

CENTRAL SAN

FY2018-19

BUDGET



CENTRAL CONTRA COSTA SANITARY DISTRICT

Board of Directors



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DISTRICT MANAGEMENT

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Ann Sasaki _____ Deputy General Manager, Director of Operations

Philip Leiber _____ Director of Finance and Administration

Jean-Marc Petit _____ Director of Engineering and Technical Services

Katie Young _____ Secretary of the District

Kent Alm _____ District Counsel

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General Manager Budget Message



Board of Directors:

I am pleased to present the Central Contra Costa Sanitary District's (Central San) Fiscal Year (FY) 2018-19 combined budget. The budget format improves ease of use and increases transparency as it combines the Operations and Maintenance, Capital Improvement, Self-Insurance, and Debt Service Budgets in one document.

Foundation for Success

During the current fiscal year, Central San has worked to set a solid foundation for the coming years with the integration of several key planning documents. These plans include an updated two-year Strategic Plan, an updated financial plan for a review of the second-year rate adjustment approved last year for FY 2018-19, and an updated proposed Ten-Year Capital Improvement Plan (CIP). The updated CIP includes further prioritization in concert with a concentrated effort to minimize costs while still meeting critical infrastructure needs set forth in the Comprehensive Wastewater Master Plan. We have continued the theme of continuous improvement and optimizing business processes through the establishment of an internal audit function, implementation of new software programs to gain efficiencies, and recognition as one of a select number of “Leading Utilities of the World” inductees. These improvements will serve to enhance our business practices, control operating costs, and provide another year of a flat operating budget.

As Central San considers switching to CalPERS for its health insurance coverage, significant savings are expected from the transition to more cost-effective employee/retiree healthcare plans. This change will provide the same coverage at a reduced cost through membership in a larger risk pool. As Central San implements several large-scale projects in both the treatment plant and collection system to replace aging infrastructure, our continued focus on financial discipline will aim to achieve our goals while keeping rates competitive. Our effort to do so is made more visible with this enhanced budget document, which follows best practices in terms of transparency and alignment with our planning documents.

Acknowledging our Past Success

The past fiscal year has been productive and successful for Central San. Every division of our team has effectively fulfilled our Strategic Plan goals, while maintaining the best reliability record and customer service standards in the Bay Area. We are extremely proud of the work we do, and year after year we strive to be better, holding ourselves to the highest levels of efficiency and effectiveness. Aligned with six of our FY 2017-18 goals, here is a list of some of our major accomplishments:

General Manager Budget Message

► Provide exceptional customer service

- Successful completion of the third Central San Academy, a program which focuses on educating our customers on the mission of Central San and how it is fulfilled.
- Hosted a week-long collection drive for the 20th Anniversary of the Household Hazardous Waste Collection Facility (HHWCF), leading to our highest customer participation level in 20 years.
- Developed household hazardous waste educational videos that promoted important Central San programs and services reaching tens of thousands of viewers.
- Increased the reach of our student pollution prevention educational programs. These students will play a role in reducing pollution and supporting the environment for decades to come.
- Focused outreach efforts to showcase completion of major infrastructure projects that will increase reliability and add value for customers.

► Strive to meet regulatory requirements

- Twenty consecutive years of 100% compliance with our National Pollutant Discharge Elimination System permit.
- Increased collection at the HHWCF and pharmaceutical drop-off sites.
- Reduced sanitary sewer overflows.

► Be a fiscally sound and effective water sector utility

- Maintained a AAA credit rating with Standard & Poor's.
- Established a combination trust for Pension and Other Post-Employment Benefits (OPEB).
- Established a new IRS Section 115 Pension Trust and funded \$5.4 million toward unfunded liabilities.
- Fully funded the OPEB actuarially determined contribution and paid an additional \$2.5 million toward the unfunded liability.
- Seventeen consecutive years of receiving the Government Finance Officers Association award for financial reporting excellence.

► Develop and retain a highly trained and innovative workforce

- Completed Recruitment Training for all District employees.
- Held various human resource topic related “brown bag” sessions for all District employees.
- Held the second Management Academy and started the second Supervisory Academy.
- Implemented the Central San Mentorship Program on an annual basis.
- Completed the Roles and Responsibilities of Public Employees Training for all District employees.
- Negotiated Kaiser Permanente and Delta Dental rate decreases of 5% and 4%, respectively, for FY 2017-18 premium rates, resulting in an annual savings of \$297,130.
- Partnered with the California Water Environment Association (CWEA) to assist in the development of the state-wide CWEA Testing Program.

► Maintain a reliable infrastructure

- Completed construction of the Pleasant Hill-Grayson Creek Trunk Sewer Project, whose scope of work included installation of up to 10,000 feet of trunk sewers.
- Completed construction of two treatment plant projects: Pump and Blower Building Seismic Upgrades and the Co-Gen Optimization Project.
- Cleaned 759 miles of sanitary sewers and televised 167 miles of sanitary sewers.

► Embrace technology, innovation, and environmental sustainability

- Successfully renegotiated a Memorandum of Understanding with Contra Costa Water District and Santa Clara Valley Water District to investigate the feasibility of water/wastewater agencies working together to use recycled water to serve industrial customers to free up drinking water supply.
- Inducted into the Leading Utilities of the World global network of the most successful and innovative water and wastewater utilities.

General Manager Budget Message

Setting Strategic Priorities

The Budget reflects the Board's policies and provides the resources necessary to accomplish Central San's mission to protect public health and the environment, overcome our challenges, and achieve the goals laid out in the FY 2018-20 Strategic Plan. Central San is committed to improving the quality of services we provide to our customers and will positively respond to the following challenges:

Challenge	Primary Response
Maintaining and upgrading aging infrastructure, including increasing capital improvement investment and the internal resources to deliver on these increased levels of capital spending.	Implement the recommendations of the Comprehensive Wastewater Master Plan (CWMP) with significantly increased capital investment beginning in FY 2018-19.
Addressing concerns and educating customers regarding required revenue/resources to replace aging infrastructure and meet regulatory requirements.	Continue commitment to customer outreach, prioritization of CIP, balance capital spending with affordability/rate impact concerns, and continue to focus on the most cost effective alternatives to maintain reliability and meet regulatory requirements.
Increasing stringent air regulation requirements.	Anticipate changing regulations and plan for cost-effective alternatives to meet requirements. This is a continuing effort.
The need for all water sector agencies to play a role in maintaining a sustainable water supply with recent drought experiences and the continuing effects of climate change.	Partner with agencies to find water solutions benefiting the region and state. This includes looking for creative solutions such as water exchanges and increased interagency cooperation. This is a continuing effort.
Ever-increasing focus on resource recovery and sustainability.	Test and plan for alternative processes, equipment, and technology that are sustainable and cost effective. This is a continuing effort.
Fostering employee engagement to meet the challenges laid out above.	Recruit, train, and retain high quality employees. This is a continuing effort.
Increasing cost of employee benefits.	Recognizing that health insurance costs are a primary expense of employee and retiree benefits, the District is considering a switch to CalPERS health insurance with the goal of reducing costs without adversely impacting level of service.

General Manager Budget Message

Meeting our Strategic Goals

The FY 2018-19 budget provides funding for Central San to continue progress in meeting the following goals set by the Board and outlined in the FY 2018-20 Strategic Plan:

- Provide exceptional customer service and maintain an excellent reputation in the community
- Strive to meet regulatory requirements
- Be a fiscally responsible and effective wastewater utility
- Recruit, develop and retain a highly trained and safe workforce
- Maintain a reliable infrastructure
- Embrace technology, innovation, and environmental sustainability

Continuing Our Progress

The FY 2018-19 budget will enable us to address our challenges and successfully complete the goals for FY 2018-19 outlined in our Strategic Plan, all while continually optimizing our operations. I want to thank the Board for providing the vision, resources, and support necessary to achieve these goals and respond to future challenges. I want to also thank our staff for working so diligently to develop this budget, which will ensure that we are well positioned financially to accomplish our goals.

We recognize that the communities within our service area rely on us for a very basic but critical service. Accordingly, the proposed budget represents our commitment to serving them with excellence. By planning for the future, making sound financial decisions, implementing new technologies and processes, and maintaining a highly skilled and dedicated workforce, Central San will remain a world-class organization that provides our customers with exceptional service and value, now and well into the future.

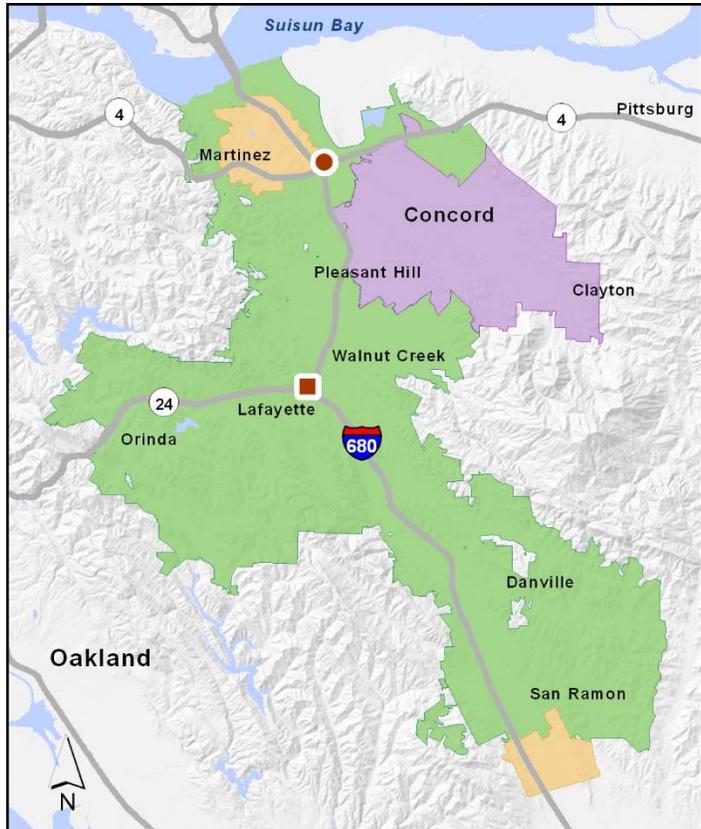


Roger S. Bailey
General Manager

District Overview

Introduction

Central San was established in 1946 and is located about 30 miles east of San Francisco. Central San provides wastewater services for approximately 484,200 residents and more than 3,000 businesses in central Contra Costa County. The service territory covers 182 square miles. This area includes Alamo, Clyde, Danville, Lafayette, Martinez, Moraga, Orinda, Pacheco, Pleasant Hill, San Ramon, Walnut Creek, and unincorporated areas within central Contra Costa County. Central San also treats wastewater for residents of Concord and Clayton under a 1974 contract with the City of Concord.



Central San serves 484,200 customers.

- Sewage collection and wastewater treatment; Household Hazardous Waste (HHW) disposal for 344,600 people. These services are provided over a 145-square-mile area.
- Wastewater treatment & HHW disposal for 140,900 people in Concord & Clayton by contract. These services are provided over a 30-square-mile area.
- HHW disposal only. These services are provided over a 9-square-mile area.
- Central San headquarters, treatment plant, HHW Facility and Residential Recycled Water Fill Station.
- Collection System Operations headquarters.

Central San operates and maintains more than 1,500 miles of sewer pipelines, 18 pumping stations, and a wastewater treatment plant that cleans and disinfects an average of 34 million gallons of wastewater per day. Most of this treated effluent is discharged into Suisun Bay. Approximately 2.5 million gallons per day receives further treatment to produce recycled water that is ideal for non-potable purposes such as landscape irrigation and industrial processes.

Since its inception in October 2014, Central San's Residential Fill Station has distributed nearly 21 million gallons of recycled water to our residential customers.

In addition to its wastewater and recycled water responsibilities, Central San operates and maintains an HHW Collection Facility that collects, recycles, or safely disposes of more than 2 million pounds of hazardous waste from approximately 24,000 residential and small business customers each year; and a Pharmaceutical Collection Program with 13 locations that collect and safely dispose of more than 12,500 pounds of unwanted drugs each year.

VISION, MISSION, VALUES

OUR VISION

To be a high-performance organization that provides exceptional customer service and regulatory compliance at responsible rates

OUR MISSION

To protect public health and the environment

OUR VALUES

People

- Value customers and employees
- Respect each other
- Work as a team
- Work effectively and efficiently
- Celebrate our successes and learn from our challenges

Community

- Value water sector partners
- Foster excellent community relationships
- Be open, transparent and accessible
- Understand service level expectations
- Build partnerships

Principles

- Be truthful and honest
- Be fair, kind and friendly
- Take ownership and responsibility

Leadership and Commitment

- Promote a passionate and empowered workforce
- Encourage continuous growth and development
- Inspire dedication and top-quality results
- Provide a safe and healthful environment

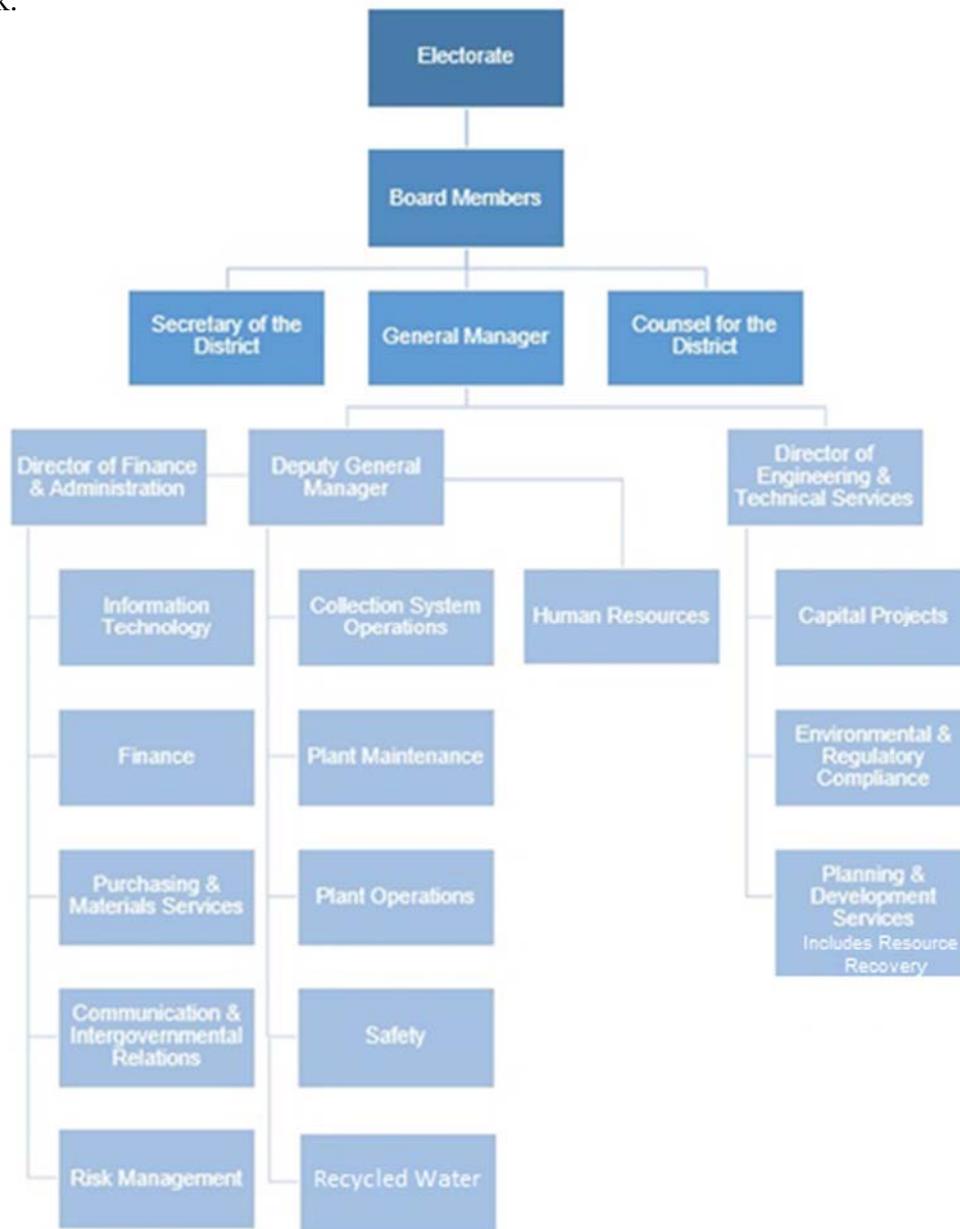


Organizational Structure

Central San is governed by a Board of Directors whose five members are elected at-large on a non-partisan basis and serve a four-year term. The Board appoints the General Manager, the Counsel for the District, and the Secretary of the District.

