSED FY 19 BUDGET AND 10-YEAR PROJECTION**

<b>Solids Treatment and Energy Generation Processes and Equipment</b>		
<b>ACCOUNT NUMBER</b>	<b>ACCOUNT / PROJECT TITLE</b>	<b>ACCOUNT / PROJECT DESCRIPTION</b>
7300-678-00	Emergency Generator Assessment & Improvement	<p>The emergency generator provides power to Agency facilities when utility power is not available and the cogeneration system is offline. The emergency generator system was installed in 1985 and consists of an electrical generator connected to a diesel fueled reciprocating engine. While the equipment is relatively old, it has had minimal usage and is maintained per manufacturer’s recommendations.</p> <p>FY 25 – A consultant will conduct an assessment of the generator for condition, air emissions and reliability. The budget includes an allowance for a preliminary design report that will include an estimate of the cost to rehabilitate or replace the equipment.</p> <p>FY 26-27 – Allowance to fund design and installation of a replacement emergency generator based on findings of the assessment and preliminary design report.</p>
7300-691-00	Digester Inspection, Cleaning and Cover Replacement	<p>This account includes allowance for periodic cleaning and inspection of each anaerobic digester every ten years based on conservative estimates of their membrane covers’ service lives. Agency staff will drain the tanks to allow a contractor to remove material that has accumulated inside the tanks. A specialty contractor will replace the membrane covers after the cleaning is complete and then staff will return each digester to service.</p> <p>FY 22 – Allowance to clean and inspect the interior of Digester No. 1 and replace its dual membrane cover.</p> <p>FY 23 – Allowance to clean and inspect the interior of Digester No. 2 and replace its dual membrane cover.</p>
7300-715-00	Centrifuge Maintenance	See Full Page Description.
7300-722-00	Cogeneration Maintenance	See Full Page Description.
7300-724-00	Hot Water Systems	<p>Repairs and replacement of hot water system pumps, valves, flex fittings, and piping as needed to maintain the system that supplies hot water to the digesters, other Agency facilities, and the administration building.</p> <p>FY 19 – Replace hot water pipe system insulation.</p> <p>FY 20-28 – Allowance for system repairs as needed.</p>
7300-728-00	Digester Mixing Pump Study	<p>The 2018 Facilities Master Plan noted that the digester mixing pumps have significant vibration and there are cracks in the pump room walls.</p> <p>FY 20 – Conduct a study to investigate the cause of the digester mixing pump vibration, any potential relationship to cracks in the pump room walls, and the need for an additional support system for the suction and discharge pipes.</p>

**CENTRAL MARIN SANITATION AGENCY  
CAPITAL IMPROVEMENT PROGRAM - ACCOUNT / PROJECT DESCRIPTIONS  
PROPOSED FY 19 BUDGET AND 10-YEAR PROJECTION**

<b>Solids Treatment and Energy Generation Processes and Equipment</b>		
<b>ACCOUNT NUMBER</b>	<b>ACCOUNT / PROJECT TITLE</b>	<b>ACCOUNT / PROJECT DESCRIPTION</b>
7300-725-00	Boilers and Gas Processing	Scheduled inspection, repair and/or replacement of boiler tubes that are used to heat water for the Agency's hot water systems when the cogeneration engine is offline. FY 19 – Allowance for major maintenance of boilers and gas compression system. FY 25 – Replacement of two existing boilers, upgraded to meet future Bay Area Air Quality Management District requirements.
7300-977-00	Sludge Recirculating Pump Grinders	An annual allowance for replacement of two sludge grinders' high-wear cutter cassettes.
7300-978-00	Biosolids Hoppers - Maintenance	An allowance for monitoring and minor repairs to biosolids hoppers, gates, and hydraulic actuators. When centrifuges are scheduled for replacement, improvements to the hoppers will be coordinated with that project. FY 20-28 – Allowance for minor maintenance of mechanical equipment every other year.
7300-980-00	Organic Waste Receiving Facility Equipment	New account for repairs and replacement of pumps, valves, monitors, and other equipment in the Organic Waste Receiving Facility (OWRF). Due to the high solids content and low pH of the organic slurry, equipment in the OWRF requires frequent repairs and/or replacement. The annual allowance is based on the cost of equipment typically consumed in a year.
7300-660-00	PG&E Interconnection Agreement Modification	The PG&E offsite and CMSA onsite improvements were completed in FY 18. However, it is possible that additional testing may be required in FY 19 to finalize the Interconnection Agreement (IA) terms. The budget includes an allowance for unexpected expenses related to completing the IA. CMSA submitted a State Revolving Fund (SRF) Green Project Reserve grant application with a Plan of Study that includes consultant tasks to define operational limits for biogas and power generation, OWRF expansion, IA modification, CEQA/NEPA environmental review, air quality permitting, financial funding review, and project management activities. The total estimated cost for the Plan of Study is \$666,859, of which \$500,000 is available for reimbursement. Because CMSA will only be reimbursed for expenses incurred, an allowance of \$100,000 has been included in this account to cover costs while waiting for reimbursement.

**CENTRAL MARIN SANITATION AGENCY  
 CAPITAL IMPROVEMENT PROGRAM - ACCOUNT / PROJECT DESCRIPTIONS  
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**Solids Treatment and Energy Generation Processes and Equipment**

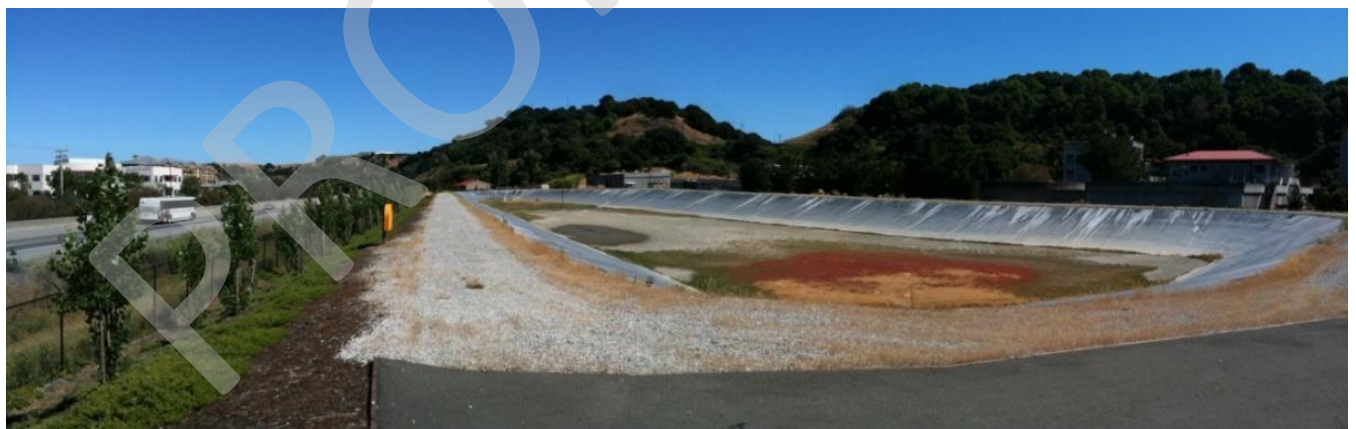
ACCOUNT NUMBER	ACCOUNT / PROJECT TITLE	ACCOUNT / PROJECT DESCRIPTION
No Account Number	CMSA Staff Costs for CIP Projects	<p>Capitalization of compensation and benefits for CMSA staff time to manage design of, contracting for, and construction of CIP projects, as listed below. Costs for FY 18 are based on actual estimated staff time, totaling two Full Time Equivalencies (FTE's). Costs for future years are based on a one FTE allowance, and will be modified for each current fiscal year in that year's CIP budget. The projects identified for staff cost capitalization in FY 18 are:</p> <ul style="list-style-type: none"> <li>7300-720-10 Gates Rehabilitation</li> <li>7300-990-00 Secondary Clarifiers Rehabilitation</li> <li>7400-966-00 Process Piping Inspection/Repairs/Replacement</li> <li>7300-715-00 Centrifuge Maintenance</li> <li>7300-660-00 PG&amp;E Interconnection Agreement Modification</li> </ul>

PROPOSED



<b>Effluent Storage Pond Rehabilitation (GL 7300-103-10)</b>			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Formally bid construction		
<b>Description and Justification</b>	The effluent storage pond was constructed over a deep layer of Young Bay Mud that settles unevenly under the pond. This causes loss of capacity due to berm settling, and small areas of shallow standing water after the pond is emptied due to bottom settling. The berm was reconstructed and raised in 2007, including a new geotextile liner and new sections of intake and outlet piping. There is an allowance for surveying in FY 22 and potential renovation of berms and bottom in FY 23.		
<b>Elements</b>	FY 22 – Survey entire berm, top road, and pond bottom for excessive or uneven settlement. FY 23 – Based on survey results, allowance for re-grading the pond bottom and/or raising the berm, including extending and re-anchoring the buried extra liner material and rebuilding the service road on top of the berm.		
<b>Risk Assessment</b>	This is a low risk project because berm settlement does not occur rapidly. Berm condition will be regularly monitored and the survey timing can be adjusted if necessary.		
<b>Projected Expenditures FY 19 - 28</b>			
		FY 22	\$38,700
		FY 23	1,225,700
		<b>FY 19 -28 Total</b>	<b>\$1,264,000</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>		<b>Cost</b>
FY 22	Allowance to survey and design improvements to berm, road, and/or pond bottom		38,700
FY 23	Allowance to raise pond berm and extend and re-anchor cover		<b>1,264,000</b>
		<b>Project Total</b>	<b>\$1,354,454</b>

**Project Photo:**



**Effluent Storage Pond**

<b>Agency Facilities Master Plan (GL 7300-700-10)</b>			
<b>Type of Project</b>	Planning Study	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Request for Proposals		
<b>Description and Justification</b>	This Master Plan will include several elements to guide the Agency in planning future projects. A traditional master plan primarily considers the impacts related to growth. Because there is limited potential for growth in the Agency's service area, this study will focus on the condition of the Agency's aging facilities, impacts associated with potential regulatory changes, reduction in energy usage and GHG emissions, operational improvements, and climate change. The Master Plan recommendations will be presented to the Board, and selected activities and projects will be incorporated into the FY 19 10-Year CIP and Revenue Program.		
<b>Elements</b>	<ul style="list-style-type: none"> <li>- Recommendations for if and when aging infrastructure should be replaced in-kind or retrofitted with a newer technology that reduces electrical consumption or GHG emissions.</li> <li>- Agency specific options for additional biogas use including energy generation, natural gas pipeline injection, and a vehicle fueling station.</li> <li>- Evaluation of potential regulatory changes including nutrient limits.</li> <li>- Evaluation of biosolids management practices and identification of future alternatives.</li> <li>- Potential facility and/or equipment improvements to address sea level rise.</li> <li>- Identify feasible locations and sizes for solar power facilities.</li> <li>- A calibrated treatment plant model that can be used to simulate changes in operational strategy and for training of new operations staff.</li> </ul>		
<b>Risk Assessment</b>	The Agency should regularly conduct master planning activities to assess potential risks associated with infrastructure management, regulatory changes, and capacity restrictions. Because there are no immediate drivers to alter the facility, this project is considered low risk.		
<b>Projected Expenditures FY 19 - 28</b>			
			FY 19
			\$40,000
			<b>FY 19 - 28 Total</b>
			<b>\$40,000</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>	<b>Cost</b>	
FY 17	Develop and issue an RFP to select a consultant and begin preparation of the Master Plan	\$230,000	
FY 18	Continue working on the Master Plan	260,000	
FY 19	Complete the Master Plan	40,000	
Project Total			<b>\$530,000</b>

**Project Photos:**



**Agency Facilities**



**Organic Waste Receiving Facility**



**Effluent Pumps**

<b>Facility Roofs Rehabilitation (GL 7400-960-00)</b>			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Formally bid		
<b>Description and Justification</b>	In FY 2015, the Agency had a roofing expert survey all its building roofs. The assessment indicated that the original standing seam metal roofs are in good condition. Therefore, planned replacement of the roofs has been postponed. This item contains allowances to rehabilitate the standing seam metal roofs on the Administration, Maintenance, Aeration and Secondary Clarifier control buildings and the Maintenance Annex, and to perform minor repairs on their supporting structures, if required.		
<b>Elements</b>	FY 18 – Replace gutters on the aeration system and secondary clarifier control buildings. (Completed) FY 20 – Prepare construction documents to bid and perform a contract for roof system replacement, structural repairs, and/or seismic upgrades. FY 21 – Construct upgrades to the structures. FY 23 – Construct roof repairs on the headworks, bio-tower control room, and switchgear.		
<b>Risk Assessment</b>	This is a medium risk project. A recent roof inspection indicated that the roof system for the Administration Building is in good condition but that it will require rehabilitation in the future.		
<b>Projected Expenditures FY 19 - 28</b>			
		FY 20	78,100
		FY 21	953,600
		FY 23	9,900
		<b>FY 19 - 28 Total</b>	<b>\$1,041,600</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>	<b>Cost</b>	
FY 18 (Completed)	Gutter replacement for the aeration system and secondary clarifier control buildings	35,000	
FY 20	Prepare construction documents for necessary upgrades	75,500	
FY 21	Planned construction for roof replacement and structural/seismic upgrades or repairs	921,400	
FY 23	Roof repairs recommended in Master Plan Project	9,900	
	<b>Project Total</b>	<b>\$1,041,800</b>	