Central San is organized into three departments: Finance and Administration, Engineering and Technical Services, and Operations. The District currently has 290 budgeted full-time employees. This team of employees is led by a General Manager, a Deputy General Manager, two Department Directors, and 12 Division Managers.

Central San's main headquarters, Board Room, and treatment plant are located at 5019 Imhoff Place in Martinez. Central San's collection system operations are headquartered at 1250 Springbrook Road in Walnut Creek.



Strategic Plan Summary

For FY 2018-20, Central San has developed a two-year Strategic Plan that establishes policy direction that will enable Central San to increase efficiencies and continue in its role as a steward of the environment. The Strategic Plan outlines Central San's core commitments, focused initiatives, and key performance measurements.

The strategic goals reflect the opportunities and challenges that many water sector agencies face as we strive to increase quality and minimize the cost of services to our customers. These include the following:

- Enhanced customer expectations and public awareness
- Aging infrastructure
- Stringent regulatory requirements
- Financial constraints
- Security and emergency response concerns
- Sustainable regional water supply
- Increased focus on resource recovery

The strategic goals and initiatives were developed using the Effective Utility Management (EUM) framework as an overarching tool. The EUM was originally developed by the Environmental Protection Agency and several major water sector associations in 2007. The framework is made up of 10 attributes which provide a succinct indication of where effectively managed utilities should focus and what they should strive to achieve.

Effective Utility Management Attributes

Product Quality

Produces "fit for purpose" water that meets or exceeds full compliance with regulatory and reliability requirements and is consistent with customer, public health, ecological, and economic needs.

Customer Satisfaction

Provides reliable, responsive, and affordable services in line with explicit, customer-derived service levels.

Employee and Leadership Development

Recruits and retains a workforce that is competent, motivated, adaptive, and safety focused.

Operational Optimization

Ensures ongoing, timely, cost-effective, reliable, and sustainable performance improvements in all facets of its operations in service to public health and environmental protection.

Financial Viability

Understands the full life-cycle cost of utility operations and the value of water resources.

Infrastructure Strategy and Performance

Understands the condition of and costs associated with critical infrastructure assets.

Enterprise Resiliency

Ensures utility leadership and staff work together internally, and with external partners, to anticipate, respond to, and avoid problems.

Water Resource Sustainability

Ensures the availability and sustainable management of water for its community and watershed, including water resource recovery.

Community Sustainability

Takes an active leadership role in promoting and organizing community sustainability improvements through collaboration with local partners.

Stakeholder Understanding and Support

Engenders understanding and support from stakeholders (anyone who can affect or be affected by the utility), including customers, oversight bodies, community and watershed interests, and regulatory bodies for service levels, rate structures, operating budgets, capital improvement programs, and risk management decisions.

Connecting Effective Utility Management with District Strategic Plan and Initiatives

The following table summarizes the goals, strategies, and initiatives outlined in the FY 2018-20 Strategic Plan. It allows alignment between each initiative, the EUM attribute, and our core values. For a complete copy of the Strategic Plan, including initiatives and key performance metrics, please visit centralsan.org.

FY 2018-20 Strategic Plan

Goal 1 - Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community			
Strategy	Initiative	EUM Attribute	District Values
Build External Customer Relationships and Awareness	Provide high-quality customer service.	Customer Satisfaction	People, Community
	Invest in business process changes and technologies to effectively increase access to District information and promote customer care, convenience, and self-service.	Customer Satisfaction, Operational Optimization	Leadership and Commitment
	Increase customer understanding and support for key District initiatives, programs, and services.	Stakeholder Understanding and Support	People, Community
	Build and maintain relationships with federal, state, and local elected officials and stakeholders.	Stakeholder Understanding and Support	Community
Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency	People
	Cultivate employees' understanding of District operations and their role in the agency's success.	Employee and Leadership Development, Enterprise Resiliency	People, Community
Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development	People, Community, Leadership and Commitment
	Continue to participate in CalWARN to provide mutual aid to sister agencies.	Community Sustainability	Community, Principles
	Minimize impacts to residents and businesses during maintenance or construction work.	Customer Satisfaction	People, Community

Goal 2 - Strive to Meet Regulatory Requirements			
Strategy	Initiative	EUM Attribute	District Values
Strive to Achieve 100% Permit Compliance in Air, Water, Land and Other Regulations	Meet existing regulations.	Product Quality	Principles
	Foster relationships with regulatory agencies.	Stakeholder Understanding and Support	Community
	Track proposed and pending legislation or regulatory changes; plan for possible implementations.	Stakeholder Understanding and Support	Community
	Actively manage greenhouse gas (GHG) emissions in the most cost-effective and responsible manner.	Community Sustainability	Principles
Strive to Minimize the Number of Sanitary Sewer Overflows	Complete the collection system scheduled maintenance on time and optimize cleaning schedules.	Infrastructure Strategy and Performance	Leadership and Commitment
	Continue the pipeline condition assessment and cleaning quality assurance program using the system-wide CCTV program.	Infrastructure Strategy and Performance	Leadership and Commitment
Comply with All Federal, State, and Local Regulations Related to District Administration	Review all existing Board Policies every two years to ensure relevancy.	Enterprise Resiliency	Principles
	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency	Principles

Goal 3 - Be a Fiscally Responsible and Effective Wastewater Utility			
Strategy	Initiative	EUM Attribute	District Values
Conduct Long-Range Financial Planning	Ensure rate structure and fees are consistent with cost-of-service principles.	Customer Satisfaction, Financial Viability	Community, Principles
	Present alternative financial plans to the Board in FY 2018-19 for necessary rate adjustments for FY 2019-20 onward, including considering the potential issuance of debt to fund the CIP in conjunction with the overall financial plan.	Financial Viability, Infrastructure Strategy and Performance	Community, Principles
	Develop alternatives for new revenues and funding sources (e.g., interagency agreements, services, and recycled water).	Financial Viability	Leadership and Commitment
Manage Costs	Effectively manage the cost of employee benefits.	Financial Viability	Community, Principles
	Carry out targeted audits of critical/high risk functions or processes.	Operational Optimization, Enterprise Resiliency	People, Principles, Leadership and Commitment
	Re-engineer business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization, Enterprise Resiliency	People, Leadership and Commitment
	Evaluate and apply risk management practices to minimize loss.	Enterprise Resiliency	Principles

Goal 4 - Recruit, Develop, and Retain a Highly Trained and Safe Workforce			
Strategy	Initiative	EUM Attribute	District Values
Ensure Adequate Staffing and Training to Meet Current and Future Operational Levels	Assess, develop, and implement District-wide training needs.	Employee and Leadership Development	People, Leadership and Commitment
	Recruit, develop, and train our future leaders.	Employee and Leadership Development	People, Leadership and Commitment
Enhance Relationships with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development	People, Leadership and Commitment
	Sustain and grow collaborative relationships with the labor bargaining units.	Employee and Leadership Development, Enterprise Resiliency	People, Community, Leadership and Commitment
Meet or Exceed Industry Safety Standards	Achieve consistent improvement on State of California and Bay Area industry injury rate.	Employee and Leadership Development	People, Principles, Leadership and Commitment
	Enhance the safety culture through improved training and communications.	Employee and Leadership Development	People, Principles, Leadership and Commitment

Goal 5 - Maintain a Reliable Infrastructure			
Strategy	Initiative	EUM Attribute	District Values
Manage Assets Optimally Throughout Their Lifecycle	Develop Ten -Year CIP consistent with recommendations of the Comprehensive Wastewater Master Plan and Asset Management.	Infrastructure Strategy and Performance	Leadership and Commitment
	Continue maintenance on assets using a reliability-based approach.	Infrastructure Strategy and Performance	Leadership and Commitment
	Manage current vehicle fleet to provide maximum value.	Infrastructure Strategy and Performance	Leadership and Commitment
Facilitate Long-Term Capital Renewal and Replacement	Integrate data from the Asset Management Program into the analysis of long-term Capital Improvement needs based on the Ten -Year CIP.	Infrastructure Strategy and Performance	Leadership and Commitment
	Implement the Program Management Information System (PMIS).	Operational Optimization, Infrastructure Strategy and Performance	People, Leadership and Commitment
Protect District Personnel and Assets from Threats and Emergencies	Enhance capability to mitigate, prepare for, respond to, and recover from emergencies.	Enterprise Resiliency	Principles
	Evaluate and implement appropriate improvements to the Security Program to meet new or evolving threats.	Enterprise Resiliency	Principles
	Improve the potable water system and enhance water quality testing procedures.	Product Quality	Community, Leadership and Commitment

Goal 6 - Embrace Technology, Innovation and Environmental Sustainability			
Strategy	Initiative	EUM Attribute	District Values
Augment the Region's Water Supply	Explore partnering opportunities.	Water Resource Sustainability, Community Sustainability	Community
	Continue to support the development of a demonstration Satellite Water Recycling Facility at Diablo Country Club.	Water Resource Sustainability, Community Sustainability	Community, Leadership and Commitment
	Continue to provide recycled water to residents and businesses; evaluate and process new customer requests.	Customer Service Satisfaction, Water Resource Sustainability	Community
Reduce Reliance on Non-Renewable Energy	Explore opportunities for renewable energy generation, conservation, and efficiency based on the Board's Energy Policy.	Community Sustainability	Leadership and Commitment
Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Select and implement new Enterprise Resource Planning (ERP) system and integrate with linked systems.	Operational Optimization	Leadership and Commitment
	Expand and improve the use of worthwhile mobile computing and communication technologies.	Operational Optimization	Leadership and Commitment
	Continue developing and investing in cost-effective innovation, leading and promising technology, and applied research and development.	Operational Optimization	Leadership and Commitment

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Financial Overview

Central San uses an enterprise fund to account for its operations. We currently have one enterprise fund, which is comprised of four internal sub-funds:

- **Operations and Maintenance (O&M) Running Expense Fund** - This fund provides for the general operations, maintenance, and administration of Central San. Sewer Service Charge (SSC) revenues are collected by the Contra Costa County Tax Assessor's Office and are remitted to Central San in two installments in April and December of each year. Central San provides several services, including wastewater treatment to its customers and the Cities of Concord and Clayton. Central San is reimbursed annually for the treatment services provided to these two cities. In order for Central San to pay its ongoing expenses throughout the year, it reserves five months (41.7%) of its gross operating expenditures at the start of each fiscal year.
- **Sewer Construction Fund (Capital Fund)** - This fund provides for treatment plant and collection system asset renewal and replacement expenditures, as well as office facilities renewal, vehicle and equipment replacement, information systems replacement, and miscellaneous capital expansion needs. The City of Concord reimburses Central San for a flow-proportional share of the expenses related to projects impacting the services the City has contracted with Central San to provide. Property tax (ad valorem taxes) and SSC revenues, which comprise a significant portion of annual capital project revenues, are also collected by the Contra Costa County Tax Assessor's Office and remitted to Central San in two installments in April and December of each year. In addition, connection fees received from permits are allocated to the capital fund. In order to meet the cash flow needs of the capital projects program, Central San reserves 50% of the annual cash-funded portion of the capital projects budget at the start of each fiscal year. In FY 2018-19, the entire Capital Projects budget will be funded from revenues. The Capital Projects section of this document provides a table showing the various sources of revenue funding for each type of capital project. In future years, the financial plan anticipates a portion of the Capital Projects budget will be funded with bond proceeds.
- **Self-Insurance Fund (SIF)** - This fund accounts for interest earnings on cash balances in this fund and cash allocations from other funds, as well as for costs of insurance premiums and claims not covered by Central San's insurance coverage. Central San has self-insured a portion of its liability and property risks since July 1, 1986, when the Board approved the establishment of the SIF. Central San is self-insured for three events up to \$500,000 per occurrence for its general and automobile liability program, for a total of \$1.5 million. Maintaining a self-insured retention reduces Central San's insurance premium expense. In order to help mitigate the financial impacts and maintain uninterrupted service in the event of an emergency or catastrophic event, Central San maintains an Emergency Fund Reserve balance of \$5 million in the SIF. Actuarial studies are performed every other year and are used to set the Governmental Accounting Standards Board (GASB) 10 liability amount.
- **Debt Service Fund** - This fund accounts for activity associated with the payment of Central San's long-term bonds and loans. Central San's total debt service for FY 2018-19 is \$3.6 million, a decrease of approximately \$0.2 million from the \$3.8 million budgeted in FY 2017-18. This decrease is due to the final amortization payment of the recycled water loan in FY 2017-18. A portion of Central San's ad valorem tax revenue is the primary funding source for the Debt Service Fund.

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Financial Planning Policies

The significant policies that play a role in managing Central San's finances are summarized below:

Fiscal Reserves Policy

There is a strong emphasis placed on maintaining adequate reserves, and having a reserve policy ensures long-term financial stability. In 2015, the Board adopted Board Policy No. BP 017-*Fiscal Reserves*, which set targets for each of Central San's reserve funds. This policy was reviewed and updated by the Board during FY 2017-18. Key provisions remained generally unchanged, with updates primarily focusing on providing detail about the usage of the reserves and recognizing new accounts since the initial policy. Fiscal reserves provide working capital for operations and maintenance activities; funding for long-term capital improvement requirements; fulfillment of legal, regulatory, and contractual obligations; mitigation of risk and liability exposures; and cash flow emergencies. Table 12 shows projected reserve balances as of June 30, 2018 and June 30, 2019.

- **O&M Fund** - Working Capital Reserves, the Board has set a target of five months (41.7%) of gross operating expenses at the start of each fiscal year.
- **Sewer Construction Fund (Capital Improvement)** - Working Capital Reserves, the Board has set a target of 50% of the annual capital projects budget at the start of each fiscal year, excluding capital projects that are to be funded with bond proceeds.
- **Self-Insurance Fund Reserves** - The Board has set a target of three times the annual retention, currently at \$500,000. In addition, to help mitigate the financial impacts and maintain uninterrupted service in the event of an emergency or catastrophic event, Central San maintains an Emergency Fund Reserve balance of \$5 million in the self-insurance fund.
- **Debt Service Reserve (Bond Reserve)** - The 2009 certificates of participation (a type of borrowing) require the establishment and maintenance of a contingency reserve that is defined in the loan documents. The balance of the reserve is set at the amount required in the loan documents, typically one annual payment per loan. The Bond Reserve balance was \$4.86 million as of June 30, 2017 and is forecasted at \$4.86 million for both June 30, 2018 and 2019.

Basis for Budgeting

Central San's Comprehensive Annual Financial Report (CAFR) provides detail about the actual expenditures of the four sub-funds in the Central San enterprise fund. The basis of budgeting for these sub-funds is the accrual basis of accounting, the same that is used in the audited financial statements and CAFR. Through this budget and its adoption by the Board, funds are appropriated to each of the four sub-funds. Each of the sub-funds presents a budget in the form of revenues, expenses, and an overall contribution to or draw, from reserves. Central San has adopted the reserve policies noted above and may as a result, collect more or less revenues than budget-year expenditures, due to contributions to or draws from the reserves, in compliance with the Reserve Policy. Central San strives to present a "balanced budget" each year, which we define as a budget in which:

Budgeted revenues and planned draws from the applicable reserve meet or exceed budgeted expenditures, and where any planned draws from the reserve will leave the reserve at or above the policy targeted level.

Debt Management and Continuing Disclosure Policy

In August 2017, the Board adopted Board Policy No. BP 029 – *Debt Management and Continue Disclosure*, which sets the parameters for the responsible and prudent use of debt to fund a part of Central San’s capital spending in the coming years. In recent years, Central San has primarily used a pay-as-you-go philosophy but has occasionally used some debt financing for large capital improvements brought about by regulatory changes or other unforeseen factors. The newly adopted debt policy provides for the conservative use of debt. The funding allocated towards pipeline replacement in general, is to be collected through Sewer Service Charge (SSC) rates or taxes, while debt is permitted for the remaining portion of the capital projects. Currently, Central San is repaying a State of California Water Reclamation Loan and 2009 Revenue Bonds. As of June 30, 2017, total outstanding debt associated with infrastructure improvements was \$31.7 million. Central San’s ten-year financial plan anticipates a bond offering (subject to Board approval) within the next five years, potentially as early as FY 2019-20.