**Project Photo:**



**Maintenance Building with standing seam metal roofs.**

<b>Solids Handling Building Elevator Control Replacement (GL 7400-967-00)</b>			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Formally bid		
<b>Description and Justification</b>	The 2018 Facility Master Plan condition assessment initially recommended replacing the entire elevator (Master Plan Project 12-5). After further discussions with staff and reviewing inspection reports it was determined that the mechanical components of the elevator still have several years of remaining life. However, the control system will need to be replaced due to age and issues that have required increased maintenance in recent years.		
<b>Elements</b>	FY 23 – Replace the Solids Handling Building elevator control system.		
<b>Risk Assessment</b>	This is a medium risk project. The control system has required increased maintenance and will potentially not pass an annual inspection in the near future if it is not replaced.		
<b>Projected Expenditures FY 19 - 28</b>			
			FY 23
			103,500
			<b>FY 19 - 28 Total</b>
			<b>\$103,500</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>	<b>Cost</b>	
FY 23	Replace elevator control system	103,500	
			<b>Project Total</b>
			<b>\$103,500</b>

**Project Photos:**



**Solids Handling Building Elevator**



**Elevator Control Panel**

Facility Structures Seismic Study (GL 7400-963-00)			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Formally bid		
<b>Description and Justification</b>	The 2018 Facility Master Plan recommends conducting a study to evaluate seismic impacts due to soil settlement (Master Plan Project 99-1). Subsidence of the ground has been observed in multiple locations throughout the facility, including in the immediate areas round process tanks. Because structures were constructed on pile foundations, the settlement has produced gaps under the bottom of the structures. It is possible that the original seismic design was dependent on the tops of the piles being at grade and fully supported. With the tops of the piles currently above grade and exposed, the unsupported pile length may be overstressed during an earthquake resulting in structural damage. Ground settlement may have also affected the stresses on buried piping between process areas.		
<b>Elements</b>	FY 20 – Conduct a study to quantify the risk of structural damage due to soil settlement and identify future structural improvement projects, if necessary.		
<b>Risk Assessment</b>	This is a medium risk project due to the unknown risk posed to facility structures resulting from soil settlement.		
<b>Projected Expenditures FY 19 - 28</b>			
			FY 20
			207,000
			<b>FY 19 - 28 Total</b>
			<b>\$207,000</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>		<b>Cost</b>
FY 20	Conduct seismic study		207,000
<b>Project Total</b>			<b>\$207,000</b>

**Project Photos:**



**Stair modifications to account for settlement**



**Exposed bottom of process tank**

<b>Electrical Distribution System Rehabilitation (GL 7450-105-00)</b>			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Formally bid		
<b>Description and Justification</b>	The 2018 Facility Master Plan recommends replacing the main electrical switchgear components that distribute power throughout the facility (Master Plan Project 14-1). The existing switchgear electrical components are mostly comprised of equipment that was installed when the facility was constructed in 1985. While most of the equipment continues to operate, it is difficult to locate functional replacement equipment because manufacturers no longer provide technical support. This project also includes allowances in later years to replace motor control centers (MCCs) located in several treatment process areas when condition assessment findings warrant replacement.		
<b>Elements</b>	FY 21 – Replace electrical equipment and the HVAC system in the existing switchgear building. FY 23 – Allowance to refurbish or replace a MCC based on condition assessment findings. FY 25 – Allowance to refurbish or replace a MCC based on condition assessment findings. FY 27 – Allowance to refurbish or replace a MCC based on condition assessment findings.		
<b>Risk Assessment</b>	This is a high risk project because a failure of the switchgear would result in a significant process disruption potentially resulting in shutdowns or significant downtime that could result in discharge of untreated effluent.		
<b>Projected Expenditures FY 19 - 28</b>			
		FY 21	1,204,800
		FY 23	194,500
		FY 25	203,800
		FY 27	216,200
		<b>FY 19 - 28 Total</b>	<b>\$1,819,300</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>		<b>Cost</b>
FY 20	Replace switchgear		1,204,800
FY 21	Replace a MCC		194,500
FY 23	Replace a MCC		203,800
FY 25	Replace a MCC		216,200
		<b>Project Total</b>	<b>\$1,819,300</b>

**Project Photos:**



**Switchgear building and transformer**



**Switchgear equipment**

<b>Biotower Rotary Distributor Replacement (GL 7300-685-00)</b>			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Informally bid		
<b>Description and Justification</b>	The biotowers are the first of two secondary treatment processes, and remove some of the biochemical oxygen demand (BOD) from the primary effluent before treatment in the aeration tanks. The rotary distributor is the critical moving part, spreading wastewater evenly on the filter media. These critical components operate in a harsh environment and they have about a 25 to 30-year life expectancy. The rotary distributor and top level of filter media in Biotower No. 1 were replaced in 2010. The 2018 Facility Master Plan recommends replacing the rotating mechanism and media in Biotower No. 2 (Master Plan Project 06-2).		
<b>Elements</b>	<ul style="list-style-type: none"> <li>- Replace galvanized-steel distributor mechanism and plastic spreader nozzles with a motor-operated mechanism.</li> <li>- Replace distributor bearing.</li> <li>- Replace or recoat the cast iron turntable on which the mechanism turns.</li> <li>- Replace the top tier of media that is subject to weather damage.</li> </ul>		
<b>Risk Assessment</b>	This is a medium risk project. The rotary distributor is operating but has significant corrosion. The upper media bed needs to be replaced due to weather damage. The project description and timing may change based on the Facilities Master Plan findings.		
<b>Projected Expenditures FY 19 - 28</b>			
			FY 24
			\$988,000
			<b>FY 19 - 28 Total</b>
			<b>\$988,000</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>		<b>Cost</b>
FY 19	Media, rotary distributor, and bearing replacement		\$988,000
<b>Project Total</b>			<b>\$988,000</b>

**Project Photos:**



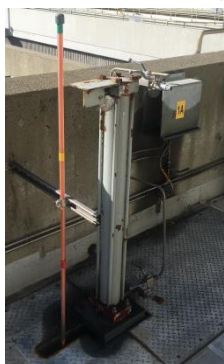
**Original base & turntable, Biotower No. 2**



**New rotary distributor, Biotower No. 2**

<b>Gates Rehabilitation (GL 7300-720-00)</b>			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Formally bid		
<b>Description and Justification</b>	There are several large gates that control flow into, through, and between processes. The gates are also used to isolate process tanks for repair or maintenance. When condition assessments warrant, these gates will be replaced with stainless steel gates, which have a longer service life due to being more corrosion resistant and having sealing surfaces that can be refurbished. This account includes two projects recommended in the 2018 Facility Master Plan. The first project replaces the hydraulic system used to open and close primary clarifier gates with an electronic actuator system that will be operated in SCADA (Master Plan Project 04-1). The second project is the replacement of the three influent gates of Chlorine Contact Tanks (CCT) 1 through 4 (Master Plan Project 09-1).		
<b>Elements</b>	FY 19 – Replace primary clarifier gates hydraulic actuator system with an electric system. FY 20 – Replace Ross Valley and San Rafael influent gates in the headworks building and other gates as needed. FY 21-23 – Allowance to replace gates as needed based on condition assessment. FY 24 – Replace CCT 1 through 4 influent gates. FY 25-28 – Allowance to replace gates as needed based on condition assessment.		
<b>Risk Assessment</b>	This is a medium risk project provided the gates are replaced according to condition assessment findings. The most risk is if a gate fails in a position that it is not normally in which could lead to a process interruption or overflow.		
<b>Projected Expenditures FY 19 - 28</b>			
		FY 19	436,400
		FY 20	77,500
		FY 21 - 23 (Total)	244,100
		FY 24	437,700
		FY 25 - 28 (Total)	362,300
		<b>FY 19 - 28 Total</b>	<b>\$1,558,000</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>	<b>Cost</b>	
FY 19	Replace primary clarifier hydraulic system	436,400	
FY 20	Replace San Rafael and Ross Valley influent gates	77,500	
FY 21-23	General allowance for gate replacement	244,100	
FY 24	Replace CCT 1 through 4 influent gates	437,700	
FY 25-28	General allowance for gate replacement	362,300	
	<b>Project Total</b>	<b>\$1,558,000</b>	

**Project Photos:**



**Hydraulic gate actuator**



**San Rafael and Ross Valley influent gates**



<b>Headworks Equipment (GL 7300-727-00)</b>			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Formally bid		
<b>Description and Justification</b>	Equipment in the headworks building is used to collect, transport, dewater, and store screenings and grit from plant influent. Headworks equipment includes screens, hydraulic systems, grit hoppers, grit classifier, grit pumps, and augers. This equipment operates in a very corrosive and erosive environment and requires ongoing maintenance and refurbishment or replacement. This account includes two projects recommended in the 2018 Facility Master Plan. The first project replaces the hydraulic pumps and control system used to open and close headworks gates (Master Plan Project 04-1). The second project is the replacement of the four original grit classifier systems with new grit classifiers (Master Plan Project 04-2).		
<b>Elements</b>	FY 19-22 – Allowance to replace equipment as needed based on condition assessment. FY 23 – Remove the hydraulic control system and install a new hydraulic unit with associated pumps and controls. FY 24 – Allowance to replace equipment as needed based on condition assessment. FY 25-26 – Replace four grit classifier systems including associated pumps, piping, and controls. FY 27-28 – Allowance to replace equipment as needed based on condition assessment.		
<b>Risk Assessment</b>	This is a low risk project because most of the Headworks has redundant equipment that allows the plant to operate when one piece of equipment is out of service for maintenance.		
<b>Projected Expenditures FY 19 - 28</b>			
		FY 19 - 22 (Total)	118,800
		FY 23	361,100
		FY 24	32,100
		FY 25 - 26 (Total)	1,311,800
		FY 27 - 28 (Total)	70,500
		<b>FY 19 - 28 Total</b>	<b>\$1,894,300</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>		<b>Cost</b>
FY 19 - 22 (Total)	General allowance for equipment replacement		118,800
FY 23	Replace hydraulic control system		361,100
FY 24	General allowance for equipment replacement		32,100
FY 25 - 26 (Total)	Replace grit classifier units 1 through 4		1,311,800
FY 27 - 28 (Total)	General allowance for equipment replacement		70,500
		<b>Project Total</b>	<b>\$1,894,300</b>

**Project Photos:**



**Hydraulic control system**



**Grit classifier**

<b>Odor Control System Improvements (GL 7300-981-00)</b>			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Formally bid		
<b>Description and Justification</b>	Some wastewater treatment processes produce odorous and/or corrosive gasses. The existing odor control scrubbers serve as one component of the Agency's overall odor control management program. Odor control scrubbers located in the Headworks, Biotower basement, and Solids Handling Building (SHB) are approaching the end of their service lives. A consulting firm prepared a conceptual design report with limited sampling to evaluate the overall scrubber performance and cost estimates to replace each unit with activated carbon media systems. While sampling showed existing scrubbers were not overly efficient, they are capable of removing odors to a level that did not impact our surrounding neighbors. The 2018 Facilities Master Plan considered the conceptual design report findings and recommends replacing the Headworks and Biotower odor scrubbers. An allowance has been added to replace the odor scrubber in the SHB if performance significantly degrades.		
<b>Elements</b>	FY 24 – Remove the Headworks odor scrubber and replace with an activated carbon scrubber. FY 26 – Remove the Biotower basement odor scrubbers and replace with a single activated carbon scrubber. FY 27 – Allowance to design and construct scrubber replacement in the SHB.		
<b>Risk Assessment</b>	This is a low risk project because the odor scrubbers are operating with minor issues.		
<b>Projected Expenditures FY 19 - 28</b>			
		FY 24	2,003,600
		FY 26	2,276,800
		FY 27	1,546,800
		<b>FY 19 - 28 Total</b>	<b>\$5,827,200</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>	<b>Cost</b>	
FY 24	Design and construct Headworks scrubber replacement	2,003,600	
FY 26	Design and construct Biotower scrubber replacement	2,276,800	
FY 27	Design and construct SHB scrubber replacement	1,546,800	
	<b>Project Total</b>	<b>\$5,827,200</b>	

**Project Photos:**



**Headworks odor control scrubber**



**Solids Handling Building odor control scrubber**

Primary Clarifiers Rehabilitation (GL 7400-965-00)			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Formally bid		
<b>Description and Justification</b>	There are seven primary clarifiers in the treatment plant. Five of the clarifiers were installed during the original plant construction and two were installed during the Wet Weather Improvement Project. The mechanical equipment in the five original clarifiers has been upgraded to non-corroding, non-metallic components. However, other metal surfaces in the tanks require periodic industrial coating. Additionally, the mechanical equipment also requires periodic replacement. The 2018 Facilities Master Plan recommends a project to address work noted above plus repairing concrete damage and replacing metal piping with PVC pipe (Master Plan Project 05-1).		
<b>Elements</b>	FY 19 – Replace primary drive units for Primary Clarifiers No. 1 through 5. FY 22 – Recoat Clarifier No. 1 interior concrete, repair concrete, replace scum skimmer drive and motor, replace metal launders with FRP, and replace metal pipes. FY 23 – Repeat elements above for Clarifier No. 2. FY 24 – Repeat elements above for Clarifier No. 3. FY 25 – Repeat elements above for Clarifiers No. 4 and 5. FY 27-28 – Allowance for industrial coatings in Clarifier No. 6 and 7.		
<b>Risk Assessment</b>	This is a low risk project because the planned work will be conducted in the summer when primary clarifiers can be out of service for extended periods of time.		
Projected Expenditures FY 19 - 28			
		FY 19	40,000
		FY 22	347,800
		FY 23	358,300
		FY 24	369,200
		FY 25	760,800
		FY 27 - 28 (Total)	329,000
		<b>FY 19 - 28 Total</b>	<b>\$2,205,100</b>
Implementation Schedule			
Schedule	Activity Description	Cost	
FY 19	Replace primary drive units	40,000	
FY 22	Primary Clarifier No. 1 coating and equipment	347,800	
FY 23	Primary Clarifier No. 2 coating and equipment	358,300	
FY 24	Primary Clarifier No. 3 coating and equipment	369,200	
FY 25	Primary Clarifiers No. 4 and 5 coating	760,800	
FY 27 - 28 (Total)	Primary Clarifiers No. 6 and 7 coating	329,000	
		<b>Project Total</b>	<b>\$2,205,100</b>

**Project Photos:**



**Primary Clarifiers**



**Primary Drive Unit**

<b>Secondary Clarifiers Rehabilitation (GL 7300-990-00)</b>			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Formally bid		
<b>Description and Justification</b>	There are four secondary clarifiers in the treatment plant. The 2018 Facilities Master Plan recommends a project for each clarifier to repair corrosion on mechanical equipment, metal structural components, and pipes inside the clarifier, resurfacing the effluent trough concrete, retrofitting the catwalk with FRP grating, and repairing corrosion on piping in the sumps in the pump room (Master Plan Project 08-1). While each clarifier is out of service, the large drive turntables in Clarifiers 1, 3, and 4 will be replaced. The turntable drive for Clarifier No. 2 was replaced in 2011.		
<b>Elements</b>	FY 19 – Refurbish Clarifier No. 3 as noted above and replace the turntable drive. FY 20 – Refurbish Clarifier No. 4 as noted above and replace the turntable drive. FY 21 – Refurbish Clarifier No. 1 as noted above and replace the turntable drive. FY 22 – Refurbish Clarifier No. 2 as noted above.		
<b>Risk Assessment</b>	This is a high risk project because failure of a secondary clarifier could lead to treatment plant process disruptions and possible discharge of effluent that does not meet NPDES treatment limits.		
<b>Projected Expenditures FY 19 - 28</b>			
		FY 19	150,000
		FY 20	507,100
		FY 21	401,800
		FY 22	227,800
		<b>FY 19 - 28 Total</b>	<b>\$1,286,700</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>		<b>Cost</b>
FY 19	Secondary Clarifier No. 3 refurbishment and turntable drive		150,000
FY 20	Secondary Clarifier No. 4 refurbishment and turntable drive		507,100
FY 21	Secondary Clarifier No. 1 refurbishment and turntable drive		401,800
FY 22	Secondary Clarifier No. 2 refurbishment		227,800
		<b>Project Total</b>	<b>\$1,286,700</b>

**Project Photos:**



**Secondary clarifier internal equipment**



**Secondary clarifier in operation**

<b>RAS/WAS Pump Replacement (GL 7300-991-00)</b>		
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b> Technical Services
<b>Project Delivery</b>	Formally bid	
<b>Description and Justification</b>	The 2018 Facilities Master Plan recommends a project to replace the Return Activated Sludge (RAS) and Waste Activated Sludge (WAS) pump systems (Master Plan Project 08-2). These pumping systems are an integral part of the activated sludge treatment process and are mostly original equipment. While the systems are currently operating without major issues, many of the pumps have moderate corrosion and leaks. This project will replace the pump systems and install valving as needed to provide increased ability to isolate pumps for maintenance in the future. The design phase will investigate if it is possible to utilize the RAS pump only with diversion valves to split WAS and RAS.	
<b>Elements</b>	FY 21 – Determine if WAS pumps can be eliminated and prepare design documents. FY 22-23 – Construction of pump system improvements.	
<b>Risk Assessment</b>	This is a high risk project because failure of the activated sludge system could lead to treatment plant process disruptions and possible discharge of effluent that does not meet NPDES treatment limits.	
<b>Projected Expenditures FY 19 - 28</b>		
	FY 21	389,700
	FY 22 - 23 (Total)	1,559,000
	<b>FY 19 - 28 Total</b>	<b>\$1,948,700</b>
<b>Implementation Schedule</b>		
<b>Schedule</b>	<b>Activity Description</b>	<b>Cost</b>
FY 21	Project design phase	389,700
FY 22 - 23 (Total)	Construct RAS & WAS pump system improvements	1,559,000
	<b>Project Total</b>	<b>\$1,948,700</b>

**Project Photos:**



**RAS and WAS pumps**

<b>Process Piping Inspection/Repairs/Replacement (GL 7400-966-00)</b>		
<b>Type of Project</b>	Inspection and Capital Construction	<b>Lead Department</b> Technical Services
<b>Project Delivery</b>	Inspection – Request for Proposals; Repairs - Formally bid	
<b>Description and Justification</b>	The San Rafael and Ross Valley Interceptors are large diameter buried force mains and are the only pipelines that convey wastewater from the satellite collection agency service areas to the treatment plant. Within the treatment plant there are several large diameter pipelines that transfer water between treatment process including the Primary Effluent pipeline and the Return Activated Sludge pipelines. The treatment plant pipelines contain elastomeric joints that are nearing the end of their service lives. Inspecting these critical buried pipe flex joints may require diver inspection or robotic inspection technology because the pipelines are difficult to keep dewatered. The 2018 Facilities Master Plan recommends two pipe repair projects in the galleries. The first project addresses corrosion on the 54-inch effluent pipe in Gallery L and the second project addresses repairs to chemical containment lines that are routed throughout the gallery system.	
<b>Elements</b>	<p>FY 19 – Interior inspection of the pipelines, elastomeric joints, and selected sumps, with possible uncovering of the exterior of some buried joints throughout the Agency facility. Includes possible internal sealing of some or all of the elastomeric joints and external pipe repairs, based on inspection results.</p> <p>FY 25 – Repair corrosion on the 54-inch storage pond discharge pipe by installing a plug or bypass.</p> <p>FY 26 – Replace chemical lines located along gallery walls with double contained PVC pipe and explore opportunities to relocate chemical piping to the bottom of the pipe rack.</p> <p>FY 27 – Allowance to inspect the San Rafael and Ross Valley Interceptors.</p>	
<b>Risk Assessment</b>	This is a medium risk project because the condition of the pipelines and flexible joints is unknown. However, the pipelines have not leaked or shown signs of corrosion.	
<b>Projected Expenditures FY 19 - 28</b>		
	FY 19	190,000
	FY 25	799,300
	FY 26	113,800
	FY 27	163,400
	<b>FY 19 - 28 Total</b>	<b>\$1,266,500</b>
<b>Implementation Schedule</b>		
<b>Schedule</b>	<b>Activity Description</b>	<b>Cost</b>
FY 19	Inspect buried pipelines	190,000
FY 25	Repair 54-inch storage pond pipe	799,300
FY 26	Replace and relocate gallery chemical pipeline	113,800
FY 27	Inspect the San Rafael and Ross Valley Interceptors	163,400
	<b>Project Total</b>	<b>\$1,266,500</b>

**Project Photos:**



**Biotower effluent pipe**



**Primary Effluent pipe manifold**

<b>Centrifuge Maintenance (GL 7300-715-00)</b>			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Informally and formally bid		
<b>Description and Justification</b>	The Agency dewateres digested sludge with three high-speed centrifuges that rotate at high speeds to remove water and produce biosolids. The high-speed rotation and corrosive operating environment necessitate a significant amount of routine maintenance for optimum performance. A manufacturer performed a condition assessment of the centrifuges in 2016 and found they were in relatively good condition. The 2018 Facilities Master Plan recommends replacing the existing centrifuges with new centrifuges that have larger capacity to handle the potential increase in biosolids related to increased delivery of organic waste.		
<b>Elements</b>	FY 19 – Allowance to refurbish one centrifuge. FY 21 – Begin design of centrifuge replacement. FY 22 – Construct the centrifuge replacement.		
<b>Risk Assessment</b>	This is a low risk project because with proper maintenance the existing centrifuges are expected to operate and meet the Agency's needs.		
<b>Projected Expenditures FY 18 - 27</b>			
		FY 19	40,000
		FY 21	500,000
		FY 22	2,703,000
		<b>FY 18 - 27 Total</b>	<b>\$3,243,000</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>	<b>Cost</b>	
FY 19	Allowance for refurbishment of one centrifuge	40,000	
FY 21	Design centrifuge replacement	500,000	
FY 22	Construct centrifuge replacement	2,703,000	
	<b>Project Total</b>	<b>\$3,243,000</b>	

**Project Photos:**



**Existing Centrifuges**



**Biosolids Hoppers**

<b>Cogeneration Maintenance (GL 7300-722-00)</b>			
<b>Type of Project</b>	Design and Capital Construction	<b>Lead Department</b>	Technical Services
<b>Project Delivery</b>	Formally bid		
<b>Description and Justification</b>	<p>The cogeneration system runs continuously, utilizing biogas and natural gas to generate most of the Agency's electrical power, and to supply the Agency's hot water needs. This account includes allowances for purchasing critical spare parts and to perform larger maintenance activities for the engine and generator. Larger maintenance activities include on-site, upper- and lower-end rebuilds involving the cylinder heads and liners, valves, and pistons; or off-site overhaul work that includes a complete disassembly and reassembly with machining to restore the engine and generator to original factory specifications. Although the engine and generator life can be extended with proper periodic major overhauls, cogeneration technologies are continuing to improve and become more efficient. The design and replacement of the cogeneration technology is planned to begin in FY 20 and end in FY 22. This schedule coincides with the expansion of the OWRF program and the Agency's ability to sell excess power through a new PG&amp;E Interconnection Agreement and power sale agreement with Marin Clean Energy. The existing cogeneration engine will remain available as a backup unit.</p>		
<b>Elements</b>	<p>FY 19 – On-site engine upper-end rebuild and replace turbo chargers, plus allowance for cogeneration technology survey.  FY 20 – Design of replacement cogeneration technology. Because current engine will be kept as a reliable backup system, conduct major off-site overhaul for engine, five-year generator preventive maintenance, and replace turbo chargers.  FY 21 – Procurement and begin installation of a replacement cogeneration technology.  FY 22 – Completion of the installation of a replacement cogeneration technology.  FY 23-28 – Allowances for major maintenance of the cogeneration facility</p>		
<b>Risk Assessment</b>	<p>This is a low risk project because the existing engine can remain in service for an extended period of time if properly maintained. However, the Agency would lose the opportunity to generate additional revenue from a more efficient system.</p>		
<b>Projected Expenditures FY 19 - 28</b>			
		FY 19	181,600
		FY 20	449,600
		FY 21	2,011,000
		FY 22	1,694,700
		FY 23 - 28 (Total)	440,100
		<b>FY 19 -6y6 28 Total</b>	<b>\$4,702,000</b>
<b>Implementation Schedule</b>			
<b>Schedule</b>	<b>Activity Description</b>	<b>Cost</b>	
FY 19	Existing engine upper-end rebuild and technology survey	181,600	
FY 20	Existing engine off-site overhaul and new system design	374,600	
FY 21	Procure and begin installation of the new system	2,011,000	
FY 22	Complete installation of the new system	1,694,700	
FY 23 - 28 (Total)	Allowance for major maintenance	440,100	
		<b>Project Total</b>	<b>\$4,702,000</b>

**Project Photo:**





## **SECTION 9. FY 2018-19 Proposed Budget—10-Year Financial Forecast**

The Agency adopts with each budget a 10-year financial forecast to accompany the budget. The forecast is a model of revenues, expenses, capital, and reserves, and essentially sets forth a strategic plan to guide funding-sources-and-uses-decisions for the operating and capital budgets. The financial forecast consists of sections for Preliminary Assumptions, Operating Surplus (Shortfall), Capital Improvement Program, and Reserve Reconciliation.

The first section, preliminary assumptions, is to assign assumption values for expenditures and revenues except regional sewer charges to establish a 10-year forecast for operating and capital programs. The base year of the forecast is the proposed budget for the given fiscal year. All future projection values derive from the base year. Amounts for debt service and debt service coverage are specific amounts from the debt service amortization tables. Amounts for the capital improvements program are per the 10-year CIP schedule. Revenue from capacity charges increases annually by the ENR index per the ordinance for the same. The forecast is constructed to *project* future expenses and capital and to *limit* revenues from service charges and the capital fee only to known values authorized by the Board. In this manner, it will be clearly apparent when there will be a revenue shortfall and how long reserves will last without revenue increases.