Debt restrictions currently include the following:

- **Revenue Pledge and Covenant** – Central San pledges Property Tax Revenue, along with its ability to raise SSC rates.
- **Debt Service Coverage Ratios (DSCR)** of at least 1.0x (Net Revenue/Total Debt Service) and 1.25x (Adjusted Net Revenue/Total Debt Service) are adhered to.

Central San’s DSCR is strong and benefits from our current pay-as-you go philosophy. This favorable coverage ratio is a factor in Central San’s very strong “AAA” (S&P) and “Aa1” (Moody’s) credit ratings.

Investment Policy

Central San’s investment policy Board Policy No. BP 005 – *Statement of Investment Policy*, last updated in September 2017, is based on state law and prudent money management. All investments are in accordance with this policy and Sections 53646 and 53601 of the California Government Code. Central San has formal agreements with Contra Costa County, allowing them to act as Central San’s banker and they invest all Central San funds. Securities are held in a custodial account separate from the County. The investment policy applies to all Central San funds and investment activities.

The investment policy is presented to the Board annually, and its priorities are: safety, liquidity, and yield. The policy addresses issues such as permitted investments, banks and dealers, maturities, diversification, risk, delegation of authority, prudence, controls, reporting and performance evaluation.

The GASB 45 Trust and Pension Prefunding Trust Investment Guidelines are also presented to the Board annually. The investments of these Trusts are longer-term investments, with the GASB 45 Trust adopting a “moderate” investment strategy, and the Pension Prefunding Trust adopting a “moderately conservative” investment strategy. With respect to both trusts, U.S. Bank is the Trustee, HighMark Capital is the Investment Manager, and Public Agency Retirement Services (PARS) is the Trust Administrator and Consultant.

The IRS Section 115 Pension Prefunding Trust was adopted during FY 2017-18, and initially funded with \$3.4 million. With the adoption of this trust, Central San may make optional payments to the Pension Prefunding Trust rather than a direct payment to the Contra Costa County Employees' Retirement Association (CCCERA), giving Central San greater retirement payment flexibility in the

future, while still reducing its overall pension liability. In December 2017 the Board allocated \$2.0 million of the FY 2016-17 favorable budget variance to the Pension Prefunding Trust. In future years Central San may draw down the Pension Prefunding Trust to meet its payment obligations to CCCERA in order to smooth payment obligations and mitigate rate volatility.

Budget Calendar and Process

The budget development process for the upcoming year started midway through the current fiscal year, with the updated financial plan, then the discussion of the financial plan with the Board in a workshop held in March. Internal budget development commences during February, and extensive internal review of the proposed budget takes place during March. Several cycles (“passes”) of budget development take place. Initial budget proposals are input in Pass 1, after which the General Manager, Director of Finance and Administration, and each division manager meet to review results. Required changes are input in Pass 2, and another review session is held. Final changes are input in the Final Pass. Development of the budget is finalized during April and May. A draft of the budget is provided to the Board in May. The Operations and Maintenance sections are reviewed by the Finance Committee, and the capital budget is reviewed by the Engineering & Operations Committee prior to Board adoption. The final budget is adopted by the Board in June.

The budget process is also related to two other key planning processes: strategic planning, which covers a two-year window; and rate setting, which covers a ten-year window. FY 2018-19 is the first year of a new two-year strategic planning cycle. As a result, the strategic goals, strategies, initiatives, and metrics have been updated concurrent with the development of this proposed budget. The budget is developed to ensure that resources are available to achieve the goals set forth. Staff works with each other and the Board to ensure this alignment. The rate adjustment for FY 2018-19 was approved in a two-year rate plan adopted by the Board in 2017 for FY 2017-18 and FY 2018-19. The Board committed at that time to review the second year (FY 2018-19) rate during the spring of 2018. The Board did so in April 2018 and elected to retain the 7% rate adjustment.

A conceptual diagram summarizing the budget and rate development process is provided below. As noted above, a rate-setting process is not conducted every year; for FY 2018-19, rates were established as part of a two-year rate adopted during FY 2016-17.



A calendar of key events during the current planning cycle for FY 2018-19 is provided below. Three critical business areas were revisited and updated simultaneously - the update of the two-year strategic plan, the development of the annual budget, and adjustment to Sewer Service Charge rates.

Key Budget Events

Date	Strategic Plan	Budget	Financial Planning and Rates
January 2018	Board approves revised Mission, Vision, Values and Goals		
January-March 2018	Staff develops strategies, initiatives and performance metrics		
February 2018		Departments/Divisions develop and submit Operating Budget proposals	
March 2018	Strategic Plan presented to the Administrative Committee	General Manager reviews Operating Budget with Departments/Divisions	Board Rate Workshop (review of Financial Plan including updates to the Ten-Year CIP and Fiscal Year CIB)
April 2018	Board receives Strategic Plan	Draft Operating Budget finalized with Departments/Divisions Draft Ten-Year CIP finalized by Engineering Department	Public Hearing on adoption of proposed rate increase
May 2018		Draft Operating Budget presented to the Finance Committee and the Board Draft Ten -Year CIP Budget presented to the Engineering & Operations Committee and the Board	
June 2018		Public Hearing on adoption of Final Budget	Public Hearing on adoption of Capacity Fees and Environmental and Development Fees

Once the budget is adopted, the General Manager has the authority to spend within the overall budget. However, there are budgetary levels of control. The General Manager has the authority to spend up to the overall level of the Operations and Maintenance budget. Spending is monitored monthly by the Board; variances of more than 10% on individual budget line item categories are highlighted and subject to discussion by the Finance Committee. Certain expenditures over \$100,000 require Board approval.

For the Capital Improvement Program, budgets are set by project, on an annual basis. The General Manager has the authority to reallocate funds up to \$500,000 between projects. Reallocations above that amount require approval by the Board. Additionally, the General Manager has the authority to spend up to the budgeted amounts for Debt Service. The General Manager may also spend Self-Insurance Reserve funds to pay claims and claims expenses within the self-insured retention (\$500,000) during the fiscal year. Payments are governed by the limits set in the General Manager Delegation of Authority.

Should it become necessary to spend more than the overall O&M budget amount, formal action by the Board would be required to adopt an amended budget. With respect to the Capital Budget, the General Manager has the authority to transfer up to \$500,000 of the budget from one approved project to another. The Capital Budget also includes a \$1.5 million contingency, which is subject to the same General Manager transfer limits. Transfers above that amount, or the creation of a new, unbudgeted capital project, would require approval by the Board.

Monthly financial statements are issued internally and to the Board. Monthly and annual variance explanations are presented to the Board. The Board also reviews annual variance explanations and determines how available funds from favorable variances are used. For FY 2016-17, variances of \$8.8 million from favorable revenue and expenses were applied to two uses, after ensuring that reserve balances were at or above the levels required in the reserve policy. In FY 2017-18, an additional \$2.0 million was contributed to the Pension Prefunding Trust to reduce outstanding pension-related liabilities, and \$6.8 million was applied to the Sewer Construction Reserve to fund capital expenditures which reduce the need for borrowing for such expenditures in FY 2019-20.

Current Financial Plan

Central San has a multi-year financial plan that projects anticipated spending, debt issuances, customer data, tax collections, and resulting rate increases. Factors considered in the long-range forecast include the impact of state legislation and mandates, regulatory compliance, GASB requirements, negotiated or forecasted salary increases and employee benefit changes (including anticipated changes in health care and retirement costs), energy costs, development in the service area, and infrastructure renewal and replacement needs.

The financial plan undergoes substantial development and review by staff, and various scenarios are presented to the Board in the context of discussions about the need for rate adjustments and potential bond issuances. The financial plan covers a period of twenty years, although assumptions for the first ten years of the plan carry a higher degree of confidence than for the outer years in the plan.

The financial plan reflects the proposed Ten-Year Capital Improvement Plan (CIP) spending levels identified in the Comprehensive Wastewater Master Plan (CWMP), as updated during a review of the spending plan conducted in early 2018. The CIP spending levels have been revised downward from the initial CWMP which projected \$873 million of spending over the ten-year period commencing in FY 2017-18, to \$806 million over the ten-year period commencing in FY 2018-19. This reflects a detailed assessment of Central San's latest needs and capacity to ramp up CIP spending from the current levels. The financial plan also funds the initiatives addressed in the updated Strategic Plan. Accordingly, Central San's various planning documents are integrated and consistent. This budget document reflects the detailed and refined estimate of the costs included in the multi-year financial plan. Once developed, the proposed budget is input as a baseline in the financial plan, and future year's costs may be updated accordingly. Many costs in the financial plan are projected based on inflation and other cost-growth factors of the latest available budget year. Known or anticipated cost savings or increases are also provided for in the Financial Plan. A key cost change anticipated for FY 2019-20 relates to an expected

transition to CalPERS healthcare, providing savings estimated at \$5.6 million annually. Savings may accrue to Central San during FY 2018-19, depending on the implementation date of the transition. Central San has conservatively assumed \$306,000 of explicit savings from this transition during FY 2018-19. In addition, Central San has not increased the budgeted costs to pay for the current health care plans, which are still in place. While such cost adjustments are customary and will likely occur, the assumption is that increased costs in the first part of the year will be offset by reduced costs after the healthcare plan transition to CalPERS, or by holding the line on spending on labor, including keeping certain positions vacant if necessary.

Financial Summary

The FY 2018-19 budget provides the resources necessary to advance the Strategic Plan and meet the challenges Central San faces as it strives to increase service quality and minimize cost. At the same time, the budget allows Central San to accomplish its mission in the most cost-effective and financially sustainable manner to ensure the best value to its customers.

Central San's FY 2018-19 total budget is \$139.6 million, representing an increase of \$2.3 million, or 1.7%, compared to the FY 2017-18 budget of \$137.2 million. As shown in Table 1, the driver for the increase in the total budget is a 5.9% increase in sewer construction investment from \$42.8 million in FY 2017-18 to \$45.3 million in FY 2018-19. The FY 2018-19 O&M Budget is \$89.7 million, which is unchanged from the current FY 2017-18 Budget of \$89.7 million. Salaries and wages increased by 2.2%, which includes an assumed cost-of-living adjustment offset by an increase in the vacancy factor from 3 to 4%. This is also offset, in part, by reductions in benefit/unfunded liability costs, so total labor-related costs decrease by \$0.2 million. The reduction in salary and benefit costs is offset by a \$0.2 million increase in all other costs. Chemicals and utilities decreased by \$0.5 million, while costs for repairs and maintenance, outside services, and materials, supplies and other miscellaneous costs increased by \$0.7 million. The Self-Insurance Fund is set at \$924,500 for the costs of premiums and estimated losses based on historical trends and represents a slight reduction from the \$936,500 funding level of the current year.

Table 1 - FY 2018-19 Total Budget

Fund	Expenditures Trend				Budget to Budget Variance	Percent Variance
	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2018-19 Budget		
Operations and Maintenance	\$ 89,810,918	\$ 85,489,712	\$ 89,713,587	\$ 89,720,456	\$ 6,869	0.0%
Sewer Construction	\$ 36,808,756	\$ 36,696,049	\$ 42,774,000	\$ 45,319,000	\$ 2,545,000	5.9%
Debt Service	\$ 3,790,807	\$ 3,791,155	\$ 3,819,099	\$ 3,611,038	\$ (208,061)	-5.4%
Self-Insurance	\$ 948,000	\$ 697,793	\$ 936,500	\$ 924,500	\$ (12,000)	-1.3%
Total Budget	\$ 131,358,481	\$ 126,674,709	\$ 137,243,186	\$ 139,574,994	\$ 2,331,808	1.7%

Sources of Funds

The sources of funds (revenues) for FY 2018-19, are shown in Figure 1. A comparison of the major revenue sources for FY 2018-19, the current year and prior years are shown in Figure 2.

Figure 1 - Where the Money Comes From

FY 2018-19 Total Budgeted Funding sources of: \$ 147,386,287

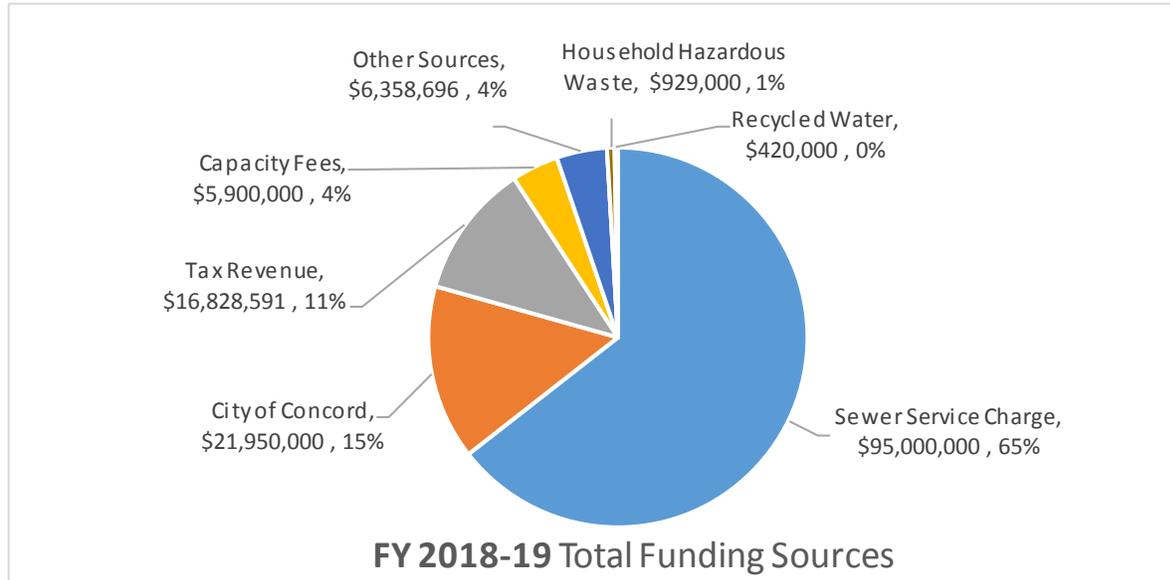
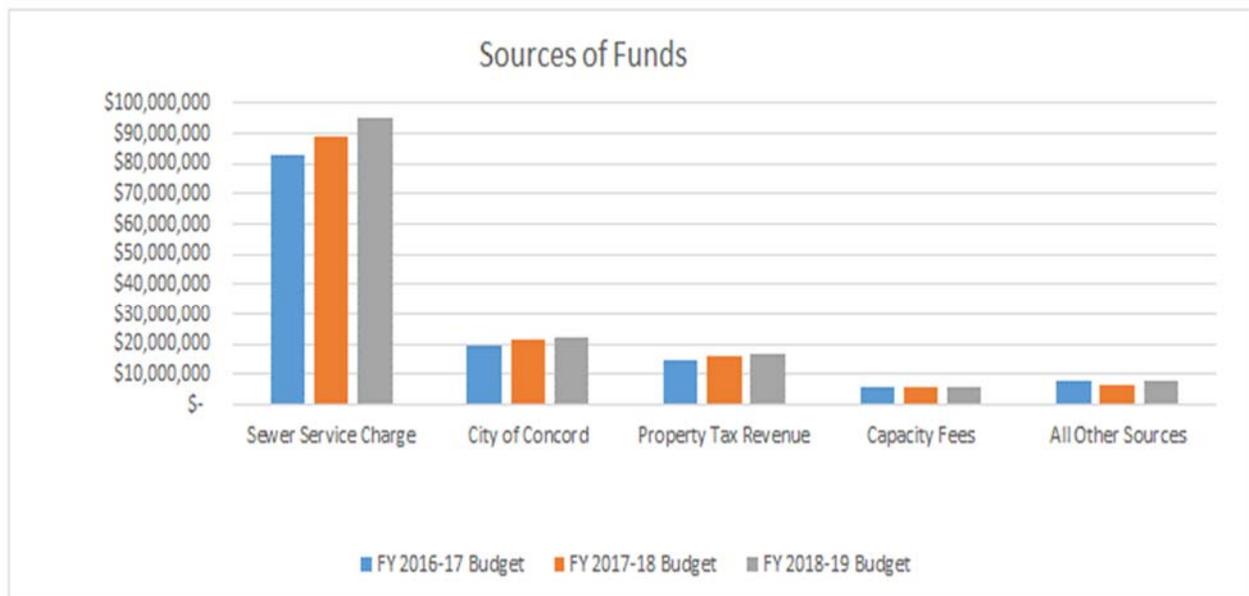