The Operating Surplus (Shortfall) section is a summary of the operating budget that reflects either a surplus, funded, or a shortfall, not funded. Funding for the operating budget comes primarily from sewer service charges from JPA members together with “all other revenues” such as contract services, program revenues, haulers, permits, and inspections. Operating expenses includes all expenses except depreciation, debt service, and capital. Debt service and capital are funded from separate dedicated sources.

The next section is the Capital Improvement Program funding. Projects and amounts of the capital improvement program are per the 10-year CIP schedule. Funding for the capital improvement program comes from the capital fee collected from JPA members, the debt service coverage amount also collected from JPA members, capacity charges received from new development, and from capital reserves to the extent available.

The last section is a reconciliation of the three types of designated reserves, Unrestricted Operating Reserve, Unrestricted Capital Reserve, and Restricted Capital Reserve. Beginning balances for each of these reserve types is the amount per the treasurer’s report. Unrestricted operating reserves are maintained at 25% of operating costs before debt and capital. Excess amounts of unrestricted operating reserves are transferred to unrestricted capital reserves to be used to fund capital. Restricted capital reserves consists of capacity charges and debt coverage fees collected and are used exclusively for capital. Any differences to fund capital comes from unrestricted capital reserves to the extent available.

The financial forecast document is a representation of the model for funding the Agency’s operating and capital programs.



**CENTRAL MARIN SANITATION AGENCY  
10-YEAR FINANCIAL FORECAST**

Line No.	Description	Assump	Adopted Budget FY 17-18	Revenue Program Period				Service Charges / Cap Fee at Last Authorized					
				Proposed Budget FY 18-19	10-Year CIP Program - Base Year Plus 9 Additional Forecast Years								
					Year 1 FY 19-20	Year 2 FY 20-21	Year 3 FY 21-22	Year 4 FY 22-23	Year 5 FY 23-24	Year 6 FY 24-25	Year 7 FY 25-26	Year 8 FY 26-27	
<b>PRELIMINARY ASSUMPTIONS</b>			<b>EDU CMSA</b>	<b>47,724</b>									
<b>Funding Requirements:</b>													
a	Salaries and wages	3.0%	\$ 5,401,800	\$ 5,555,200	\$ 5,721,856	\$ 5,893,512	\$ 6,070,317	\$ 6,252,427	\$ 6,439,999	\$ 6,633,199	\$ 6,832,195	\$ 7,037,161	
b	Retirement - CalPERS normal cost (Note 2)	Various	549,528	597,251	603,224	615,288	627,594	640,146	652,949	666,007	679,328	692,914	
c	Retirement - CalPERS UAL (Note 2)	Various	481,072	597,749	627,636	706,091	829,657	1,016,330	1,295,820	1,749,358	1,749,358	1,749,358	
d	All other employee benefits	2.0%	1,530,500	1,563,700	1,594,952	1,626,805	1,659,359	1,692,514	1,726,371	1,760,928	1,796,187	1,832,146	
e	Chemicals and fuels	1.5%	1,069,500	1,126,900	1,143,822	1,160,952	1,178,392	1,196,041	1,214,001	1,232,169	1,250,648	1,269,438	
f	Biosolids management	1.5%	387,700	400,300	406,303	412,406	418,611	424,918	431,326	437,836	444,447	451,161	
g	Permit testing and monitoring	1.0%	179,500	148,800	150,275	151,747	153,215	154,780	156,342	157,901	159,456	161,007	
h	Maintenance and repairs - net of contract maint	1.5%	382,500	363,500	368,931	374,454	380,072	385,784	391,591	397,493	403,487	409,577	
i	Utilities	1.0%	350,500	317,800	320,938	324,172	327,403	330,630	333,953	337,273	340,689	344,101	
j	Insurance premiums	2.5%	261,200	250,800	257,077	263,545	270,101	276,846	283,779	290,901	298,211	305,708	
k	General and administrative (operating)	2.0%	868,800	900,000	917,976	936,358	955,045	974,138	993,636	1,013,541	1,033,852	1,054,569	
l	Operating before debt and capital		11,462,600	11,822,000	12,112,988	12,465,330	12,869,766	13,344,554	13,919,768	14,676,605	14,987,857	15,307,140	
m	Debt service actual plus estimated		3,961,906	3,973,206	3,967,331	4,603,006	4,612,006	4,611,706	5,306,381	5,308,506	5,303,381	5,352,756	
n	Operating before capital		15,424,506	15,795,206	16,080,319	17,068,336	17,481,772	17,956,260	19,226,149	19,985,111	20,291,238	20,659,896	
o	Capital program		3,817,600	2,862,500	3,034,000	7,732,800	7,922,700	5,368,400	4,968,200	3,718,900	5,550,800	5,315,500	
p	Total funding requirements		\$ 19,242,106	\$ 18,657,706	\$ 19,114,319	\$ 24,801,136	\$ 25,404,472	\$ 23,324,660	\$ 24,194,349	\$ 23,704,011	\$ 25,842,038	\$ 25,975,396	
				3.5%	3.5%	3.5%	3.5%	3.5%	0.0%	0.0%	0.0%	0.0%	
q	Unrestricted - Regional sewer service charges	0.0%	\$ 10,263,165	\$ 10,622,376	\$ 10,994,159	\$ 11,378,954	\$ 11,777,218	\$ 12,189,421	\$ 12,189,421	\$ 12,189,421	\$ 12,189,421	\$ 12,189,421	
r	Unrestricted - Capital fee (Note 4)	0.0%	630,000	811,259	1,020,824	435,529	640,904	865,486	0	0	0	0	
s	Unrestricted - All other revenues	3.0%	1,731,900	1,712,048	1,763,409	1,816,312	1,870,801	1,926,925	1,981,876	2,038,675	2,106,242	2,107,711	
t	Restricted capital - Debt service charge (Note 5)		3,961,906	3,973,206	3,967,331	4,603,006	4,612,006	4,611,706	5,306,381	5,308,506	5,303,381	5,352,756	
u	Restricted capital - Debt service coverage		990,477	993,301	991,833	1,150,752	1,153,002	1,152,927	1,326,595	1,327,127	1,325,845	1,338,189	
v	Restricted capital - Capacity charges	2.7%	29,300	30,091	30,904	31,738	32,595	33,475	34,379	35,307	36,260	37,239	
w	Subtotal funding sources before reserve (increase) usage		17,606,748	18,142,281	18,768,460	19,416,291	20,086,526	20,779,940	20,838,651	20,899,036	20,961,149	21,025,316	
x	Reserve (Increase) Usage (Note 6)		1,635,359	515,425	345,860	5,384,844	5,317,946	2,544,720	3,355,697	2,804,975	4,880,889	4,950,080	
y	Total funding sources		\$ 19,242,106	\$ 18,657,706	\$ 19,114,319	\$ 24,801,136	\$ 25,404,472	\$ 23,324,660	\$ 24,194,349	\$ 23,704,011	\$ 25,842,038	\$ 25,975,396	
z	Control total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

**NOTES ON FORECAST:**

- The purpose of the above section (Preliminary Assumptions) is to assign assumption values for expenditures and revenues except regional sewer charges to establish a 10-year pro-forma forecast
- Annual increases per CalPERS Circular Letter 200-004-17 dated January 19, 2017
- Funding from JPA agencies increases 3.5% per 5-year revenue plan
- Capital fee becomes zero (0) in outer years beyond revenue program period
- Assume new debt issue for \$9M in FY20 and \$10M in FY23
- Use of reserves through FY20 for capital and debt proceeds for capital thereafter
- The above forecast is in the form of a balanced budget and is NOT FUNDING. FUNDING IS SHOWN BELOW IN SECTIONS I, II, and III
- Beginning reserve balances for Section III are per the Treasurer's Report
- Transfer operating surpluses to unrestricted capital reserve as necessary to maintain Board established 25% unrestricted operating reserve
- Transfer unrestricted capital reserves to fully fund CIP Section II until depleted for forecast purposes
- Capacity charges, the debt service coverage fee, the capital fee, and unrestricted capital reserve usage fund the capital program
- Unrestricted operating reserve beginning balance contains amount per treasurer's report plus \$100,000 insurance reserve plus \$250,000 contingency reserve

**Red:** Indicates reserve usage.      **Brackets:** Indicates reserve increases.

**CENTRAL MARIN SANITATION AGENCY  
10-YEAR FINANCIAL FORECAST**

Line No.	Description	Assump	Adopted Budget FY 17-18	Revenue Program Period				Service Charges / Cap Fee at Last Authorized				
				Proposed Budget FY 18-19	10-Year CIP Program - Base Year Plus 9 Additional Forecast Years							
					Year 1 FY 19-20	Year 2 FY 20-21	Year 3 FY 21-22	Year 4 FY 22-23	Year 5 FY 23-24	Year 6 FY 24-25	Year 7 FY 25-26	Year 8 FY 26-27
<b>FUNDING FOR PROGRAMS - DETAIL</b>												
<b>OPERATING PROGRAM</b>												
1	Total operating costs before debt and capital		\$ 11,462,600	\$ 11,822,000	\$ 12,112,988	\$ 12,465,330	\$ 12,869,766	\$ 13,344,554	\$ 13,919,768	\$ 14,676,605	\$ 14,987,857	\$ 15,307,140
2	Service charges and other revenues		11,995,065	12,334,424	12,757,568	13,195,266	13,648,019	14,116,346	14,171,296	14,228,096	14,295,663	14,297,131
3	Total operating surplus (shortfall)		\$ 532,465	\$ 512,424	\$ 644,580	\$ 729,937	\$ 778,253	\$ 771,792	\$ 251,529	\$ (448,510)	\$ (692,195)	\$ (1,010,009)
<b>CAPITAL IMPROVEMENT PROGRAM</b>												
4	Total Annual CIP to Fund (10-Year CIP)		\$ 3,817,600	\$ 2,862,500	\$ 3,034,000	\$ 7,732,800	\$ 7,922,700	\$ 5,368,400	\$ 4,968,200	\$ 3,718,900	\$ 5,550,800	\$ 5,315,500
5	Restricted - other financing sources (e.g., bonds, loans, grants)		\$ -	\$ -	\$ 988,971	\$ 6,273,700	\$ 1,737,329	\$ 3,316,437	\$ 3,780,894	\$ 2,356,998	\$ 545,671	\$ -
6	Restricted - Capacity charges		29,300	30,091	30,904	31,738	32,595	33,475	34,379	35,307	36,260	37,239
7	Restricted - Debt Service Coverage (i.e., covenant req)		992,024	990,477	993,301	991,833	1,150,752	1,153,002	1,152,927	1,326,595	1,327,127	1,325,845
8	Unrestricted - Capital Fee		630,000	811,259	1,020,824	435,529	640,904	865,486	0	0	0	0
9	Unrestricted - General Cap Rsv (Inc) Draw (step 2)		2,166,277	1,030,673	-	-	4,361,120	-	-	-	3,641,741	83,683
10	Total Available Funding		\$ 3,817,601	\$ 2,862,500	\$ 3,034,000	\$ 7,732,800	\$ 7,922,700	\$ 5,368,400	\$ 4,968,200	\$ 3,718,900	\$ 5,550,800	\$ 1,446,768
11	Control Total / (Unfunded Capital)	\$ (3,868,732)	\$ 1	\$ (0)	\$ (0)	\$ (0)	\$ 0	\$ 0	\$ 0	\$ 0	\$ (0)	\$ (3,868,732)
<b>RESERVE RECONCILIATION</b>												
12	Restricted capital reserve balance - beg (Treas Report)		\$ 992,024	\$ 990,477	\$ 993,301	\$ 9,002,862	\$ 2,888,081	\$ 1,153,002	\$ 7,836,490	\$ 4,229,264	\$ 1,872,798	\$ 1,325,845
13	Other financing sources balance - beg		-	-	-	8,011,029	1,737,329	-	6,683,563	2,902,669	545,671	-
14	New debt issuance proceeds		-	-	9,000,000	-	-	10,000,000	-	-	-	-
15	Project requisition draws (neg number) (use 1st, then reserve)		-	-	(988,971)	(6,273,700)	(1,737,329)	(3,316,437)	(3,780,894)	(2,356,998)	(545,671)	-
16	Other financing sources balance - end		-	-	8,011,029	1,737,329	-	6,683,563	2,902,669	545,671	-	-
17	Capacity charges revenue		29,300	30,091	30,904	31,738	32,595	33,475	34,379	35,307	36,260	37,239
18	Capacity charges usage for capital		(29,300)	(30,091)	(30,904)	(31,738)	(32,595)	(33,475)	(34,379)	(35,307)	(36,260)	(37,239)
19	Debt coverage collection - current year		990,477	993,301	991,833	1,150,752	1,153,002	1,152,927	1,326,595	1,327,127	1,325,845	1,338,189
20	Debt coverage usage - prior year		(992,024)	(990,477)	(993,301)	(991,833)	(1,150,752)	(1,153,002)	(1,152,927)	(1,326,595)	(1,327,127)	(1,325,845)
21	Net change		(1,547)	2,825	8,009,561	(6,114,781)	(1,735,079)	6,683,488	(3,607,226)	(2,356,466)	(546,953)	12,344
22	Restricted capital reserve balance - end		\$ 990,477	\$ 993,301	\$ 9,002,862	\$ 2,888,081	\$ 1,153,002	\$ 7,836,490	\$ 4,229,264	\$ 1,872,798	\$ 1,325,845	\$ 1,338,189
<b>Unrestricted capital reserve balance - beg (Treas Report)</b>												
23	Capital fee revenue		\$ 7,798,013	\$ 6,042,995	\$ 5,434,896	\$ 6,006,729	\$ 6,648,580	\$ 2,964,604	\$ 3,617,699	\$ 3,725,424	\$ 3,725,424	\$ 83,683
24	Unrestricted operating reserve transfer-in (step 1)		630,000	811,259	1,020,824	435,529	640,904	865,486	0	0	0	0
25	Capital fee usage to fund CIP		411,259	422,574	571,833	641,851	677,144	653,095	107,725	-	-	-
26	Unrestricted capital reserve draw (enter CIP control total) (step 2)		(630,000)	(811,259)	(1,020,824)	(435,529)	(640,904)	(865,486)	(0)	(0)	(0)	(0)
27	Net change		(2,166,277)	(1,030,673)	-	-	(4,361,120)	-	-	-	(3,641,741)	(83,683)
28	Unrestricted capital reserve balance - end		\$ 6,042,995	\$ 5,434,896	\$ 6,006,729	\$ 6,648,580	\$ 2,964,604	\$ 3,617,699	\$ 3,725,424	\$ 3,725,424	\$ 83,683	\$ -
<b>Unrestricted operating reserve balance - beg (Treas Report) (Note 12)</b>												
29	Service charges and other revenues		\$ 2,744,444	\$ 2,865,650	\$ 2,955,500	\$ 3,028,247	\$ 3,116,332	\$ 3,217,441	\$ 3,336,138	\$ 3,479,942	\$ 3,031,432	\$ 2,339,237
30	Operating expenses		11,995,065	12,334,424	12,757,568	13,195,266	13,648,019	14,116,346	14,171,296	14,228,096	14,295,663	14,297,131
31	Unrestricted operating reserve transfer-out (excess or draw) (step 1)		(11,462,600)	(11,822,000)	(12,112,988)	(12,465,330)	(12,869,766)	(13,344,554)	(13,919,768)	(14,676,605)	(14,987,857)	(15,307,140)
32	Net change		(411,259)	(422,574)	(571,833)	(641,851)	(677,144)	(653,095)	(107,725)	-	-	-
33	Unrestricted operating reserve balance - end		\$ 2,865,650	\$ 2,955,500	\$ 3,028,247	\$ 3,116,332	\$ 3,217,441	\$ 3,336,138	\$ 3,479,942	\$ 3,031,432	\$ 2,339,237	\$ 1,329,228
34	(25% of operating costs before debt and capital)		25%	25%	25%	25%	25%	25%	25%	21%	16%	9%
35	Net change		(1,635,359)	(515,425)	8,654,140	(5,384,844)	(5,317,946)	7,455,280	(3,355,697)	(2,804,976)	(4,880,889)	(1,081,348)
36	Reserve balance total - beg		\$ 11,534,481	\$ 9,899,122	\$ 9,383,697	\$ 18,037,837	\$ 12,652,993	\$ 7,335,048	\$ 14,790,327	\$ 11,434,630	\$ 8,629,654	\$ 3,748,766
37	Reserve balance total - end		\$ 9,899,122	\$ 9,383,697	\$ 18,037,837	\$ 12,652,993	\$ 7,335,048	\$ 14,790,327	\$ 11,434,630	\$ 8,629,654	\$ 3,748,766	\$ 2,667,418

**CENTRAL MARIN SANITATION AGENCY  
10-YEAR FINANCIAL FORECAST**

Line No.	Description	Assump	Adopted Budget FY 17-18	Revenue Program Period				Service Charges / Cap Fee at Last Authorized					
				Proposed Budget FY 18-19	10-Year CIP Program - Base Year Plus 9 Additional Forecast Years								
					Year 1 FY 19-20	Year 2 FY 20-21	Year 3 FY 21-22	Year 4 FY 22-23	Year 5 FY 23-24	Year 6 FY 24-25	Year 7 FY 25-26	Year 8 FY 26-27	
<b>FUNDING FOR PROGRAMS - SUMMARY (ALTERNATIVE 2d - DEBT FINANCED SCHEDULED PROJECTS PLUS CAPITAL AMOUNT TO BALANCE)</b>													
<b>OPERATING PROGRAM SUMMARY</b>													
1	Annual operating costs for funding	Various	\$ 11,462,600	\$ 11,822,000	\$ 12,112,988	\$ 12,465,330	\$ 12,869,766	\$ 13,344,554	\$ 13,919,768	\$ 14,676,605	\$ 14,987,857	\$ 15,307,140	
				3.5%	3.5%	3.5%	3.5%	3.5%					
2	Regional service charges		10,263,165	10,622,376	10,994,159	11,378,954	11,777,218	12,189,421	12,189,421	12,189,421	12,189,421	12,189,421	
3	Other revenues	3.0%	1,731,900	1,712,048	1,763,409	1,816,312	1,870,801	1,926,925	1,981,876	2,038,675	2,106,242	2,107,711	
4	Total revenues		11,995,065	12,334,424	12,757,568	13,195,266	13,648,019	14,116,346	14,171,296	14,228,096	14,295,663	14,297,131	
5	Operating surplus (shortfall)		\$ 532,465	\$ 512,424	\$ 644,580	\$ 729,937	\$ 778,253	\$ 771,792	\$ 251,529	\$ (448,510)	\$ (692,195)	\$ (1,010,009)	
6	(Operating reserves at 25% of operating costs - amount)		\$ 2,865,650	\$ 2,955,500	\$ 3,028,247	\$ 3,116,332	\$ 3,217,441	\$ 3,336,138	\$ 3,479,942	\$ 3,669,151	\$ 3,746,964	\$ 3,826,785	
7	(Operating reserves at 25% of operating costs - percent)		25%	25%	25%	25%	25%	25%	25%	21%	16%	9%	
<b>CAPITAL IMPROVEMENT PROGRAM SUMMARY</b>													
	Annual CIP costs for funding		\$ 50,291,400	\$ 3,817,600	\$ 2,862,500	\$ 3,034,000	\$ 7,732,800	\$ 7,922,700	\$ 5,368,400	\$ 4,968,200	\$ 3,718,900	\$ 5,550,800	\$ 5,315,500
9	Capacity Charges	2.7%	29,300	30,091	30,904	31,738	32,595	33,475	34,379	35,307	36,260	37,239	
10	Debt Service Coverage (i.e., covenant req)		992,024	990,477	993,301	991,833	1,150,752	1,153,002	1,152,927	1,326,595	1,327,127	1,325,845	
11	Capital Fee	0	630,000	811,259	1,020,824	435,529	640,904	865,486	0	0	0	0	
12	Reserve Funding		2,166,277	1,030,673	-	-	4,361,120	-	-	-	3,641,741	83,683	
13	Total Available Funding		\$ 3,817,601	\$ 2,862,500	\$ 3,034,000	\$ 7,732,800	\$ 7,922,700	\$ 5,368,400	\$ 4,968,200	\$ 3,718,900	\$ 5,550,800	\$ 1,446,768	
14	Control Total / (Unfunded Capital)		\$ (3,868,732)	\$ 1	\$ (0)	\$ (0)	\$ (0)	\$ 0	\$ 0	\$ 0	\$ (0)	\$ (3,868,732)	
15	(Capital funding ratio - target 70%)	Actual AVE	92.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	27.2%	
<b>ANNUAL UNIT COSTS SUMMARY</b>													
16	EDU unit count to CMSA w/o SQSP (budget)		47,724	47,724	47,724	47,724	47,724	47,724	47,724	47,724	47,724	47,724	
17	Regional service charge per unit		\$ 215.05	\$ 222.58	\$ 230.37	\$ 238.43	\$ 246.78	\$ 255.41	\$ 255.41	\$ 255.41	\$ 255.41	\$ 255.41	
18	Capital fee per unit		13.20	17.00	21.39	9.13	13.43	18.14	0.00	0.00	0.00	0.00	
19	Debt service charge per EDU count fixed per 9-21-16 memo	48,039	103.09	103.38	103.23	119.77	120.01	120.00	138.07	138.13	138.00	139.28	
	Debt service rate stabilization			10.36	(12.35)	(5.18)	0.94	6.23					
			103.09	113.74	90.88	114.59	120.95	126.23	138.07	138.13	138.00	139.28	
	Total annual CMSA charges per unit		\$ 331.34	\$ 353.32	\$ 342.64	\$ 362.15	\$ 381.15	\$ 399.78	\$ 393.49	\$ 393.55	\$ 393.41	\$ 394.70	
	Percent increase from prior year			6.63%	-3.02%	5.69%	5.25%	4.89%	-1.57%	0.01%	-0.03%	0.33%	
	Control total debt plus coverage to collect	27,209,070		\$ 4,966,507	\$ 4,959,164	\$ 5,753,758	\$ 5,765,008	\$ 5,764,633					
	Actual debt plus coverage collected	27,209,070		5,464,191	4,365,882	5,504,916	5,810,165	6,063,916					
	Difference over (under)	-		\$ 497,684	\$ (593,282)	\$ (248,842)	\$ 45,157	\$ 299,283					

**CENTRAL MARIN SANITATION AGENCY  
10-YEAR FINANCIAL FORECAST**

Line No.	Description	Assump	Adopted Budget FY 17-18	Revenue Program Period				Service Charges / Cap Fee at Last Authorized			
				Proposed Budget FY 18-19	10-Year CIP Program - Base Year			Plus 9 Additional Forecast Years			
					Year 1 FY 19-20	Year 2 FY 20-21	Year 3 FY 21-22	Year 4 FY 22-23	Year 5 FY 23-24	Year 6 FY 24-25	Year 7 FY 25-26

**DEBT FINANCED SCHEDULED PROJECTS TO ACCOMPANY ALTERNATIVE 2d**

PROJECT DESCRIPTION	TOTALS	PROJECT AMOUNTS							
Cogeneration maintenance (3)	\$ 3,580,700	\$ -	\$ -	\$ 1,943,200	\$ 1,637,500	\$ -	\$ -	\$ -	\$ -
Centrifuge maintenance	1,950,000			250,000	1,700,000				
Facility roofs rehabilitation	921,400			921,400					
Fuel storage tanks	112,400		112,400						
Electrical distribution system rehabilitation	1,164,200			1,164,200					
Bio-Tower rotary distributor replacement	988,000					988,000			
Gates rehabilitation	421,635	421,635							
Headworks equipment	348,965					348,965			
Process tank maintenance	517,700			517,700					
Primary clarifiers rehabilitation	1,739,000				430,600	433,600	436,400	438,400	
Secondary clarifiers rehabilitation	1,243,200	314,700	320,200	388,200	220,100				
RAS/WAS pump replacement	1,883,000			376,600	753,200	753,200			
Digester inspect, cleaning, cover replace	1,732,200				856,600	875,600			
<b>Total projects</b>	<b>\$ 16,602,400</b>	<b>\$ 736,335</b>	<b>\$ 432,600</b>	<b>\$ 5,561,300</b>	<b>\$ 5,598,000</b>	<b>\$ 3,399,365</b>	<b>\$ 436,400</b>	<b>\$ 438,400</b>	

Issue #1, Closing '20, Pmt strt '21, Loan type	Rev Bd or SRF
Close of transaction	FY 2020
Repayment begins	FY 2021
Principal plus estimated 2% cost of issuance	\$ 9,180,000
Interest rate	3.50%
Years amortization	20
Estimated payment	\$ 645,915
<b>Budgeted amount</b>	<b>\$ 646,000</b>

Issue #2, Closing '23, Pmt strt '24, Loan type	Rev Bd or SRF
Close of transaction	FY 2023
Repayment begins	FY 2024
Principal plus estimated 2% cost of issuance	\$ 10,200,000
Interest rate	3.50%
Years amortization	20
Estimated payment	\$ 717,683
<b>Budgeted amount</b>	<b>\$ 718,000</b>

**SECTION 10. DEBT OBLIGATIONS**

The Agency took advantage of historically low interest rates in the fiscal year 2015 by refunding its Series 2006 Revenue Bonds to realize savings through lower interest rates. On April 22, 2015, the Agency issued \$49,310,000 of Series 2015 Revenue Bonds at a premium of \$5,344,174, with an interest rate average of 2.78% percent. The proceeds from the 2015 bonds were placed in an escrow account and used 1) to make debt service payments on the existing Series 2006 Bonds through September 1, 2016, and 2) to redeem the outstanding Series 2006 Revenue Bonds when they become callable. The Agency’s sole, ongoing debt service obligation is the Series 2015 bonds, which are fully registered, with principal due annually on September 1, and interest payable semi-annually on March 1 and September 1. The transaction resulted in cost savings of over \$15 million for the fiscal years from 2015-16 to 2031-32.