Figure 2 - Where the Money Comes From

FY 2016-17	FY 2017-18	FY 2018-19
\$131,343,455	\$138,532,599	\$147,386,287



The Sewer Service Charge (SSC) is the largest source of revenue at \$95 million, followed by the City of Concord at \$22 million, ad valorem property tax at \$16.8 million, and Sewer Connection Fees (Capacity Fees and Pumped Zone Fees) at \$5.9 million. A brief description of Central San's revenue sources and how they are forecasted follows:

- **Sewer Service Charge (SSC)** - This fee is charged annually to residential and non-residential customers. For residential customers, separate rates are charged to single family and multi-family residences. Non-residential customers pay a proportionate charge based on their water use, size of facility, and the strength of the wastewater. SSC is estimated based on prior year collections and estimates of growth in the number of residential customers. For commercial and industrial customers SSC revenues are forecasted based on water consumption and strength of each use category.
- **City of Concord and Clayton** - Central San revenues from the City of Concord and Clayton are calculated and billed in accordance with the terms of a contract agreement. The City of Concord is responsible for a share of Central San's treatment plant and associated costs, and their share is proportional to the overall flows to the treatment plant. The amount of revenue is forecasted annually for budgeting purposes by multiplying the City of Concord's estimated flow percentage by the budgeted treatment plant and associated costs. The amount due is invoiced by Accounting in August for the prior fiscal year.
- **Tax Revenue** - Central San receives a share of Contra Costa County's collected ad valorem property taxes on properties within the service area. These taxes are used to pay debt service requirements, and the remaining funds are allocated to the CIP.
- **Capacity Fees** – These are collected from new construction and expansion of non-residential and residential customers. The fee is calculated as an equity buy-in and assessed based on a per-residential-unit-equivalent basis, square footage, and type of usage for commercial facilities. The amounts due are collected before plans are approved. The budgeted amount is estimated by the Planning & Development Services Division based on trend analysis and anticipated construction activity for the upcoming year.
- **Household Hazardous Waste Reimbursement** - Central San provides a facility where local residents and businesses within the service area may dispose of specified hazardous wastes. Additionally, residents from specified cities (Concord, Clayton, San Ramon, and parts of Martinez served by the Mt. View Sanitary District) also have the right to use the facility, and these cities pay a contractually agreed amount for this service. The amounts due are invoiced by Accounting in August for the prior fiscal year. The budgeted amounts are based on projected total costs of the facility, to be shared pro-rata by all users within the service area.
- **Recycled Water** – This represents revenue from the sale of recycled water to customers in Central San's service area who have recycled water meters. The amounts due are invoiced by Accounting bi-monthly based on monthly meter readings. The Planning & Development Services Division forecasts the revenue from recycled water.
- **Other Sources** include the following:
 - **Permit and inspection fees** - Fees for sewer permits, inspections, and related activities, including environmental compliance fees, plan review, and other than inspections of mainlines. The amounts are forecasted by the Development Services Supervisor based on anticipated construction activity for the upcoming year.
 - **Lease rental income** - Rental income from buffer properties (buildings and undeveloped land) owned by Central San and rented to third parties through multi-year agreements. Leases are reviewed by Accounting and Right-of-Way to identify any changes to multi-year lease rates. Budgeted lease revenue is based on the terms of those leases.

- **Stormwater/Pollution prevention** - Fees collected from the County and certain cities for performing storm water inspections as required by the County’s National Pollutant Discharge Elimination System permit. These services are provided by Central San’s Environmental Compliance group under contract with the Contra Costa Clean Water Program. Amounts are invoiced by Accounting based on the number of inspections completed. The budgeted amount is based on a targeted number of inspections to be done during the fiscal year.
- **Interest income** - Budgeted interest income is based on forecasted cash levels times estimated interest rates over the course of the fiscal year.
- **Developer fees** - Charges for plan review and inspection of mainline extension projects by developers and other property owners. The amounts are collected by the Permit Counter and are budgeted based on estimates by the Planning & Development Services Division based on trend analysis and anticipated construction activity for the upcoming fiscal year.
- **Pumped Zone fees** – For new developments in areas where pumps are required to move wastewater to the Central San treatment plant pay an additional capacity fee to cover pumping infrastructure costs. These fees are separately shown as Pumped Zone fees and are budgeted by multiplying the incremental pumped zone fee times the number of development units anticipated to be subject to such fees.
- **Other** - Includes annexation fees, other service charges, and miscellaneous fee revenue. Amounts are collected by various departments depending on the source of revenue. For the Self-Insurance Fund, other revenue includes an allocation from the O&M fund in an amount necessary to replenish the Self-Insurance Fund to the targeted level after projected expenses in the budget year.

Table 2 below shows the overall funding sources of Central San, and how those funding sources are applied to each sub-fund.

Table 2 - Revenue Matrix

Funding Sources	Total	Fund 01	Fund 02	Fund 03	Fund 04
	FY 2018-19 Budget	O&M	Capital	Self Insurance	Debt Service
Sewer Service Charge	\$95,000,000	67,073,732	27,926,268		
City of Concord	21,950,000	14,800,000	7,150,000		
Tax Revenue	16,828,591		13,300,000		3,528,591
Capacity Fees	5,900,000		5,900,000		
HHW Reimbursement	929,000	929,000			
Recycled Water	420,000	420,000			
Other Revenue Sources Including					
Permit & Inspection Fees	1,783,000	1,783,000			
Lease Rental Income	627,000	627,000			
Stormwater/Pollution Prevention	360,000	360,000			
Interest Income	1,368,197	600,000	570,000	115,750	82,447
Developer Fees	443,000		443,000		
Pumped Zone Fees	600,000		600,000		
Other	1,177,500	333,000	-	844,500	-
Total Other Revenue Sources	6,358,696	3,703,000	1,613,000	960,250	82,447
Total	147,386,287	86,925,732	55,889,268	960,250	3,611,038

Sewer Service Charge (SSC)

Table 3 indicates the total collected SSC and how such funds are allocated to the O&M and Capital budgets. The allocation of the SSC to Capital increases significantly from 15.7% in FY 2017-18 to 29.4% in FY 2018-19. All of the revenue generated by the FY 2018-19 SSC rate adjustment is being directed to the Capital Program and will be used to fund capital spending in FY 2018-19 and the subsequent year. A higher proportion of the available SSC can be directed to Capital given that the O&M budget is being held flat, while the SSC is increasing due to the July 1, 2018 scheduled rate increase. Table 4 shows the SSC for FY 2018-19 compared to the FY 2017-18 rates. These rates were approved by the Board in the spring of 2017 through a two-year rate ordinance which provided for a check-in to review Central San's financial status prior to the implementation of the FY 2018-19 rate adjustment. A public hearing on the rates was held on April 26, 2018 after a Board workshop on Central San's financial status and outlook was held on March 8, 2018. No change to the level of the previously adopted 7% rate adjustment was approved.

Table 3 - Allocation of Sewer Service Charge

	FY 2016-17		FY 2016-17		FY 2017-18		FY 2018-19		Change
	Budget	%	Actual	%	Budget	%	Budget	%	
To O&M	\$71,100,000	85.7%	\$73,138,235	85.8%	\$75,220,700	84.3%	\$67,073,732	70.6%	(\$8,146,968)
To Capital	\$11,820,000	14.3%	\$12,151,144	14.2%	\$13,967,300	15.7%	\$27,926,268	29.4%	\$13,958,968
Total Collected	\$82,920,000	100.0%	\$85,289,379	100.0%	\$89,188,000	100.0%	\$95,000,000	100.0%	\$5,812,000

Table 4 - Approved Annual Sewer Service Charge

Customer Type	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Single Family Residence	\$471	\$503	\$530	\$567
Multi-Family Residence	\$463	\$487	\$513	\$549
Effective Date	07/01/15	07/01/16	07/01/17	07/01/18

Customer Type	FY 2016-17	FY 2017-18	FY 2018-19
Rates per hundred cubic feet unless otherwise indicated			
Standard Commercial Rate for Users Not Listed Below	\$4.98	\$5.25	\$5.61
Automotive	\$5.73	\$6.04	\$6.46
Bakeries	\$13.22	\$13.93	\$14.90
Hotels / Motels	\$8.64	\$9.10	\$9.74
Supermarkets	\$9.34	\$9.84	\$10.53
Mortuaries	\$11.47	\$12.09	\$12.93
Restaurants	\$9.34	\$9.84	\$10.53
Minimum Annual Charge	\$504.00	\$530.00	\$566.00

Customer Type	FY 2016-17	FY 2017-18	FY 2018-19
Industrial (rates per unit specified):			
Wastewater Flow (per hundred cubic feet)	\$3.67	\$3.87	\$4.14
Biochemical Oxygen Demand (per 1,000 pounds)	\$1,216.00	\$1,281.27	\$1,370.72
Suspended Solids (per 1,000 pounds)	\$567.00	\$597.44	\$639.14
Fixed	\$87.23	\$91.91	\$98.33
Minimum Annual Charge	\$504.00	\$530.00	\$566.00
Special Discharge Permits & Contractual Agreements:	Determined Individually	Determined Individually	Determined Individually
Mixed Use (for parcels with shared water meter; rates per hundred cubic feet):			
Rate Group XA: (90-99% Standard Commercial; 1-10% Restaurant)	\$5.32	\$5.61	\$6.00
Rate Group XB: (80-89% Standard Commercial; 11-20% Restaurant)	\$5.77	\$6.08	\$6.50
Rate Group XC: (70-79% Standard Commercial; 21-30% Restaurant)	\$6.23	\$6.56	\$7.02
Rate Group XD: (60-69% Standard Commercial; 31-40% Restaurant)	\$6.67	\$7.03	\$7.52
Rate Group XE: (50-59% Standard Commercial; 41-50% Restaurant)	\$7.12	\$7.50	\$8.03
Rate Group XF: (40-49% Standard Commercial; 51-60% Restaurant)	\$7.56	\$7.97	\$8.52
Rate Group XG: (30-39% Standard Commercial; 61-70% Restaurant)	\$8.01	\$8.44	\$9.03
Rate Group XH: (20-29% Standard Commercial; 71-80% Restaurant)	\$8.45	\$8.90	\$9.53
Rate Group XI: (10-19% Standard Commercial; 81-90% Restaurant)	\$8.91	\$9.39	\$10.04
Rate Group XJ: (31-35% Standard Commercial; 65-69% Bakery)	\$10.69	\$11.26	\$12.05
Rate Group XK: (21-30% Standard Commercial; 70-79% Bakery)	\$10.32	\$10.87	\$11.63
Rate Group XL: (16-20% Standard Commercial; 80-84% Bakery)	\$10.92	\$11.51	\$12.31
Rate Group XM: (11-15% Standard Commercial; 85-89% Bakery)	\$11.26	\$11.86	\$12.69
Rate Group XN: (5-10% Standard Commercial; 90-95% Bakery)	\$11.54	\$12.16	\$13.01
Rate Group XO: (10-15% Restaurant; 85-90% Bakery)	\$11.69	\$12.32	\$13.18
Minimum Annual Charge	\$504.00	\$530.00	\$566.00

Customer Type	FY 2016-17	FY 2017-18	FY 2018-19
Institutional (rates per hundred cubic feet unless otherwise noted):			
Churches	\$4.98	\$5.25	\$5.61
Schools (Daycare, Preschool, University)	\$4.98	\$5.25	\$5.61
Schools (Elementary)	\$6.19 per student	\$6.52 per student	\$6.98 per student
Schools (Intermediate)	\$12.16 per student	\$12.81 per student	\$13.71 per student
Schools (High School)	\$12.16 per student	\$12.81 per student	\$13.71 per student
Fraternal & Service Organizations	\$4.98	\$5.25	\$5.61
Local & State Institutions	\$4.98	\$5.25	\$5.61
Other Tax Exempt (Except Federal)	\$4.98	\$5.25	\$5.61
Federal Institutions	\$4.98	\$5.25	\$5.61
Utilities with Special Tax Status	\$4.98	\$5.25	\$5.61
Independent Living Facilities, Rest Homes, & Convalescent Hospitals	\$4.98	\$5.25	\$5.61
Minimum Annual Charge	\$504.00	\$530.00	\$566.00

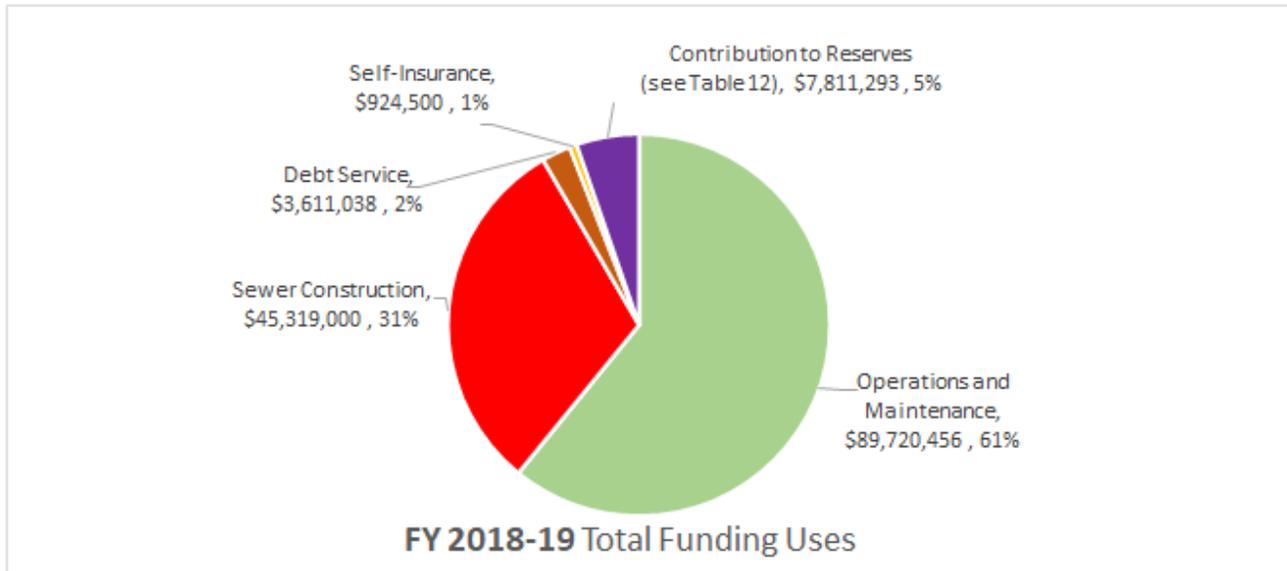
Source: Ordinance No. 294, <http://centralsan.org/index.cfm?navid=1523>

Uses of Funds

The uses of funds (expenditures and contributions to reserves) for FY 2018-19 is shown in Figure 3. Two expenditure categories, O&M and Sewer Construction, account for more than 90% of the total uses. In FY 2018-19, a contribution to reserves comprises 5% of the total use of funds. These funds will be applied to the Sewer Construction Fund to help offset the anticipated borrowing impact of the increased capital spending planned for FY 2019-20.

Figure 3 - Where the Money Goes

Total Budgeted Funding Uses of: \$ 147,386,287



O&M Budget Overview

The total O&M revenue for FY 2018-19 is projected to be \$86.9 million, compared to the FY 2017-18 budget amount of \$94.7 million. Revenue decreases by \$7.7 million, or 8.2%, due to the following:

- While SSC rates are increasing by 7%, the O&M allocation of the SSC decreases to 70.6% from 84.3% in FY 2017-18, with the amount allocated to Capital Projects increasing from 15.7% to 29.4%.
- The City of Concord is allocated a share proportional to their flow to the treatment plant, and environmental and regulatory compliance expenses, and is billed for administrative overhead and a finance charge. City of Concord revenue towards O&M costs is expected to be \$14.8 million in FY 2018-19, a 2.6% reduction compared to the \$15.2 million in FY 2017-18. This is due to actual expenses shared by the City of Concord coming in lower than what was budgeted in FY 2016-17 and FY 2017-18, which lead to a downward adjustment in expected revenue for FY 2018-19.

The total O&M expenses are projected to be \$89.7 million in FY 2018-19, unchanged from the \$89.7 million in FY 2017-18. Central San has achieved a flat O&M budget that addresses critical needs and provides funding for key activities. Table 5 and Figure 4 show the FY 2018-19 O&M budget by expense category.