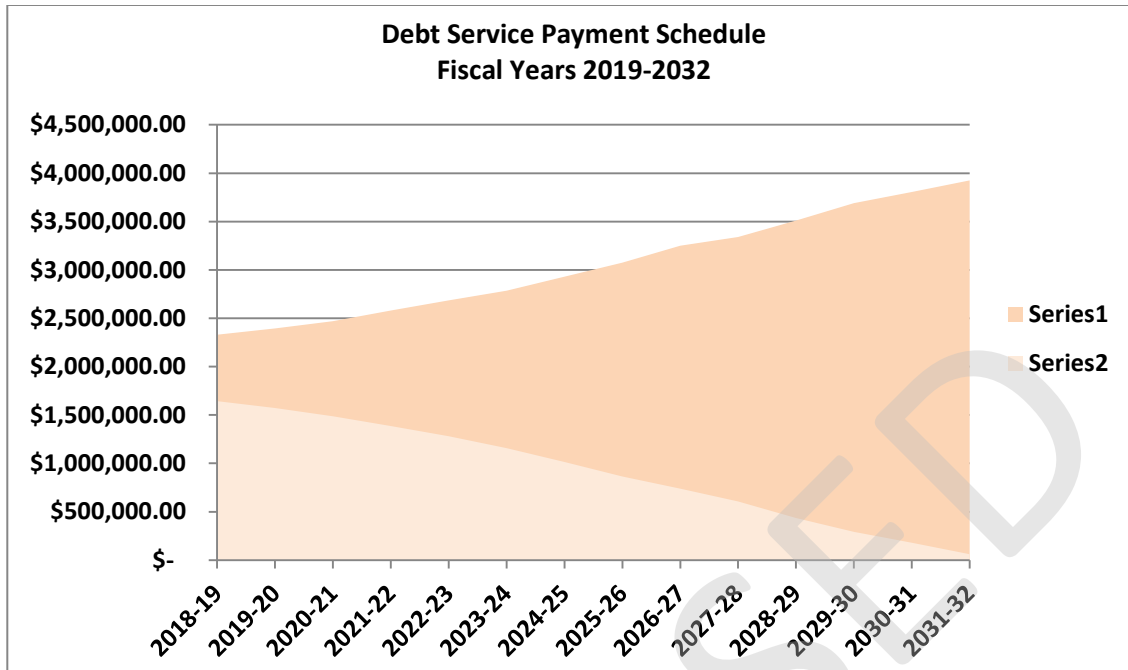
The table below displays the amount of outstanding debt service obligations through 2032.

**Refunding Revenue Bonds Series 2015 Debt Service Schedule Remaining to 2032**

<b>Fiscal Year</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>
2018-19	2,330,000	1,643,206	3,973,206
2019-20	2,395,000	1,572,331	3,967,331
2020-21	2,470,000	1,487,006	3,957,006
2021-22	2,580,000	1,386,006	3,966,006
2022-23	2,685,000	1,280,706	3,965,706
2023-24	2,785,000	1,157,381	3,942,381
2024-25	2,930,000	1,014,506	3,944,506
2025-26	3,075,000	864,381	3,939,381
2026-27	3,250,000	738,756	3,988,756
2027-28	3,340,000	606,506	3,946,506
2028-29	3,510,000	435,256	3,945,256
2029-30	3,690,000	292,156	3,982,156
2030-31	3,805,000	179,731	3,984,731
2031-32	3,925,000	61,328	3,986,328
<b>Total Refunding Revenue Bond Series 2015 Debt Outstanding as of July 1, 2018</b>	<b>\$42,770,000</b>	<b>\$12,719,260</b>	<b>\$55,489,260</b>

Each JPA Member is obligated to pay its proportionate share of the semi-annual debt service payments, and a payment for debt service coverage (equivalent to 25% of the annual debt service) pursuant to the Debt Service Payment Agreement between CMSA and the Member Agencies, as well as the Master Indenture between CMSA and the Bond Trustee. The proportionate allocation of the debt service payment and coverage to each member is based upon average EDU counts over a 10-year period from the fiscal year 2006-07 to the fiscal year 2015-16 reported for the JPA service area. This allocation method smooths out unit count fluctuations and promotes stable/predictable debt service costs to members.

**Debt Limits:** The Agency is an enterprise business activity supported by user fees with no revenues from taxes, and accordingly, is not subject to legal debt limitation.



In accordance with the Agency’s Financial Policy on Reserves, debt service coverage funds are restricted for capital project use with the limitation that the amount collected during each fiscal period cannot be expended in the same period. The annual budget appropriates funds from Restricted Reserves for Capital Projects to fund current year Capital Improvement Program (CIP) activities. The FY 19 Budget appropriates approximately \$993,000 to be spent from the Restricted Reserves for CIP activities. Because debt service obligations are collected from JPA Members, the existing debt level has little impact on the Agency’s current operations. Details for the Agency’s FY 19 CIP can be found in Section 8 – Capital Improvement Program.

The table below displays the debt service payment and coverage collection since FY 2006-07.

<b>Debt Service Charges per Equivalent Dwelling Unit</b>				
Fiscal Year	Debt Service Charges/EDU	Principal	Interest	25% Coverage Collected
<b>Series 2015 Revenue Bonds</b>				
2018-19	\$95.43	\$2,330,000	\$1,643,206	\$993,301
2017-18	95.16	2,250,000	1,711,906	990,477
2016-17	94.74	2,195,000	1,773,094	992,023
2015-16	87.10	2,095,000	1,564,224	914,806
<b>Series 2006 Revenue Bonds</b>				
2014-15	\$110.75	\$2,135,000	\$2,517,501	\$1,163,125
2013-14	111.69	2,040,000	2,616,539	1,164,135
2012-13	113.51	1,955,000	2,701,751	1,164,188
2011-12	106.08	1,880,000	2,775,914	1,163,979
2010-11	103.95	1,805,000	2,849,708	1,163,677
2009-10	103.44	1,735,000	2,918,251	1,163,313
2008-09	104.19	1,670,000	2,986,351	1,164,088
2007-08	71.63	-	3,019,751	754,938
2006-07	33.15	-	1,107,242	276,811



## SECTION 11. KEY TERMS AND FINANCIAL GLOSSARY WITH ACRONYM LISTING

- **ASSETS:** Anything of material and economic value or usefulness that is owned by the entity.
- **BAY AREA CLEAN WATER AGENCIES (BACWA):** A joint powers agency formed under the California Government Code by the five largest wastewater treatment agencies that provide sanitary sewer services to the more than seven million people living in the nine county San Francisco Bay Area. CMSA is one of BACWA's 65 principal and associate members.
- **BAY AREA CHEMICAL CONSORTIUM (BACC):** A cooperative group of over 50 public water and wastewater agencies in northern California whose primary purpose is to seek competitive bids from vendors to supply and deliver chemicals for water and/or wastewater treatment.
- **BAY AREA AIR QUALITY MANAGEMENT DISTRICT (BAAQMD):** A government agency that regulates sources of air pollution within the nine San Francisco Bay Area Counties.
- **BOND PREMIUM:** A bond that is priced higher than its stated face (par) value.
- **CAPITAL ASSETS:** Includes Agency land, treatment plant, outfall, facilities, buildings, and equipment net of depreciation.
- **CAPITAL EXPENDITURE:** An expenditure of \$5,000 or more that is used to purchase a capital asset with a useful life of one year or more, or an investment that improves the useful life of an existing asset.
- **CAPITAL IMPROVEMENT PROGRAM (CIP):** A plan that describes and explains the Agency's capital and asset management projects, delineated by type of project and funding source, over ten fiscal years. The CIP is a planning document that provides the Agency with an opportunity to evaluate and assess its capital needs from financial, engineering, operational and planning perspectives.
- **CAPACITY CHARGE:** A one-time fee charged to all new users connecting to, and creating additional demand on, the sanitary and sewer treatment systems and is a funding mechanism by which the cost of the facilities to serve them are paid for. Government code requires capacity charges to fund capital projects.
- **COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM (CMMS):** A software program that is used for inventory control, procurement management, fixed asset condition assessment, maintenance repair management, and asset reporting. The Agency uses a CMMS product called NEXGEN.
- **CONTRACT SERVICE REVENUES:** Services provided by the Agency under contract to other local agencies for pump station and collection system maintenance, the various source control programs, a new service to assure safe disposal of amalgam and mercury contaminants.
- **CURRENT AND OTHER ASSETS:** Assets that can easily be converted to cash or consumed within one year. Includes cash, investments, receivables, prepaid expenses, deposits with others (example: OPEB asset).
- **CURRENT LIABILITIES:** Payment obligations owed by the Agency within the next 12 months.
- **EQUIVALENT DWELLING UNIT (EDU):** An EDU is one single-family residence.
- **ENTERPRISE FUND:** A government accounting fund that provides goods or services to the public for a fee that makes the entity self-supporting.
- **FLOW(S):** The total incoming sewage flow(s) to CMSA from JPA member agencies measured in millions of gallons and collected for the previous April 1 to March 31. It is used to calculate the sewer service charge and allocate to each JPA member agency its respective portion of the sewer charge.
- **FOG:** Fats, Oils and Grease
- **FULL TIME EQUIVALENT (FTE):** A position converted to a decimal equivalent of a full-time employee position.
- **HAULERS, PERMITS and INSPECTION REVENUE:** Fees and charges for use of Agency septage receiving facility, permit fees for commercial and industrial waste regulated commercial and industrial dischargers, reimbursement of Agency labor, and administrative costs for performing inspections and other services.

- **INVESTED IN CAPITAL ASSETS, NET OF RELATED DEBT:** Represents amounts invested in capital assets less accumulated depreciation and any outstanding debt used to acquire the assets.
- **JOINT POWERS AGREEMENT (JPA):** An agreement between two or more local government agencies to form a separate governmental entity distinct from the member governments. It authorizes the powers the JPA is allowed to exercise.
- **LIABILITIES:** What the Agency owes others.
- **MCSTOPP:** Marin County Stormwater Pollution Prevention Program
- **MEDICAL AFTER RETIREMENT ACCOUNT (MARA):** An employer paid contribution to participating employee's MARA account. The accumulated funds, owned by the individual, can be spent on qualified medical expenses during retirement.
- **NET POSITION:** The difference between total assets and total liabilities.
- **NON-CURRENT LIABILITIES:** Payment obligations owed by the Agency more than 12 months in the future.
- **NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):** A federal permit that establishes the quality requirements of the Agency's treatment waters, and requires the Agency to manage and maintain pretreatment, pollution prevention, mercury reduction and public education programs.
- **OTHER NON-OPERATING REVENUE:** Includes CSRMA dividends, CalCARD prompt payment incentive rebates, settlement claims, the occasional sale of assets, SDI disability reimbursements, and other miscellaneous revenue sources.
- **OPEB:** Other post-employment benefits which are specifically medical benefits for retired employees.
- **POST-EMPLOYMENT HEALTH PLAN (PEHP):** An employer paid contribution to participating employee's PEHP account has replaced the MARA. The accumulated funds, owned by the individual, can be spent on qualified medical expenses during retirement.
- **PEPRA:** Public Employees' Pension Reform Act established a cap on the amount of compensation that can be used to calculate a retirement benefit for new public employees hired on or after January 1, 2013.
- **PROGRAM REVENUES:** The Agency is the lead coordinator for the Safety Director, Countywide Education, and Outside Safety Training programs. Costs incurred by CMSA are allocated to the districts that participate in the programs. The Agency invoices participating districts quarterly for Safety Director and Countywide Education expenditures in accordance with agreements with program participants.
- **RESTRICTED CASH:** Cash and investments not available for immediate use and set aside for specific, contractual purposes.
- **REVENUE BOND:** Debt obligation for which interest and principal payments are secured by the debt service portion of service charge revenues.
- **SANITARY DISTRICT No. 2 (SD#2):** SD#2 is a CMSA JPA member, and comprises the Town of Corte Madera and unincorporated properties on the Tiburon peninsula.
- **SERVICE CHARGE:** A fee for wastewater treatment service and payment of the revenue bond debt service.
- **UNRESTRICTED CASH:** Cash and investments available to use for operations and not tied to a specific expenditure or reserve.
- **WATER ENVIRONMENT FEDERATION (WEF):** A not-for-profit technical and educational organization of 36,000 individual members and 75 affiliated Member Associations representing water quality professionals around the world.