Table 5 - FY 2018-19 Budgeted O&M Revenues and Expenditures

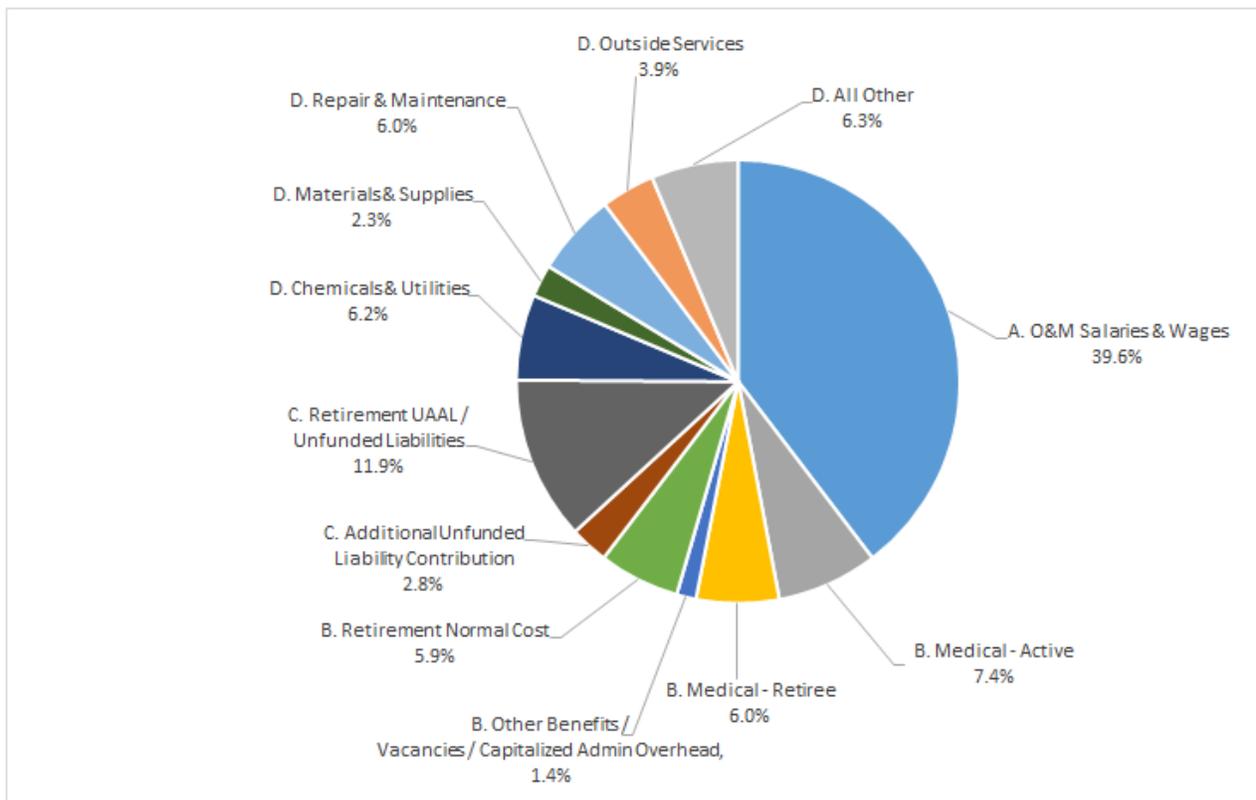
Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Budget Variance	Percent Variance
Revenue:							
Sewer Service Charge	71,100,000	73,138,235	75,220,700	75,221,000	67,073,732	(8,146,968)	-10.8%
Concord SSC	14,790,000	13,851,253	15,200,000	14,100,000	14,800,000	(400,000)	-2.6%
Permit & Inspection Fees	1,430,000	2,042,488	1,724,000	1,806,450	1,783,000	59,000	3.4%
Lease Rental Income	616,200	605,648	612,000	612,900	627,000	15,000	2.5%
HHW Reimbursement	888,000	851,710	853,000	906,000	929,000	76,000	8.9%
Stormwater/Pollution Prevention	310,000	377,140	340,000	380,000	360,000	20,000	5.9%
Interest Income	233,000	77,223	78,000	366,000	600,000	522,000	669.2%
Recycled Water	100,000	349,763	335,000	377,000	420,000	85,000	25.4%
Other	350,000	501,079	296,000	376,000	333,000	37,000	12.5%
Total Revenue	89,817,200	91,794,539	94,658,700	94,145,350	86,925,732	(7,732,968)	-8.2%
Expenditures:							
Salaries & Wages	33,158,707	31,794,337	34,797,628	34,003,060	35,571,037	773,409	2.2%
Benefits & Cap O/H Credit	14,163,311	14,178,918	12,655,155	13,257,513	12,655,572	417	0.0%
Salary & Benefits (Active Employees)	47,322,018	45,973,256	47,452,783	47,260,573	48,226,609	773,826	1.6%
Benefits (Retirees)	5,362,300	5,404,628	5,946,000	5,620,900	5,941,200	(4,800)	-0.1%
Retirement UAAL / Unfunded Liabilities	11,741,700	10,964,446	11,679,261	11,282,158	10,720,478	(958,783)	-8.2%
Additional UAAL Contributions	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	-	0.0%
Total UAAL / Unfunded Liabilities*	14,241,700	13,464,446	14,179,261	13,782,158	13,220,478	(958,783)	-6.8%
Total Labor Related Costs	66,926,018	64,842,329	67,578,044	66,663,631	67,388,287	(189,757)	-0.3%
Chemicals	1,920,000	1,426,091	1,482,000	1,379,600	1,459,000	(23,000)	-1.6%
Utilities	4,315,790	4,680,813	4,639,790	4,266,037	4,142,550	(497,240)	-10.7%
Repair & Maintenance	5,222,852	4,662,917	5,299,754	4,982,045	5,414,644	114,890	2.2%
Hauling & Disposal	941,050	999,167	1,023,975	1,047,433	1,126,475	102,500	10.0%
Professional & Legal Fees	630,750	646,602	807,600	657,300	845,300	37,700	4.7%
Outside Services	3,980,175	3,244,611	3,452,717	3,069,992	3,510,822	58,105	1.7%
Self Insurance Fund	920,000	920,000	585,000	585,000	779,500	194,500	33.2%
Materials & Supplies	2,100,025	2,008,099	2,059,325	2,030,835	2,108,126	48,801	2.4%
Other Expenses	2,854,258	2,059,083	2,785,382	2,356,155	2,945,752	160,370	5.8%
**Total Other O&M	22,884,900	20,647,382	22,135,543	20,374,397	22,332,169	196,626	0.9%
Total Expenditures	89,810,918	85,489,712	89,713,587	87,038,028	89,720,456	6,869	0.0%
Contribution to Reserve	6,282	6,304,827	4,945,113	7,107,322	(2,794,724)	(7,739,837)	-156.5%

*FY 2016-17 includes amounts that were reclassified during the annual audit to the Balance Sheet.

** Includes cost for the production and distribution of recycled water.

Figure 4 - FY 2018-19 O&M Budget by Expense Category

Operations and Maintenance Expenses (in thousands)	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2018-19 Budget	Percent of Total
A. O&M Salaries & Wages	\$33,158,707	\$31,794,337	\$34,797,628	\$35,571,037	39.6%
B. Medical - Active	\$6,845,900	\$6,264,760	\$7,094,079	\$6,615,333	7.4%
B. Medical - Retiree	\$4,916,000	\$4,938,618	\$5,441,500	\$5,417,000	6.0%
B. Other Benefits / Vacancies / Capitalized Admin Overhead	1,838,462	3,006,594	944,506	1,273,038	1.4%
B. Retirement Normal Cost	\$5,925,249	\$5,373,575	\$5,121,070	\$5,291,401	5.9%
C. Additional Unfunded Liability Contribution	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	2.8%
C. Retirement UAAL / Unfunded Liabilities	\$11,741,700	\$10,964,446	\$11,679,261	\$10,720,478	11.9%
D. Chemicals & Utilities	\$6,235,790	\$6,106,903	\$6,121,790	\$5,601,550	6.2%
D. Materials & Supplies	\$2,100,025	\$2,008,099	\$2,059,325	\$2,108,126	2.3%
D. Repair & Maintenance	\$5,222,852	\$4,662,917	\$5,299,754	\$5,414,644	6.0%
D. Outside Services	\$3,980,175	\$3,244,611	\$3,452,717	\$3,510,822	3.9%
D. All Other	\$5,346,058	\$4,624,852	\$5,201,957	\$5,697,027	6.3%
Total	\$89,810,918	\$85,489,712	\$89,713,587	\$89,720,456	100.0%



Staffing, Salaries, and Benefits

Total salaries and benefits for active employees is projected to be \$56.6 million in FY 2018-19, including both the O&M Fund and the Sewer Construction Fund. Compared to \$56.5 million total salaries and benefits in FY 2017-18, this is a \$0.1 million or 0.2% increase, as shown in Table 6a. Benefits for retirees are projected to be \$5.9 million in FY 2018-19, unchanged from \$5.9 million for FY 2017-18. Costs of Unfunded Liabilities for Pension and OPEB costs are \$13.2 million, down from \$14.2 million in FY 2017-18. Total Labor related costs decrease 1.1% from \$76.6 million in FY 2017-18 to \$75.7 million in FY 2018-19. The following tables show various levels of detail regarding labor costs. Table 6 summarizes all labor related costs across two sub-funds. Table 6a provides additional detail by sub-fund, and Table 7 provides more detail, particularly about benefit costs.

Table 6 - Total Labor Costs Summary

Budget (FY 2018-19)	Operations & Maintenance	Sewer Construction	Total
Active Employees			
Budgeted FTE Positions (estimated allocation)	266.86	23.14	290.00
Budgeted Salaries & Wages	\$35,571,037	\$3,085,056	\$38,656,093
Budgeted Benefits	\$16,635,295	\$1,294,263	\$17,929,558
Capitalized Admin Overhead **	(\$3,979,723)	\$3,979,723	\$0
Benefits After Capitalized Admin Overhead	\$12,655,572	\$5,273,986	\$17,929,558
Total Costs Active Employees	\$48,226,609	\$8,359,042	\$56,585,651
Retiree Costs and Unfunded Liabilities			
Retiree Benefit Costs	\$5,941,200	\$0	\$5,941,200
UAAL / Unfunded Liabilities	\$13,220,478	\$0	\$13,220,478
Total Retiree Costs and Unfunded Liabilities	\$19,161,678	\$0	\$19,161,678
Total Labor Related Costs	\$67,388,287	\$8,359,042	\$75,747,329

** Consists of Indirect costs associated with non-productive hours and Admin Overhead.

Table 6a – Salaries, Benefits, Retiree and Unfunded Liabilities Detail

Total District					
	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2018-19 Budget	Budget to Budget Variance
Salaries	\$35,172,458	\$33,192,567	\$36,516,669	\$38,251,464	\$1,734,795
Salary Vacancy	(\$476,000)	\$0	(\$443,000)	(\$1,193,000)	(\$750,000)
Overtime	\$1,184,636	\$1,148,954	\$1,201,806	\$1,222,429	\$20,623
Standby	\$322,000	\$371,085	\$375,000	\$375,200	\$200
Total Salaries	\$36,203,094	\$34,712,606	\$37,650,475	\$38,656,093	\$1,005,618
Current Employee Benefits	\$20,071,193	\$20,096,121	\$19,956,075	\$18,935,558	(\$1,020,517)
Benefit Vacancy	(\$1,149,000)	\$0	(\$1,149,000)	(\$1,006,000)	\$143,000
Total Benefits (Active Employees)	\$18,922,193	\$20,096,121	\$18,807,075	\$17,929,558	(\$877,517)
Total Salaries and Benefits (Active Employees)	\$55,125,287	\$54,808,728	\$56,457,550	\$56,585,651	\$128,101
Capitalized Administrative O/H	\$0	\$0	\$0	\$0	\$0
Total Salaries and Benefits (Active Employees) after Capitalized Administrative O/H		\$54,808,728	\$56,457,550	\$56,585,651	\$128,101
Retiree Benefits	\$5,946,000	\$5,404,628	\$5,946,000	\$5,941,200	(\$4,800)
UAAL / Unfunded Liabilities	\$14,179,261	\$13,464,446	\$14,179,261	\$13,220,478	(\$958,783)
Total Benefits and Liabilities for Past Service	\$20,125,261	\$18,869,074	\$20,125,261	\$19,161,678	(\$963,583)
Total Salaries, Benefits & Liabilities for Past Service (Active and Retiree)	\$75,250,548	\$73,677,801	\$76,582,811	\$75,747,329	(\$835,482)

Operations & Maintenance					
	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2018-19 Budget	Budget to Budget Variance
Salaries	\$32,217,344	\$30,305,136	\$33,739,967	\$35,186,029	\$1,446,062
Salary Vacancy	(\$440,000)	\$0	(\$413,000)	(\$1,111,000)	(\$698,000)
Overtime	\$1,059,363	\$1,118,116	\$1,095,661	\$1,120,808	\$25,147
Standby	\$322,000	\$371,085	\$375,000	\$375,200	\$200
Total Salaries	\$33,158,707	\$31,794,337	\$34,797,628	\$35,571,037	\$773,409
Current Employee Benefits	\$17,776,358	\$17,793,673	\$17,776,358	\$17,641,295	(\$135,063)
Benefit Vacancy	(\$1,149,000)	\$0	(\$1,149,000)	(\$1,006,000)	\$143,000
Total Benefits (Active Employees)	\$16,627,358	\$17,793,673	\$16,627,358	\$16,635,295	\$7,937
Total Salaries and Benefits (Active Employees)	\$49,786,065	\$49,588,010	\$51,424,986	\$52,206,332	\$781,346
Capitalized Administrative O/H	(\$3,972,203)	(\$3,614,755)	(\$3,972,203)	(\$3,979,723)	(\$7,520)
Total Salaries and Benefits (Active Employees) after Capitalized Administrative O/H	\$45,813,862	\$45,973,256	\$47,452,783	\$48,226,609	\$773,826
Retiree Benefits	\$ 5,946,000	\$ 5,404,628	\$ 5,946,000	\$ 5,941,200	(\$4,800)
UAAL / Unfunded Liabilities	\$ 14,179,261	\$ 13,464,446	\$ 14,179,261	\$ 13,220,478	(\$958,783)
Total Benefits and Liabilities for Past Service	\$20,125,261	\$18,869,074	\$20,125,261	\$19,161,678	(\$963,583)
Total Salaries, Benefits & Liabilities for Past Service (Active and Retiree)	\$65,939,123	\$64,842,329	\$67,578,044	\$67,388,287	(\$189,757)

Sewer Construction					
	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2018-19 Budget	Budget to Budget Variance
Salaries	\$2,955,114	\$2,887,431	\$2,776,702	\$3,065,435	\$288,733
Salary Vacancy	(\$36,000)	\$0	(\$30,000)	(\$82,000)	(\$52,000)
Overtime	\$125,273	\$30,838	\$106,145	\$101,621	(\$4,524)
Standby	\$0	\$0	\$0	\$0	\$0
Total Salaries	\$3,044,387	\$2,918,269	\$2,852,847	\$3,085,056	\$232,209
Current Employee Benefits	\$2,294,835	\$2,302,448	\$2,179,717	\$1,294,263	(\$885,454)
Benefit Vacancy	\$0	\$0	\$0	\$0	\$0
Total Benefits (Active Employees)	\$2,294,835	\$2,302,448	\$2,179,717	\$1,294,263	(\$885,454)
Total Salaries and Benefits (Active Employees)	\$5,339,222	\$5,220,717	\$5,032,564	\$4,379,319	(\$653,245)
Capitalized Administrative O/H	\$3,972,203	\$3,614,755	\$3,972,203	\$3,979,723	\$7,520
Total Salaries and Benefits (Active Employees) after Capitalized Administrative O/H		\$8,835,472	\$9,004,767	\$8,359,042	(\$645,725)
Retiree Benefits	\$0	\$0	\$0	\$0	\$0
UAAL / Unfunded Liabilities	\$0	\$0	\$0	\$0	\$0
Total Benefits and Liabilities for Past Service	\$0	\$0	\$0	\$0	\$0
Total Salaries, Benefits & Liabilities for Past Service (Active and Retiree)	\$9,311,425	\$8,835,472	\$9,004,767	\$8,359,042	(\$645,725)

Table 7 shows the allocation of Central San salaries and benefits to the O&M Fund and the Sewer Construction Fund.