## **ACRONYM LISTING**

AM	Asset Management
AOWP	Adult Offender Work Program
BACC	Bay Area Chemical Consortium
BACWA	Bay Area Clean Water Agencies
BAPPG	Bay Area Pollution Prevention Group
BAAQMD	Bay Area Air Quality Management District
BOD	Biological Oxygen Demand
CAFR	Comprehensive Annual Financial Report
CalPERS	California Public Employees' Retirement System
CAMP	California Asset Management Program
CASA	California Association of Sanitation Agencies
CCI	Construction Cost Index and/or City Cost Index (ENR.com)
CIP	Capital Improvement Program
CMMS	Computerized Maintenance Management System
CMSA	Central Marin Sanitation Agency
COLA	Cost of Living Adjustment
CoM	County of Marin
CPI	Consumer Price Index
CSRMA	California Sanitation Risk Management Authority
CUPA	Certified Unified Program Agencies
CWEA	California Water Environment Association
DAFs	Dissolved Air Flotation Thickeners
EDU	Equivalent Dwelling Unit
ELAP	Environmental Laboratory Approval Program
ENR	Engineering News-Record
F2E	Food-to-Energy
FOG	Fats, Oils, and Grease program (see Contract Service Revenues)
FTE	Full Time Equivalent
FW	Food Waste
FY	Fiscal Year
GASB	Government Accounting Standards Board
GFOA	Government Finance Officers Association
G&A	General & Administrative
IW	Industrial Waste
JPA	Joint Powers of Authority
LAIF	Local Agency Investment Fund (see Interest Income)
LARK	City of Larkspur
LGVSD	Las Gallinas Sanitary District (see Contract Service Revenues)
MARA	Medical After Retirement Account
MSS	Marin Sanitary Service
NACWA	National Association of Clean Water Agencies
NBWA	North Bay Watershed Association
NPDES	National Pollutant Discharge Elimination System
OPEB	Other Post-Employment Benefits (retiree medical benefits)
OWRF	Organic Waste Receiving Facility
PAFR	Popular Annual Financial Report
PEHP	Post-Employment Health Plan (employee benefit)
RVSD	Ross Valley Sanitary District, JPA Member
SBP	Strategic Business Plan
SD #2	Sanitary District #2, JPA Member

SDI	State Disability Insurance
SQSP	San Quentin State Prison
SQ Village	San Quentin Village
SQVSMC	San Quentin Village Sewage Maintenance District
SRSD	San Rafael Sanitation District, JPA Member
SSC	Sewer Service Charge
SWRCB	State Water Resources Control Board
TCSD	Tamalpais Community Services District (see Contract Service Revenues)
TSS	Total Suspended Solids
USA	Underground Service Alert
WAS	Waste Activated Sludge

PROPOSED

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PROPOSED



**CENTRAL MARIN SANITATION AGENCY**  
Preliminary Budget for the Fiscal Year 2018-19  
**SCHEDULE OF REVENUE ALLOCATION TABLES**

Description	Fiscal Year 2017-18	Fiscal Year 2018-19	Amount Increase (Decrease)	Percent Increase (Decrease)
Flow-Strength Allocation Table (for service charges and capital fee)				
	36M Flow <u>36M Strength</u>	36M Flow <u>36M Strength</u>		
SRSD	41.41%	40.86%		
RVSD	50.30%	50.49%		
SD #2	8.29%	8.65%		
Totals	<u>100.00%</u>	<u>100.00%</u>		
<hr/>				
Allocation of Service Charges to Members	\$ 10,263,166	\$ 10,622,376	\$ 359,210	3.5%
<hr/>				
SRSD	4,249,977	4,340,303	90,326	2.1%
RVSD	5,162,372	5,363,238	200,866	3.9%
SD #2	850,816	918,836	68,020	8.0%
Totals	<u>\$ 10,263,165</u>	<u>\$ 10,622,377</u>	<u>\$ 359,212</u>	3.5%
<hr/>				
Allocation of Capital Fee to Members	\$ 630,000	\$ 811,258	\$ 181,258	28.8%
<hr/>				
SRSD	260,883	331,480	70,597	27.1%
RVSD	316,890	409,604	92,714	29.3%
SD #2	52,227	70,174	17,947	34.4%
Totals	<u>\$ 630,000</u>	<u>\$ 811,258</u>	<u>181,258</u>	28.8%
<hr/>				
Debt Service Cost - Refunding Revenue Bonds Series 2015				
Service charges-debt service principal	\$ 2,250,000	\$ 2,330,000	\$ 80,000	3.6%
Service charges-debt service interest	1,711,906	1,643,206	(68,700)	-4.0%
Subtotal debt service	3,961,906	3,973,206	11,300	0.3%
Service charges-debt service coverage	990,477	993,302	2,825	0.3%
Total debt service cost	<u>\$ 4,952,383</u>	<u>\$ 4,966,508</u>	<u>\$ 14,125</u>	0.3%
<hr/>				
EDU Count (for debt service allocation)				
SRSD (Effective FY 2017-18 fixed at 19,545)	19,545	19,545	-	0.0%
RVSD (Effective FY 2017-18 fixed at 22,404)	22,404	22,404	-	0.0%
SD #2 (Effective FY 2017-18 fixed at 6,090)	6,090	6,090	-	0.0%
SQSP (Effective FY 2017-18 fixed at 4,005)	4,005	4,005	-	0.0%
Total EDU's	<u>52,044</u>	<u>52,044</u>	<u>-</u>	0.0%
<hr/>				
Allocation of Debt Service Costs to Members				
<hr/>				
SRSD	\$ 1,859,855	\$ 1,865,160	\$ 5,305	0.3%
RVSD	2,131,911	2,137,992	6,081	0.3%
SD #2	579,510	581,163	1,653	0.3%
SQSP	381,106	382,193	1,087	0.3%
Totals	<u>\$ 4,952,383</u>	<u>\$ 4,966,508</u>	<u>\$ 14,125</u>	0.3%
<hr/>				
Total billed charges to JPA members	<u>15,845,549</u>	<u>16,400,142</u>	<u>\$ 554,593</u>	3.5%

**CENTRAL MARIN SANITATION AGENCY**  
Proposed Budget for the Fiscal Year 2018-19  
**FY 2018-19 Initial Allocation of Service Charges using Flow and Strength (without SQSP)**

**I. Allocation of treatment costs by Flow and Strength**

A. Flow volume	50.6%
B. Biological Oxygen Demand mass (BOD, Strength)	24.7%
C. Total Suspended Solids mass (TSS, Strength)	24.7%
<b>Total Distribution</b>	<b>100.0%</b>

**A. Annual (April to March) Flows volume into CMSA in million gallons**

	SRSD	RVSD	SD #2	Total CMSA Plant Influent Flow
April 1, 2015 to March 31, 2016	1,435.31	1,912.90	422.01	3,770.22
April 1, 2016 to March 31, 2017	1,844.03	2,597.79	472.68	4,914.50
April 1, 2017 to March 31, 2018	1,411.51	1,913.07	357.66	3,682.24
<b>Total 48 month Flow</b>	<b>4,690.85</b>	<b>6,423.76</b>	<b>1,252.35</b>	<b>12,366.96</b>
<b>% of Flow</b>	<b>37.93%</b>	<b>51.94%</b>	<b>10.13%</b>	<b>100.0%</b>

**B. Annual (April to March) Mass of Biological Oxygen Demand (BOD) in pounds**

	SRSD	RVSD	SD #2	Total CMSA Plant Influent BOD
April 1, 2015 to March 31, 2016	3,892,566	4,358,760	592,658	8,843,984
April 1, 2016 to March 31, 2017	4,293,860	4,450,865	674,224	9,418,949
April 1, 2017 to March 31, 2018	3,603,210	4,142,759	578,870	8,324,839
<b>Total 48 month BOD</b>	<b>11,789,636</b>	<b>12,952,384</b>	<b>1,845,752</b>	<b>26,587,772</b>
<b>% of Total BOD</b>	<b>44.34%</b>	<b>48.72%</b>	<b>6.94%</b>	<b>100.0%</b>

**C. Annual (April to March) Mass of Total Suspended Solids (TSS) in pounds**

	SRSD	RVSD	SD #2	Total CMSA Plant Influent TSS
April 1, 2015 to March 31, 2016	5,569,476	6,827,531	934,372	13,331,379
April 1, 2016 to March 31, 2017	5,543,868	5,629,170	905,498	12,078,536
April 1, 2017 to March 31, 2018	4,656,989	5,435,656	814,651	10,907,296
<b>Total 48 month TSS</b>	<b>15,770,333</b>	<b>17,892,357</b>	<b>2,654,521</b>	<b>36,317,211</b>
<b>% of Total TSS</b>	<b>43.42%</b>	<b>49.27%</b>	<b>7.31%</b>	<b>100.0%</b>

**II. Allocation of Sewer Service Charges to JPA Members**

This is determined by multiplying the allocation of treatment costs by volume and and strength (Section I) by each member's share of the flow (Section A), BOD (B) and TSS (C)

	SRSD	RVSD	SD #2	Total Allocation
FY 2018-19 Budget	40.86%	50.49%	8.65%	100.00%



**CENTRAL MARIN SANITATION AGENCY**  
Proposed Budget for the Fiscal Year 2018-19  
**FY 2018-19 Initial Allocation of Service Charges using Flow and Strength (with SQSP)**

**I. Allocation of treatment costs by Flow and Strength**

A. Flow volume	50.6%
B. Biological Oxygen Demand mass (BOD, Strength)	24.7%
C. Total Suspended Solids mass (TSS, Strength)	24.7%
<b>Total Distribution</b>	<b>100.0%</b>

**A. Annual (April to March) Flows volume into CMSA in million gallons**

	SRSD	RVSD	SD #2	SQSP	Total CMSA Plant Influent Flow
April 1, 2015 to March 31, 2016	1,435.31	1,912.90	422.01	129.48	3,899.70
April 1, 2016 to March 31, 2017	1,844.03	2,597.79	472.68	136.90	5,051.40
April 1, 2017 to March 31, 2018	1,411.51	1,913.07	357.66	166.12	3,848.36
<b>Total 48 month Flow</b>	<b>4,690.85</b>	<b>6,423.76</b>	<b>1,252.35</b>	<b>432.50</b>	<b>12,799.46</b>
<b>% of Flow</b>	<b>36.65%</b>	<b>50.19%</b>	<b>9.78%</b>	<b>3.38%</b>	<b>100.0%</b>

**B. Annual (April to March) Mass of Biological Oxygen Demand (BOD) in pounds**

	SRSD	RVSD	SD #2	SQSP	Total CMSA Plant Influent BOD
April 1, 2015 to March 31, 2016	3,892,566	4,358,760	592,658	306,804	9,150,787
April 1, 2016 to March 31, 2017	4,293,860	4,450,865	674,224	355,347	9,774,296
April 1, 2017 to March 31, 2018	3,603,210	4,142,759	578,870	403,835	8,728,674
<b>Total 48 month BOD</b>	<b>11,789,636</b>	<b>12,952,384</b>	<b>1,845,752</b>	<b>1,065,986</b>	<b>27,653,757</b>
<b>% of Total BOD</b>	<b>42.63%</b>	<b>46.84%</b>	<b>6.67%</b>	<b>3.85%</b>	<b>100.0%</b>

**C. Annual (April to March) Mass of Total Suspended Solids (TSS) in pounds**

	SRSD	RVSD	SD #2	SQSP	Total CMSA Plant Influent TSS
April 1, 2015 to March 31, 2016	5,569,476	6,827,531	934,372	398,325	13,729,703
April 1, 2016 to March 31, 2017	5,543,868	5,629,170	905,498	457,495	12,536,031
April 1, 2017 to March 31, 2018	4,656,989	5,435,656	814,651	486,679	11,393,975
<b>Total 48 month TSS</b>	<b>15,770,333</b>	<b>17,892,357</b>	<b>2,654,521</b>	<b>1,342,499</b>	<b>37,659,709</b>
<b>% of Total TSS</b>	<b>41.88%</b>	<b>47.51%</b>	<b>7.05%</b>	<b>3.56%</b>	<b>100.0%</b>

**II. Allocation of Sewer Service Charges to JPA Members**

This is determined by multiplying the allocation of treatment costs by volume and and strength (Section I) by each member's share of the flow (Section A), BOD (B) and TSS (C)

	SRSD	RVSD	SD #2	SQSP	Total Allocation
FY 2018-19 Budget	39.42%	48.70%	8.34%	3.54%	100.00%