Table 7 – Salaries, Benefits (Detailed), Retiree and Unfunded Liabilities

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Budget Variance	Percent Variance
O&M Salaries & Benefits - Active Employees							
O&M Salaries	\$33,158,707	\$31,794,337	\$34,797,628	\$34,003,060	\$35,571,037	\$773,409	2.2%
O&M Benefits - Active Employees							
O&M Workers' Compensation	\$402,948	\$250,313	\$415,320	\$418,799	\$483,026	\$67,706	16.3%
O&M Medical & Health	\$6,845,900	\$6,264,760	\$7,094,079	\$6,221,507	\$6,615,333	(\$478,746)	-6.7%
O&M Dental	\$529,909	\$523,927	\$523,098	\$481,780	\$531,242	\$8,144	1.6%
O&M Retirement - Normal cost	\$5,925,249	\$5,373,575	\$5,121,070	\$4,998,132	\$5,291,401	\$170,331	3.3%
O&M Deferred Comp/Medicare	\$2,264,571	\$2,252,429	\$2,396,058	\$2,275,590	\$2,457,201	\$61,143	2.6%
O&M Other Benefits	\$209,627	\$84,057	\$198,733	\$160,248	\$230,292	\$31,559	15.9%
OPEB Contribution (future contribution only; does not include retiree healthcare)	\$2,528,700	\$2,486,372	\$1,578,000	\$1,903,100	\$1,582,800	\$4,800	0.3%
O&M Accrued Compensated Absence	\$360,000	\$558,241	\$450,000	\$450,000	\$450,000	\$0	0.0%
O&M Benefit Vacancy Factor	(\$1,159,000)	\$0	(\$1,149,000)	\$0	(\$1,006,000)	\$143,000	-12.4%
O&M Benefits (Active Employees)	\$17,907,904	\$17,793,673	\$16,627,358	\$16,909,156	\$16,635,295	\$7,937	0.0%
O&M Capitalized Administrative Overhead Credit (indirect costs associated with non-productive hours and Admin Overhead)	(\$3,744,593)	(\$3,614,755)	(\$3,972,203)	(\$3,651,643)	(\$3,979,723)	(\$7,520)	0.2%
O&M Benefits less Cap O/H Credit (Active)	\$ 14,163,311	\$ 14,178,918	\$ 12,655,155	\$ 13,257,513	\$ 12,655,572	\$ 417	0.0%
O&M Salaries & Benefits	\$47,322,018	\$45,973,256	\$47,452,783	\$47,260,573	\$48,226,609	\$773,826	1.6%
Capital							
Capital Salary and Benefits**	\$5,566,832	\$5,220,717	\$5,032,564	\$4,630,302	\$4,379,319	(\$653,245)	-13.0%
Portion of Capitalized Overhead from above	\$3,744,593	\$3,614,755	\$3,972,203	\$3,651,643	\$3,979,723	\$7,520	0.2%
Capital Salary, Benefits and Capitalized Overhead	\$9,311,425	\$8,835,472	\$9,004,767	\$8,281,945	\$8,359,042	(\$645,725)	-7.2%
O&M and Capital Salaries and Benefits (Active)	\$56,633,443	\$54,808,728	\$56,457,550	\$55,542,518	\$56,585,651	\$128,101	0.2%
Benefits - Retiree							
Retiree Medical	\$4,916,000	\$4,938,618	\$5,441,500	\$5,165,100	\$5,417,000	(\$24,500)	-0.5%
Retiree Dental	\$350,200	\$350,058	\$397,800	\$348,700	\$405,500	\$7,700	1.9%
Retiree Life	\$96,100	\$115,951	\$106,700	\$107,100	\$118,700	\$12,000	11.2%
Retiree Benefits	\$ 5,362,300	\$ 5,404,628	\$ 5,946,000	\$ 5,620,900	\$ 5,941,200	(4,800)	-0.1%
UAAL / Unfunded Liabilities							
UAAL / Unfunded Liabilities	\$11,741,700	\$10,964,446	\$11,679,261	\$11,282,158	\$10,720,478	(\$958,783)	-8.2%
Additional UAAL Contributions	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$0	0.0%
Total UAAL / Unfunded Liabilities	\$ 14,241,700	\$ 13,464,446	\$ 14,179,261	\$ 13,782,158	\$ 13,220,478	\$ (958,783)	-6.8%
Total O&M Salaries & Benefits, Capital, Retiree Benefits, and Unfunded Liabilities	\$ 76,237,443	\$ 73,677,801	\$ 76,582,811	\$ 74,945,576	\$ 75,747,329	\$ (835,482)	-1.1%

Budgeted Full Time Equivalents

Table 8 shows full time equivalent employee totals for time periods indicated. The Year-End Actual figures represent actual staffing as of June 30, 2017. In addition to the 290 budgeted positions, the General Manager has the ability to add five (5) additional “transitional” positions at any given time to backfill positions vacated due to an extended leave of absence or as necessary to properly address succession planning. The cost associated with these positions are funded through vacancy savings. Table 8a shows FY 2018-19 budgeted positions by bargaining unit.

Table 8 - Budgeted Full Time Equivalents

	FY 2016-17			
	FY 2016-17 Budget	Year-End Actual	FY 2017-18 Budget	FY 2018-19 Budget
Regular Employees (excluding Recycled Water)	290.0	272.00	290.00	290.00
Limited Duration Employees				
Summer Students	30.0	25.00	31.00	31.00
Interns	10.5	12.00	9.50	8.50

Table 8a - Full Time Equivalent Positions by Bargaining Unit and Division

	Administration	Engineering	Operations	Total
Local One	18.0	39.00	108.00	165.00
MS/CG	27.0	49.00	32.00	108.00
Management Unit	5.0	5.00	3.00	13.00
Unrepresented	3.0	0.00	1.00	4.00
Total by Division	53.0	93.0	144.0	290.00

Staffing Changes

During 2015, a staffing and organizational study^[1] was completed for Central San. The study recommended that Central San hire a consultant to conduct a classification study, which was completed in 2017, to ensure that Central San’s classification structure was appropriate and employees were working within their job classifications. The budget includes the cost of implementing the recommendations of the study, as well as other changes to the classification structure that Central San has deemed as operationally necessary. The FY 2018-19 budget includes \$200,000 in gross wages and \$106,000 for the benefit related costs of implementing these potential changes.

Overall staffing remains at 290 positions, unchanged from the FY 2017-18 budget. Reallocations of staffing between divisions are summarized below:

- Contracts Analyst (Purchasing) replacing Accountant (Finance)
- Senior Administrative Technician replacing Human Resources Analyst (Human Resources)

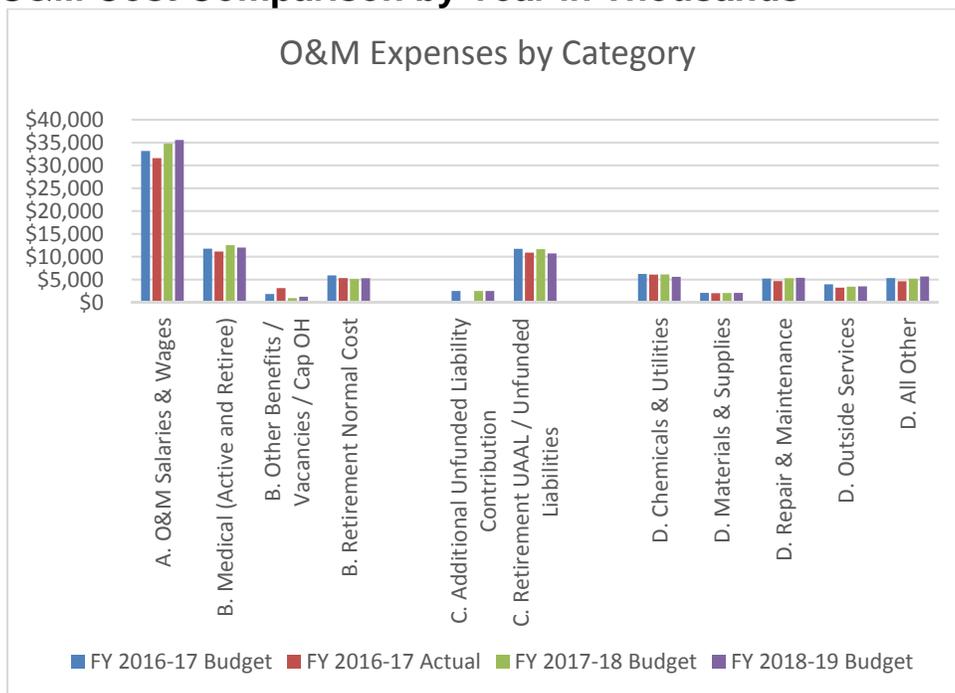
^[1] Report is available here: http://centralsan.org/documents/Organization_and_Staffing_Plan.pdf.

- Two IT Analysts I/II replacing Programmer Analyst and IT Analysts (Information Technology)
- Senior Materials Coordinator replacing Materials Coordinator (Purchasing)
- Risk Management Specialist replacing Risk Management Analyst (Risk Management)
- Administrative Technician replacing Senior Administrative Technician (Office of General Manager)
- Senior Engineer replacing Assistant Engineer along with Temporary Senior Engineer (Capital Projects)
- Net staffing change: Zero

Variations in the O&M Budget

O&M costs overall are flat from FY 2017-18 to FY 2018-19. Salaries increase \$0.8 million, which are offset by benefit and retirement cost decreases of \$1.0 million, while other costs increase \$0.2 million. These changes are discussed below and illustrated in Figure 5.

Figure 5 - O&M Cost Comparison by Year in Thousands



The lettered expense categories in the chart correspond to the descriptions below.

A. O&M Salaries & Wages

Central San’s budgeted salaries are \$35.6 million in FY 2018-19, compared to \$34.8 million in FY 2017-18, representing an increase of \$0.8 million, or 2.2%. The primary driver of this is an assumed salary adjustment effective May 2018 (based on the Bay Area consumer price index change from February 2017 to February 2018), and step increases for newer employees. These additional costs are offset by an increase in the vacancy factor and the assumption that vacant positions will be filled by lower paid employees.

B. Benefits and Capitalized Overhead

Central San benefits for the O&M budget are \$18.7 million in FY 2018-19 compared to \$18.6 million in FY 2017-18, an increase of \$0.1 million or 0.3%. Given the timing of the budget

process, assumptions were made on program costs pending the availability of actual announced changes by the providers. These assumed cost changes for budget purposes, and the actual cost changes subsequently announced by the carriers, are discussed in the bullet points below.

While healthcare plan cost changes have now been provided by Kaiser and Health Net for FY 2018-19 versus the rates for FY 2017-18, these overall healthcare cost changes have generally not been included in the budget, as Central San anticipates a reduction in healthcare costs to commence mid to late in FY 2018-19, after a transition to a new health plan provider. This move is subject to finalized labor agreements and then the commencement of new healthcare plans through the California Public Employees' Retirement System (CalPERS). When implemented, this change is estimated to save Central San ratepayers \$5.6 million annually on an ongoing basis. For budget purposes, we assume the same level of spending on healthcare as in FY 2017-18, less \$306,000, recognizing the possibility of some savings in the year to offset anticipated increases during the first portion of the fiscal year.

The primary benefit rate assumptions include the following:

- Kaiser – The budget assumes a \$306,000 reduction. In late April 2018 after the budget assumption was made, the carrier announced a 4.9% premium decrease compared to the rates paid in FY 2017-18 (representing a \$260,000 reduction). As the majority of employees receive Kaiser healthcare, these cost savings will help offset the increase in Health Net rates (reflected in the following bullet).
- Health Net - No rate change was assumed during the budget process. Subsequently, the carrier announced a 16% rate increase from the levels charged in FY 2017-18. As noted above, savings from the Kaiser decrease will help absorb a portion of this increase. Overall, healthcare costs for the existing Kaiser and Health Net plans will increase by about \$492,000 from the rates paid in FY 2017-18. Savings from other benefit plans, savings from the transition to the CalPERS plans, or other budget savings, can help address this now known variance.
- CCCERA – The retirement rate is decreasing 2.9% for legacy employees and 4.9% for PEPPRA employees, offset by higher pensionable wages. This is compared to a 7.6% decrease and 11.2% decrease for legacy and PEPPRA employees, respectively, in FY 2017-18.
- Delta Dental – A 4% rate increase was assumed during the budget process. Subsequently, the carrier announced that rates are to be held flat.
- Long-Term Disability - A 3% rate increase was assumed during the budget process. Subsequently, the carrier announced that rates are to be held flat.
- Employee Assistance Program - A 3% rate increase is assumed for budget purposes. Subsequently, the carrier announced that rates are to be decreased 5.1% from the rates paid in FY 2017-18.
- Workers' Compensation – The budget assumes an estimated 10.% rate increase.
- Life Insurance - A 3% rate increase is assumed for budget purposes. Subsequently, the carrier announced that rates are to be held flat.

The Capitalized Administrative Overhead rate, a credit given for capital work to the O&M budget for non-work hours and overhead, increased from 123% in FY 2017-18 to 124% for FY 2018-19. The Capitalized Administrative Overhead budget is \$4 million in FY 2018-19, unchanged from FY 2017-18.

C. Unfunded Liabilities

Central San has agreements with its employees to provide pension and post-employment health care benefits. The District prefunds the pension/benefits in accordance with actuarial calculations that make certain economic and demographic assumptions. The goal is to grow these prefunded amounts into enough assets to cover the liabilities arising from the promised pension/benefits. An unfunded liability may occur when those economic/demographic assumptions are not met, those assumptions are changed, and/or the level of pension/benefits is adjusted.

The pension unfunded liability expense paid to CCCERA is \$11.4 million in FY 2018-19, which, compared to the budget of \$11.7 million in FY 2017-18, is a decrease of \$0.3 million or 2.0%.

The budget also includes an additional \$2.5 million to be paid towards the unfunded liability in retirement and/or Other Post-Employment Benefits (OPEB) Trust, as determined by the Board during the fiscal year. This level of funding continues as in FY 2016-17 and FY 2017-18.

D. All Other O&M Expenses

The remaining O&M non-labor expenses total \$22.3 million in FY 2018-19, compared to a budget of \$22.1 million in FY 2017-18. This is an increase of \$0.2 million or 0.9%. Additional information is included in the individual division budgets. The areas of most significant changes include the following:

- Chemicals - This expense was reduced by \$23,000, or 1.6% due to lower usage of chemicals in the pumping stations.
- Utilities - This expense decreased \$497,000 or 10.7% due to lower use of electricity from PG&E due to cogeneration system improvement and the lower cost of pre-purchased natural gas.
- Repairs & Maintenance - This expense increased \$115,000, or 2.2% due to increased mechanical repair expenses offset by the elimination of bypass pumping expense.
- Hauling & Disposal - This expense increased \$103,000, or 10% due to higher household hazardous waste disposal rates and the new screens at the headworks facilities at the plant.
- Professional & Legal Fees - This expense increased \$38,000K, or 4.7% due to legal review of updates to policies and procedures budgeted in the Office of the Secretary of the District.
- Outside Services - This expense increased by \$58,000, or 1.7% due to non-capital security improvement, increased recruitment expense and increased cost-of-service consultant spending offset somewhat by a net reduction in outside temporary help.
- Self-Insurance Expense - This expense increased by \$195,000, or 33% and funds the requirements for the payment of premiums and estimated losses based on historical trends.
- Materials & Supplies - This expense increased \$49,000, or 2.4% due to small budgetary increases across many divisions.
- Other Expenses - This expense increased by \$160,000, or 5.8% due to Proposition 218 Notice expenses and the fall 2018 Board election.
- Conferences - This expense is included in the Other Expenses category. District-wide conferences presented in the FY 2016-17 budget represented out-of-state conferences; FY 2017-18 and FY 2018-19 also include in-state conferences. Table 9 shows that overall spending on conferences remains essentially flat from the current year budget to FY 2018-19.

Table 9 - Conferences

	FY 2016-17 Budget	FY 2017-18 Budget	FY 2018-19 Budget	Variance	Percent Variance
Board Conferences	\$50,000	\$45,000	\$45,000	\$0	0%
District Wide Conferences, Out-of-State*	\$66,350	\$59,450	\$82,500	\$23,050	39%
District Wide Conferences, In-State	not specified	\$170,675	\$148,900	(\$21,775)	-13%
Total	\$116,350	\$275,125	\$276,400	\$1,275	0%

*FY 2016-17 included only out-of-state conferences; future years include all conferences.

Operating Departments

Table 10 and Figure 6 provide a summary of the operating budgets by department. Further details on the operating departments are included in the Operating Departments Section.

Table 10 - O&M Budget by Department

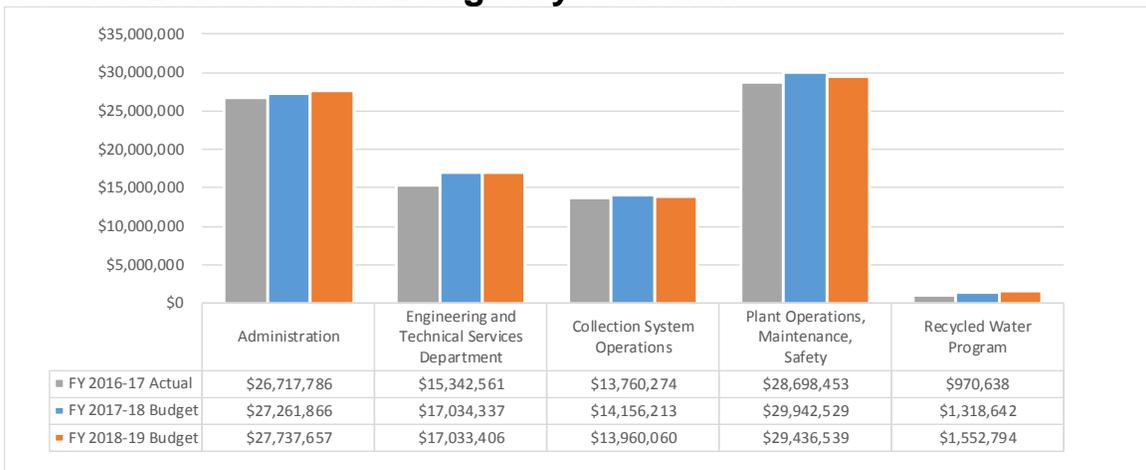
Table 8 - Operations and Maintenance Budget by Department

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Budget Variance	Percent Variance
Administration							
Communications Services and Intergovernmental Relations	\$2,124,485	\$1,894,969	\$1,979,369	\$1,906,679	\$2,094,427	\$115,058	6%
Finance	\$2,507,401	\$2,253,392	\$2,570,983	\$2,254,762	\$2,442,604	(\$128,379)	-5%
Human Resources	\$12,104,264	\$12,045,527	\$12,579,787	\$12,564,487	\$12,609,437	\$29,650	0%
Information Technology	\$3,700,951	\$3,528,391	\$3,938,582	\$3,704,335	\$4,137,334	\$198,752	5%
Purchasing and Material Services	\$1,763,107	\$1,577,434	\$1,958,932	\$1,732,274	\$2,051,286	\$92,354	5%
Risk Management	\$2,008,786	\$1,668,104	\$1,604,720	\$1,340,076	\$1,823,308	\$218,588	14%
Office of the General Manager / Office of the Secretary of the District	\$3,619,999	\$3,749,968	\$2,629,493	\$2,840,642	\$2,579,261	(\$50,232)	-2%
Total	\$27,828,993	\$26,717,786	\$27,261,866	\$26,343,255	\$27,737,657	\$475,791	2%

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Budget Variance	Percent Variance
Engineering and Technical Services Department							
Capital Projects Division	\$1,199,904	\$731,890	\$766,422	\$423,622	\$835,854	\$69,432	9%
Environmental and Regulatory Compliance Division	\$8,243,342	\$8,028,974	\$8,451,520	\$7,990,437	\$8,397,399	(\$54,121)	-1%
Planning and Development Services Division	\$6,455,894	\$6,581,696	\$7,816,395	\$8,106,320	\$7,800,153	(\$16,242)	0%
Total	\$15,899,140	\$15,342,561	\$17,034,337	\$16,520,379	\$17,033,406	(\$931)	0%

Account Description	FY 2016-17	FY 2016-17	FY 2017-18	FY 2017-18	FY 2018-19	Budget to	Percent Variance
	Budget	Actual	Budget	Projected	Budget	Variance	
Operations							
Collection System Operations	\$14,472,053	\$13,760,274	\$14,156,213	\$13,848,644	\$13,960,060	(\$196,153)	-1%
Plant Maintenance	\$14,035,700	\$13,126,339	\$14,138,658	\$13,619,948	\$14,366,463	\$227,805	2%
Plant Operations	\$14,859,845	\$14,700,185	\$14,886,976	\$14,634,580	\$14,131,964	(\$755,012)	-5%
District Safety Program	\$913,468	\$871,929	\$916,895	\$843,267	\$938,112	\$21,217	2%
Recycled Water Program	\$1,801,719	\$970,638	\$1,318,642	\$1,227,955	\$1,552,794	\$234,152	18%
Total	\$46,082,785	\$43,429,366	\$45,417,384	\$44,174,394	\$44,949,393	(\$467,991)	-1%
Total All Departments	\$89,810,918	\$85,489,712	\$89,713,587	\$87,038,028	\$89,720,456	\$6,869	0%

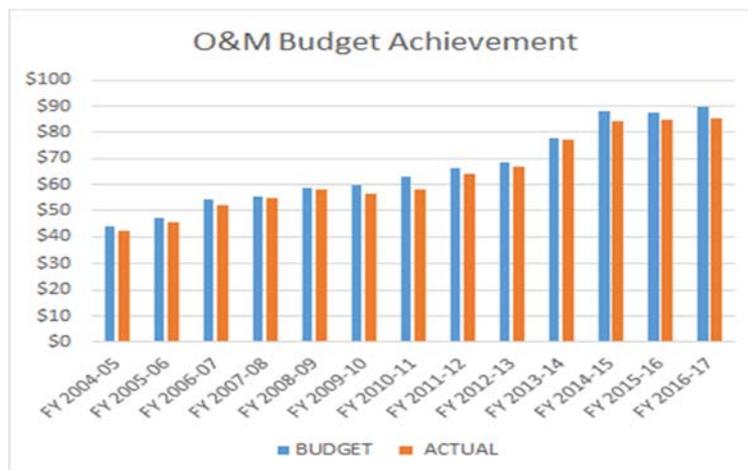
Figure 6 - FY 2018-19 O&M Budget by Function



Historical Variances in O&M Spending

Figure 7 below shows historic O&M budgeted and actual amounts. As noted, there have been variances averaging 3% (spending was 97% of budget) over the last five completed years. In the development of the FY 2018-19 budget, attention was paid to reviewing the budget on a line-by-line basis, with the budgeted amount evidenced by detailed support and a comparison to FY 2017-18 projected spending.

Figure 7 - Historic O&M Budget vs. Actual Spending in Millions (Multi-Year Trend)



Capital Improvement Budget (CIB)

Sewer Construction Fund revenues are projected to increase by \$16.6 million, from \$39.3 million in FY 2017-18 to \$55.9 million in FY 2018-19. This increase is to cover an extensive capital improvement program and will be generated primarily through an increase in Sewer Service Charges of \$14.0 million, resulting from additional revenue available from the 7% rate increase effective July 1, 2018, and an expected City of Concord reimbursement of \$1.2 million due to higher flows and increased cost-based reimbursement. Budgeted capital expenditures for FY 2018-19 are \$45.3 million, a \$2.5 million increase over the FY 2017-18 budget of \$42.7 million. The \$45.3 million does not include the anticipated carryforward from FY 2017-18, which will be communicated to the Board after the close of the current fiscal year. The \$2.5 million, or 6%, increase in budgeted spending is a small step toward the significantly increased capital spending foreseen for the next decade as shown in the Ten-Year Capital Improvement Plan (CIP) presented later in this document.

Central San will contribute approximately \$10.6 million to capital reserves in FY 2018-19 with revenues exceeding expenditures by that amount. Funding the Sewer Construction Fund (Capital Improvement) - Working Capital Reserves exceeds the requirement of the aforementioned Board Policy No. BP 017 – *Fiscal Reserves*. The excess funding is to be applied toward reducing anticipated borrowing in FY 2019-20.

Table 11 below is a summary of the projected FY 2018-19 Sewer Construction Fund revenues and expenditures. Further details are included in the Capital Improvement Program Section.

Table 11 - Sewer Construction Fund Revenues and Expenditures

	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget *	Budget to Budget Variance	Percent Variance
Revenue							
Capacity Fees	\$6,060,000	\$6,367,013	\$5,900,000	\$5,700,000	\$5,900,000	\$0	0%
Pumped Zone Fees	\$400,000	\$596,564	\$513,000	\$860,000	\$600,000	\$87,000	17%
Interest Income	\$225,000	\$588,387	\$386,000	\$553,000	\$570,000	\$184,000	48%
Ad Valorem Taxes	\$11,080,000	\$12,577,156	\$12,100,000	\$12,900,000	\$13,300,000	\$1,200,000	10%
Sewer Service Charge	\$11,820,000	\$12,151,144	\$13,967,300	\$13,967,000	\$27,926,268	\$13,958,968	100%
Reimbursements							
City of Concord	\$4,550,000	\$4,476,961	\$6,000,000	\$6,000,000	\$7,150,000	\$1,150,000	19%
Recycled Water Sales	\$300,000	\$36,946	\$38,500	\$0	\$0	(\$38,500)	-100%
Developer Fees & Charges	\$470,400	\$519,072	\$423,000	\$442,500	\$443,000	\$20,000	5%
Total Revenue	\$34,905,400	\$37,313,243	\$39,327,800	\$40,422,500	\$55,889,268	\$16,561,468	42%
Expenditures							
Collection System Program	\$17,925,105	\$20,791,120	\$18,492,000	\$19,530,000	\$19,347,000	\$855,000	5%
Treatment Plant Program	\$13,125,000	\$12,239,981	\$18,045,000	\$17,900,000	\$16,865,000	(\$1,180,000)	-7%
General Improvements Program	\$3,808,651	\$3,062,994	\$4,277,000	\$2,640,000	\$4,750,000	\$473,000	11%
Recycled Water Program	\$500,000	\$601,954	\$460,000	\$1,675,000	\$2,857,000	\$2,397,000	521%
Contingency	\$1,450,000	\$0	\$1,500,000	\$0	\$1,500,000	\$0	0%
Total Expenditures	\$36,808,756	\$36,696,049	\$42,774,000	\$41,745,000	\$45,319,000	\$2,545,000	6%
Carryforward			\$3,700,000				
Total Expenditure Authority			\$46,474,000				
Sewer Construction Funds Available							
Projected Revenue					\$55,889,268		
Projected Expenditures					\$45,319,000		
Contribution to Reserves					\$10,570,268		

* The FY 2018-19 budget amount does not include any carryforward from past fiscal years; the Board will be notified of any carryforward amount after the close of the current fiscal year.

Impact of CIP on Ongoing O&M Budget

Central San's Capital Budget and the extent to which FY 2018-19 nonrecurring capital investments will have an effect on the proposed or future year's operating budget are described later in this document. In general, given the nature and composition of the FY 2018-19 Capital Budget, these effects are minimal. Future capital projects could have more substantial impacts (e.g., additional personnel costs, additional maintenance costs, or additional utility costs, or conversely, anticipated savings such as reduced utility costs or lower maintenance costs) that would be specified further in the year such projects are budgeted.

Reserve Projections

Board Policy No. BP 017 *Fiscal Reserves* sets targets for each of Central San's reserve funds. Fiscal reserves provide working capital for O&M activities; funding for long-term capital improvement requirements; fulfillment of legal, regulatory and contractual obligations; mitigation of risk and liability exposures; and cash flow emergencies. These reserves are fully funded as of FY 2016-17 but are adjusted annually based on changes in the targeted balance calculation.

- **For the O&M Fund** - Working Capital Reserves, the Board has set a target of five months (41.7%) of gross operating expenses at the start of each fiscal year.
- **For the Sewer Construction Fund** (Capital Improvement) - Working Capital Reserves, the Board has set a target of 50% of the annual capital projects budget at the start of each fiscal year, excluding capital projects that are to be funded with bond proceeds.
- **For the Self-Insurance Fund Reserves** the Board has set a target of three times the annual deductible, \$1.5 million. In addition, to help mitigate financial impacts and maintain uninterrupted service in the event of an emergency or catastrophic event, Central San maintains an Emergency Fund Reserve balance of \$5 million in the Self-Insurance Fund.

Table 12 presents a summary of Central San's current reserve balance projections compared to the Board Policy targets. The reserve levels are projected to be above the policy-required levels at June 30, 2018 and 2019. The FY 2018-19 revenue requirement funds a projected \$7.8 million increase in the reserve balances. While the FY 2019-20 capital budget and funding combination is yet to be finalized, the current projection anticipates \$9.2 million of funding above the targeted level, providing for the ability to reduce the proportion of the CIB that would otherwise be financed with bonds. The amounts are subject to change based on actual financial results for the current and next fiscal years.

Table 12 - Reserve Projections

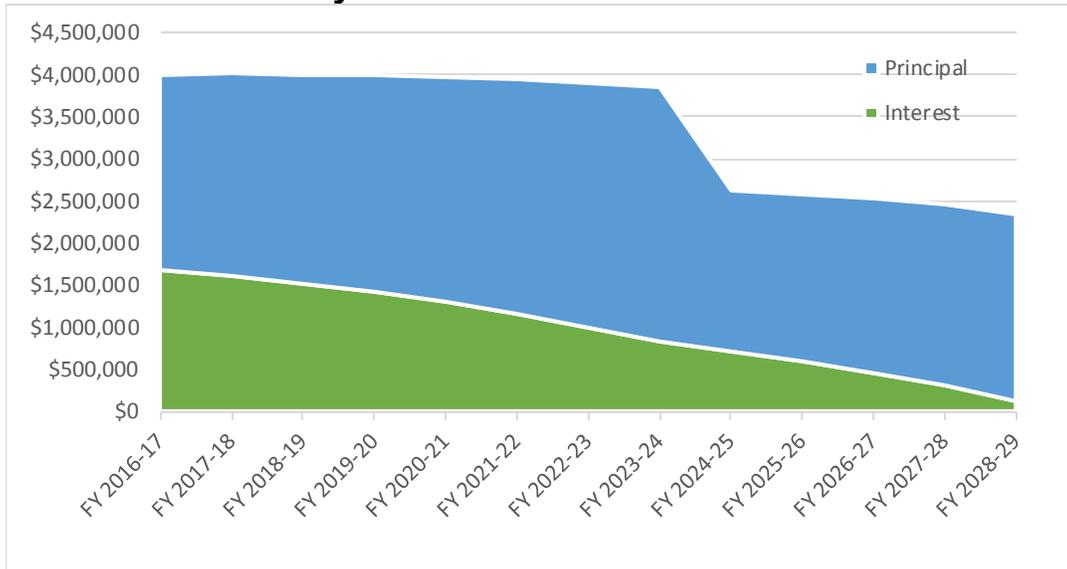
	O&M Fund	Sewer Construction Fund (Capital)	Self Insurance Fund	Totals
Projected Balance as of June 30, 2018	\$40,265,845	\$29,053,312	\$6,516,933	\$75,836,090
Projected Balance as of June 30, 2019	\$37,471,121	\$39,623,580	\$6,552,683	\$83,647,384
Change year over year	(\$2,794,724)	\$10,570,268	\$35,750	\$7,811,294
Reference:	<i>Table 5</i>	<i>Table 11</i>	<i>Self Insurance Table 1</i>	<i>See Figure 3</i>
Percentage change year over year	-6.9%	36.4%	0.5%	10.3%
Explanation	Ending balance at 6/30/18 is above policy level due to O&M savings in FY 2017-18.	Funds are being set aside during FY 2018-19 to be used towards funding the following year's Capital budget.		
<u>Policy Target</u>	5/12 of following year's O&M Budget	50% of following year's non-debt funded Capital	3 times annual deductible of \$500,000 plus \$5 million	
Reserve Policy Target end of June 30, 2018	\$37,383,523	\$22,659,500	\$6,500,000	\$66,543,023
Projected Balance Minus Reserve Policy Target at June 30, 2018	\$2,882,322	\$6,393,812	\$16,933	\$9,293,067
Reserve Policy Target end of June 30, 2019	\$37,271,483	\$30,379,000	\$6,500,000	\$74,150,483
Projected Balance Minus Reserve Policy Target at June 30, 2019	\$199,638	\$9,244,580	\$52,683	\$9,496,901

Reserve calculations subject to final close of financial results for the year and may differ from projection. Reserve projection may be updated by the time of the presentation of the final budget.