TABLE 1 - HEALTH & SAFETY CORE PROGRAM	Adopted FY 17	Adopted FY 18	Projected FY 18	Proposed FY 19	NSD Share	CMSA Share	Comments
<b>Fixed Expenses</b>							
Salary - Safety Specialist/Manager (1 FTE)	137,105	111,839	73,747	118,000	46,910	71,090	3% Increase effective 07/01/17. Step C. CMSA 60.25% & NSD 39.75%.
Car Allowance - Health & Safety Manager (1 FTE)	4,800	4,800	3,785	4,800	1,908	2,892	\$400/month
Benefits - CalPERS Retirement	61,392	24,574	19,376	29,400	11,688	17,712	CMSA 60.25% & NSD 39.75%. Classic CalPERS status.
Benefits - SS/Medicare		1,681	1,325	1,800	716	1,084	
Benefits - Health		11,040	8,704	29,200	11,608	17,592	
Benefits - PEHP		1,680	1,325	1,700	676	1,024	
Benefits - Retiree Health (2)	5,888	6,481	5,110	6,400	2,544	3,856	62,100
<b>Total Salaries &amp; Benefits</b>	<b>209,185</b>	<b>162,095</b>	<b>113,372</b>	<b>191,300</b>	<b>76,050</b>	<b>115,250</b>	
<b>Variable Expenses</b>							
Professional Services	6,000	6,000	-	6,000	2,385	3,615	Contract services to assist in completing program development.
Publications	1,300	1,300	341	1,600	636	964	Mancomm, CalOSHA Reporter, ANSI/NFPA standards
Memberships	750	750	542	750	298	452	NSC, CWEA, American Society Safety Engineers
Office Supplies	450	450	-	450	179	271	
Safety Shoes	200	200	-	200	80	120	
Training Materials	2,000	2,000	697	2,000	795	1,205	Training Supplies, DVDs
Computer Software/Supply	3,600	3,600	3,395	4,000	1,590	2,410	Keller On-Line, MSDS Online
Seminars/Conferences	-	6,200	-	5,500	2,186	3,314	CASA Conference. (KT) CWEA Classes, Fall Protection Training, Forklift Training and Workers Compensation training .
<b>Subtotal Variable Expenses</b>	<b>14,300</b>	<b>20,500</b>	<b>4,975</b>	<b>20,500</b>	<b>8,150</b>	<b>12,350</b>	
<b>Total Health &amp; Safety Program Expenses</b>	<b>223,485</b>	<b>182,595</b>	<b>118,347</b>	<b>211,800</b>	<b>84,199</b>	<b>127,601</b>	
<b>Testing/Training Expenses 6830-017-01 &amp; 06</b>							
Testing and Training-CMSA	15,616	13,100	13,886	5,560	-	5,560	Scheduled Hearing tests, Incident Command, Underground Utility Locator (6830-017-01)
Testing and Training-NSD	10,096	11,200	4,600	4,560	4,560		(6830-017-06)
<b>Subtotal Testing and Training</b>	<b>25,712</b>	<b>24,300</b>	<b>18,486</b>	<b>10,120</b>	<b>4,560</b>	<b>5,560</b>	
<b>Total Program Expenses</b>	<b>249,197</b>	<b>206,895</b>	<b>136,833</b>	<b>221,920</b>	<b>88,759</b>	<b>133,161</b>	
	40.00%	41.67%		39.75%			NSD Allocation
	60.00%	58.33%		60.25%			CMSA Allocation
Salary - ARS&SO (.25 FTE)		35,842	35,842	38,800	19,400	19,400	.25 FTE cost shared equally (NSD not budgeted)
Benefits - ARS&SO (FY18: .25 FTE)		11,593	11,593	12,400	6,200	6,200	.25 FTE cost shared equally (NSD not budgeted)
Car Allowance - ARS&SO Salary (.25 FTE)		1,200	-	-	-	-	NSD's ARS&SO does not receive car allowance
<b>Total Salaries &amp; Benefits - ARS&amp;SO</b>		<b>48,635</b>		<b>51,200</b>	<b>25,600</b>	<b>25,600</b>	Administrative, Risk Services & Safety Officer (ARS&SO)
					<b>86,600</b>	<b>N/A</b>	<b>FY 19 Budget (rounded)</b>
						<b>38,000</b>	<b>4070-000-00 Health &amp; Safety Revenue Budget (Excludes ARS&amp;SO)</b>
						<b>5,600</b>	<b>6830-016-01 Health &amp; Safety Program, CMSA Share</b>
					<b>4,600</b>	<b>5,600</b>	<b>6830-017-06 (NSD) &amp; 01 (CMSA) Outside Safety Training Services</b>
					<b>91,200</b>	<b>43,600</b>	<b>SUBTOTAL</b>
					<b>(2,400)</b>		<b>less 5% Admin Fee</b>
					<b>400</b>		<b>Cooperative Agreement Expenses department adjustments</b>
					<b>89,200</b>		<b>TOTAL FY 19 Budget Health &amp; Safety Program</b>

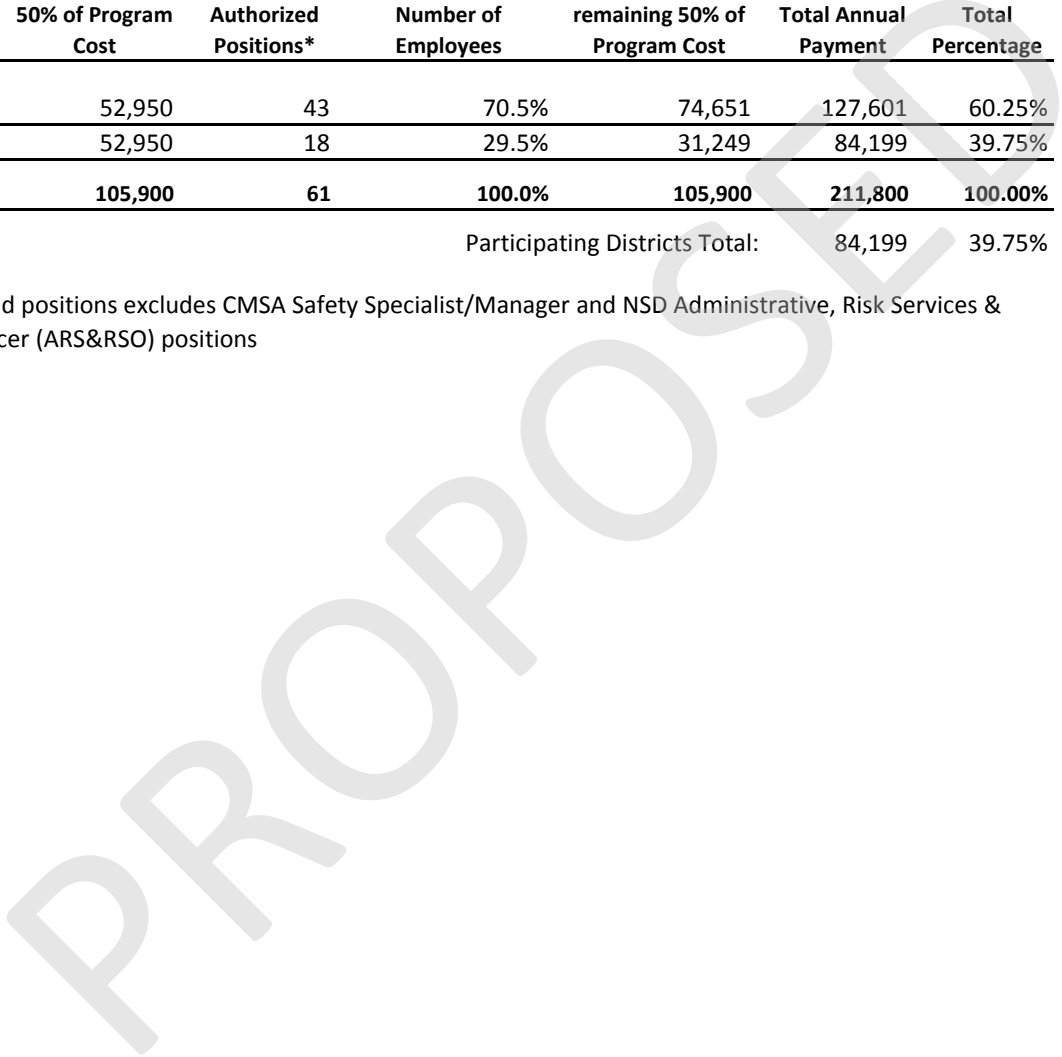
**FY 19 Distribution of Health & Safety Program Expenses to Participating Districts - Adopted Budget**

Method of Distribution: Each District has an equal share 50% of the total expense.  
 The remaining 50% of the program cost is distributed by the number of authorized positions for each District.

**Total Cost Core Program**                      **211,800** Excludes .25 FTE ARS&SO (costs shared equally) & 5% Admin Fee  
**50% of Total Expense**                      \$    105,900

<b>Agency</b>	<b>Distribution on 50% of Program Cost</b>	<b>Number of Authorized Positions*</b>	<b>Percentage of Total Number of Employees</b>	<b>Distribution on remaining 50% of Program Cost</b>	<b>Total Annual Payment</b>	<b>Total Percentage</b>
<b>CMSA*</b>	52,950	43	70.5%	74,651	127,601	60.25%
<b>NSD*</b>	52,950	18	29.5%	31,249	84,199	39.75%
<b>Total</b>	<b>105,900</b>	<b>61</b>	<b>100.0%</b>	<b>105,900</b>	<b>211,800</b>	<b>100.00%</b>
Participating Districts Total:					84,199	39.75%

\*Authorized positions excludes CMSA Safety Specialist/Manager and NSD Administrative, Risk Services & Safety Officer (ARS&RSO) positions



**CENTRAL MARIN SANITATION AGENCY**  
Public Education Committee Annual Budget FY 2018-2019

Program Costs	Fiscal Year 2016-17	Fiscal Year 2017-18	Expenses YTD 2017-18	Fiscal Year 2018-19
Event Enrollment (Booth costs and event support)	\$ 15,000	\$ 15,000	\$ 1,860	\$ 7,000
Juggler Show (20 shows per year annual cost)	10,000	10,000	10,000	10,000
RxSafe Marin	14,000	-	14,000	14,000
Fast Forward/Kidspeak Publication (110,000 copies)	4,000	4,000	4,000	4,000
Logo Development (for Marin County Fair 2018)	3,000	3,000	200	3,000
Awards ( 6 plaques - purchase plaques local and state)	1,000	1,000	800	-
Meeting Expenses (copies, demo promo/brochure items)	500	500	100	500
Educational Video reproduction/updating		10,000	-	18,000
Booth Set Up Supplies (numerous events throughout year)	2,000	2,000	254	1,000
Brochures (printing/updates/ development)	1,200	1,200	-	3,000
MCSTOPPP Calendar Support	3,000		-	
Promotional Items (FY 18-19)	24,000	24,000	6,000	24,000
STRAW - Students and Teachers Restoring A Watershed	4,000			
Marin Science and Environmental Leadership Prgm at Terra Linda HS				2,500
Contingency	5,000	5,000		-
<b>Totals</b>	<b>\$ 86,700</b>	<b>\$ 75,700</b>	<b>\$ 37,214</b>	<b>\$ 87,000</b>

Program Cost Allocation to Participating Members					Member Revenue to CMSA (Cost Plus 15% Program Mngt Fee)		
Agency	Percent Share	Annual Total Program Costs			2016-17	2017-18	2018-19
		2016-17	2017-18	2018-19			
CMSA	40.6%	\$ 35,200	\$ 30,734	\$ 35,322			
LGVSD	13.2%	11,444	9,992	11,484	\$ 13,161	\$ 11,491	\$ 13,207
NSD	24.8%	21,502	18,774	21,576	24,727	21,590	24,812
SASM	11.6%	10,057	8,781	10,092	11,566	10,098	11,606
SMCSD	6.8%	5,896	5,148	5,916	6,780	5,920	6,803
SD5	3.0%	2,601	2,271	2,610	2,991	2,612	3,002
<b>Totals</b>	<b>100.0%</b>	<b>\$ 86,700</b>	<b>\$ 75,700</b>	<b>\$ 87,000</b>	<b>\$ 59,225</b>	<b>\$ 51,711</b>	<b>\$ 59,430</b>

**Notes:**

Event Enrollment - committee decreased amount needed due to several events being discontinued (Salmon Festival, BAEER Faire) in 2018.

Educational Video reproduction/updating - committee increased the amount needed after discussions with a video production company, Green Planet Films, who quoted \$16,000. The committee thought an added \$2,000 for possible change orders might be prudent.

Booth Set Up Supplies (numerous events throughout year) - committee lowered this amount needed after reviewing the amount historically spent on this line item.

Brochures (printing/updates/development) - committee would like to develop brochures which are bi-lingual, deliver a clear message of what to flush and a brochure directed toward Senior Citizens. Julie Hoover and Liz Falejczyk are the committee leads on this project.

MCSTOPPP Calendar Support - MCSTOPP is no longer publishing an annual county wide calendar. If this organization starts up again, the committee will discuss funding.

STRAW - this program was only funded in FY16-17.

MSEL - Student Outreach Research Projects - LGVSD currently works with MSEL students and suggested this would be a great addition to the Public Education Program. This year the student project researched the effects of microbeads from beauty products, on the environment and the difficulty removing them from wastewater. The students made alternative beauty products using natural ingredients and have printed up the recipes for people to make at home. They will be presenting their project at the Downtown San Rafael Farmer's Market, Thursday, April 26th and San Rafael, Civic Center Farmer's Market, Sunday, April 29th in hopes to bring attention to this problem. The requested \$2,500 would be seed money to assist the MSEL program at Terra Linda HighSchool.



## Central Marin Sanitation Agency

# Financial Policies Manual

FY19 GFOA Budget published on the [www.cmsa.us/finance](http://www.cmsa.us/finance) website will include the Financial Policies Manual

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March 13, 2018