Debt Service

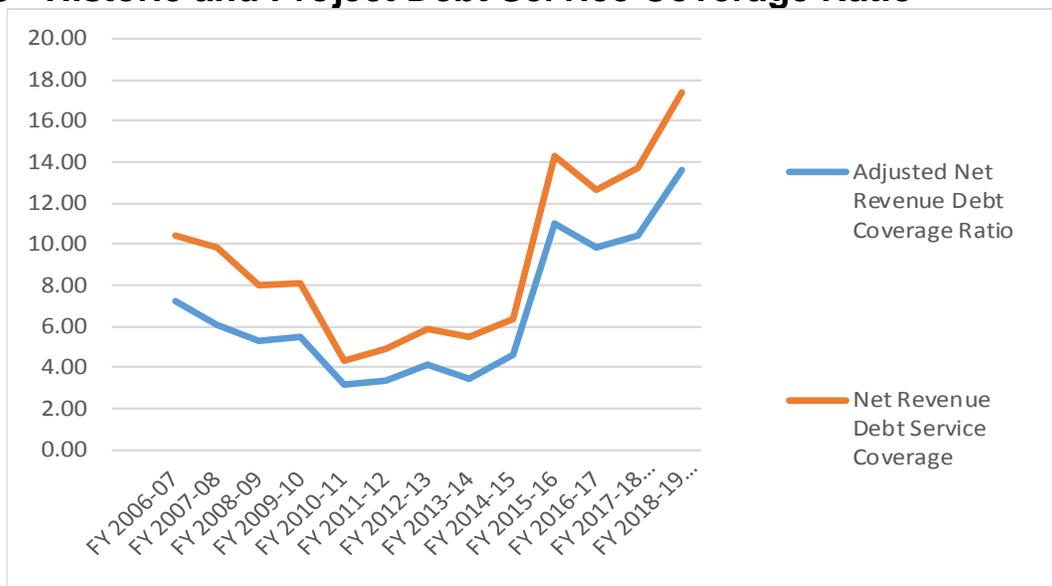
Current debt service expenditures include outstanding payments on a State of California Water Reclamation Loan and 2009 Revenue Bonds. Details on the debt service are included in the Debt Program Section. Figure 8 depicts all existing debt payments for Central San. Future planned debt issuances would add to this debt profile. The need for new bond funding is anticipated for FY 2019-20.

Figure 8 - Debt Service Payment Schedule



An important financial performance metric is the Debt Service Coverage Ratio. The Board’s targeted coverage ratio is 2.0. As shown in Figure 9, Central San will meet the overall Debt Service Coverage Ratio of 2.0 as required.

Figure 9 - Historic and Project Debt Service Coverage Ratio



Net Revenue: This ratio must be above 1.00 to meet the Debt Rate Covenant (Net Revenue / Total Debt Service).
Adjusted Net Revenue = Net Revenue less Capital Improvement Fees (Connection Fees) and City of Concord Capital Charges. This ratio must be above 1.25 to meet the Debt Rate Covenant (Adjusted Net Revenue / Total Debt Service).

Long-Term Spending Trend

Figure 10 shows a long-term trend line of O&M expenditures, while Figure 11 shows a long-term trend line of capital expenditures.

Figure 10 - Long-Term O&M Spending Trend

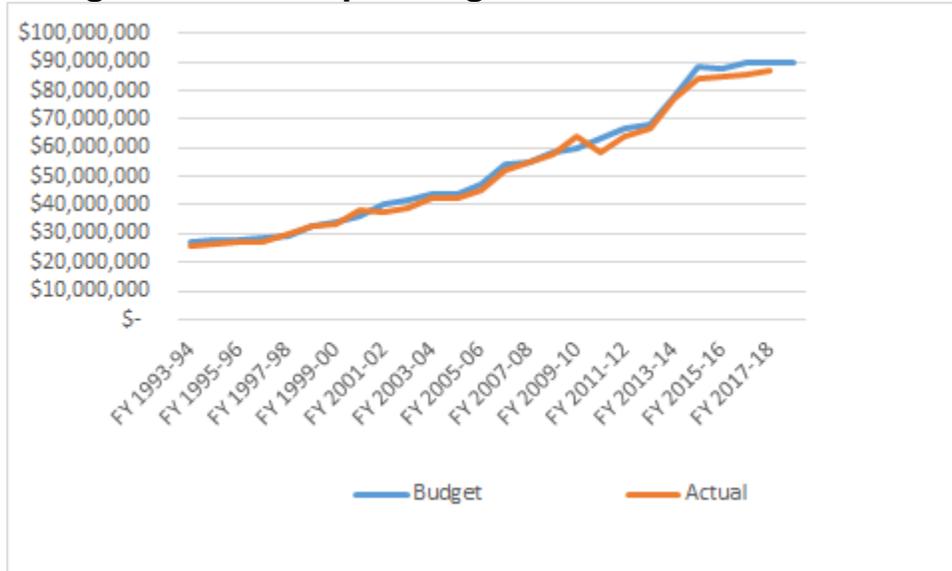
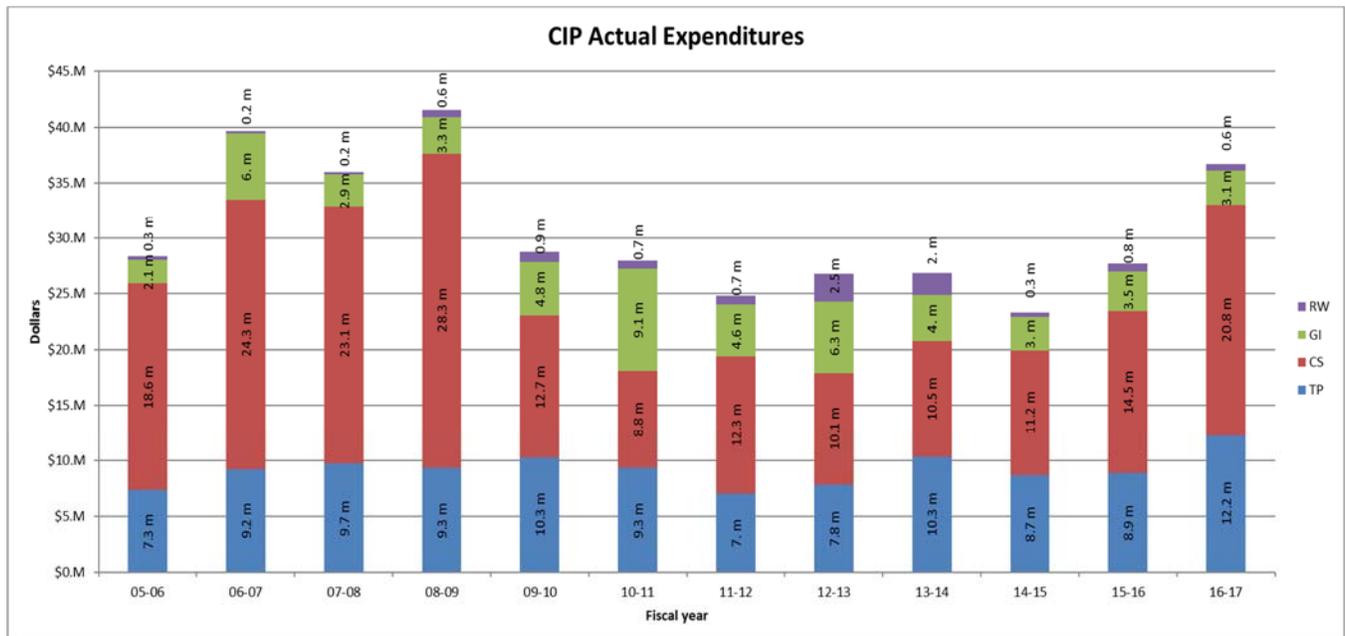


Figure 11 - Infrastructure Investments Over Ten Years: \$300,119,500



RW – Recycled Water / GI – General Improvements / CS – Collection System / TP – Treatment Plant

Operating Departments

On a day-to-day basis, the following three Operating Departments carry out the mission of Central San to protect public health and the environment:

- Administration
- Engineering and Technical Services
- Operations

These three operating departments carry out Central San's mission by providing exceptional customer service in the operation of our wastewater collection, treatment, recycled water, and household hazardous waste collection facilities. The departments are guided by Central San's Strategic Plan which provides direction and initiatives to help guide us in achieving our goals and objectives.

The following sections describe the responsibilities of each department and their operating budget needs. The total operating budget for Fiscal Year 2018-19 is \$89.7 million, unchanged as compared to the \$89.7 million budget for Fiscal Year 2017-18.

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Administration Department



The Administration Department consists of the Office of the General Manager, the Office of the Secretary of the District, District Counsel, Human Resources, and Administrative Services. The primary function of the Administration Department is to provide services that support the efficient operation of Central San, including administrative support to the General Manager; financial management; purchasing and materials management; information technology; and risk management. The Department is also responsible for advancing Central San's policy objectives with state and federal legislative bodies in addition to being responsible for interagency relations and public affairs.

The Divisions that comprise this Department include:

- Communication Services and Intergovernmental Relations
- Finance
- Human Resources
- Information Technology
- Purchasing and Materials Services
- Risk Management
- Office of the General Manager/Office of the Secretary of the District

Communication Services and Intergovernmental Relations

OVERVIEW

This Division supports Central San’s internal and external communication, government relations, advocacy, community outreach, media relations, emergency communications, publications, events, and student educational programs. The Division also oversees a contracted, full-service reprographics services center and mail service which serves all of Central San.

Fiscal Year 2017-18 Accomplishments

This Division had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
<p>Goal 1 - Provide Exceptional Customer Service</p>	<ul style="list-style-type: none"> • Successful completion of the third Central San Academy, a program which focuses on educating our customers on the mission of Central San and how it is fulfilled. • Hosted a week-long collection drive for the 20th Anniversary of the Household Hazardous Waste Collection Facility, leading to our highest customer participation level ever. • Developed innovative household hazardous waste and educational videos that televised important and timely Central San programming, operational support, and pollution prevention messages reaching tens of thousands of viewers. • Increased the reach of our student pollution prevention educational programs. These students will play a role in reducing pollution and supporting the environment for decades to come. • Provided educational programming to over 2,200 students in our service area, helping support hands-on science-based learning in local schools. • Focused outreach efforts that showcased completion of major infrastructure projects that increase service reliability and add value for customers. • Provided comprehensive and engaging Speakers Bureau presentations to over 1,000 customers. • Provided tours of Central San’s treatment plant and Household Hazardous Waste Collection Facility to over 250 customers. • Trained Communication Services Division in crisis communications to prepare for possible emergencies. • Honored by the California Association of Public Information Officials for the 2018 Photography Award. • Received the 2018 First Place California Water Environment Association statewide award for Photography. • Selected to showcase an Interactive Knowledge Exchange video at the 2017 Water Environment Federation’s annual Technical Exhibition and Conference.

Fiscal Year 2018-19 Key Metrics

Metric	Target
Students served by educational programs	Greater than 4,000 per year
Participants in Treatment Plant / Household Hazardous Waste Collection Facility tours and District presentations	Greater than 500 participants per year
Participants in citizens academy, Central San Academy	Greater than 30 participants per session

Metric	Target
Operating expenditures as a percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute	
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Build External Customer Relationships and Awareness	Provide high-quality customer service.	Customer Satisfaction	
		Invest in business process changes and technologies to effectively increase access to District information and promote customer care, convenience, and self-service.	Customer Satisfaction, Operational Optimization	
		Increase customer understanding and support for key District initiatives, programs, and services.	Stakeholder Understanding and Support	
		Build and maintain relationships with federal, state, and local elected officials and key stakeholder groups.	Stakeholder Understanding and Support	
	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency	
		Cultivate employees’ understanding of District operations and their role in the agency’s success.	Employee and Leadership Development, Enterprise Resiliency	
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development	
		Minimize impacts to residents and businesses during maintenance or construction work.	Customer Satisfaction	
	Goal 2 – Strive to Meet Regulatory Requirements	Comply with All Federal, State, and Local Regulations Related to District Administration	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
	Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Manage Costs	Re-engineer business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization

Goal	Strategy	Initiative	EUM Attribute
Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce	Enhance Relationships with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$664,176	\$666,559	\$676,862	\$635,300	\$732,452	\$97,152	15%	\$55,590	8%
Employee Benefits	\$513,804	\$518,129	\$471,302	\$442,264	\$216,536	(\$225,728)	-51%	(\$254,766)	-54%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$226,934	\$226,934	100%	\$226,934	100%
Repairs & Maintenance	\$1,000	\$0	\$1,000	\$1,000	\$1,000	\$0	0%	\$0	0%
Professional & Legal Services	\$2,600	\$6,052	\$2,600	\$2,600	\$3,500	\$900	35%	\$900	35%
Outside Services	\$409,000	\$344,127	\$399,000	\$390,200	\$391,000	\$800	0%	(\$8,000)	-2%
Materials & Supplies	\$61,675	\$52,657	\$61,675	\$61,675	\$61,675	\$0	0%	\$0	0%
Other Expenses	\$472,230	\$307,445	\$366,930	\$373,640	\$461,330	\$87,690	23%	\$94,400	26%
Total	\$2,124,485	\$1,894,969	\$1,979,369	\$1,906,679	\$2,094,427	\$187,748	10%	\$115,058	6%

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Personnel Requirements

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Communication Services and Intergovernmental Relations Manager	1.00	1.00	1.00
Community Affairs Representative	2.00	2.00	3.00
Graphics Technician	1.00	1.00	1.00
Media Production Technician	1.00	1.00	1.00
Public Information and Production Assistant	1.00	1.00	0.00
Total	6.00	6.00	6.00

Limited Duration Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Graphic Design Summer Student	1.00	1.00	1.00
Intern	0.00	0.00	1.00
Total	1.00	1.00	2.00

Significant Budget Modifications

The Communication Services and Intergovernmental Relations Division Operating Budget for FY 2018-19 is \$2.1 million, a \$0.1 million or 6% increase over the \$2.0 million budget in FY 2017-18. Salaries & Wages include the agency-wide cost-of-living adjustment, funding for an intern, and step increases for recently hired staff. The other primary cost change is in Other Expenses, for the required Proposition 218 Notice to customers in 2019, which is typically provided every two or more years.

The Operating Budget for FY 2018-19 will address the challenges of educating customers regarding required rate increases that will fund a long-term capital plan to replace aging infrastructure on the treatment plant and throughout our collection system. This will be accomplished through a multi-pronged outreach campaign involving publications, media relations, a simplified Proposition 218 Notice, engaging public service announcements, social media posts, customer-focused construction communications, and through local government relations.

Communication Services and Intergovernmental Relations also takes the lead role in conveying to customers and other government agencies how Central San responds to challenges facing the organization. This includes federal, state, and local advocacy, maintaining customer awareness of Central San’s services, and promoting customer behavioral changes to reduce water pollution and impacts on Central San’s infrastructure.

Finance

OVERVIEW

This Division is responsible for maintaining internal controls over financial reporting of all Central San funds and accounts. The Division administers the transactions related to cash and investments, debt service, cash receipts, accounts payable, sewer service charges and all other revenues, pension, and capital assets. The Division is also responsible for budget document preparation and coordinates the process with all other Departments at Central San. Monthly financial statements are prepared, reviewed, and analyzed by the Division and submitted to the Board of Directors for their review. Central San is subject to an annual external audit which is also administered and coordinated by the Division. Subsequent to the audit, the Division assembles the Comprehensive Annual Financial Report which is submitted to the Board of Directors and the Government Finance Officers Association.

Fiscal Year 2017-18 Accomplishments

This Division had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
<p>Goal 3 – Be a Fiscally Sound and Effective Water Sector Utility</p>	<ul style="list-style-type: none"> ● Maintained a AAA credit rating with Standard & Poor's. ● Maintained a ratio of net operating revenue over debt service of at least 2:1. ● Maintained service affordability by keeping the sewer service charge below the median of other Bay Area agencies. ● Established a combination trust for Pension and Other Post-Employment Benefits in FY 2017-18. ● Funded a new IRS Section 115 Pension Trust with \$5.4 million toward unfunded pension liabilities. ● Fully funded the Other Post-Employment Benefits actuarially determined contribution and paid an additional \$2.5 million toward the unfunded liability. ● Received an unmodified (clean) audit opinion on the financial statements. ● 17th year of receiving the Government Finance Officers Association award for financial reporting excellence. ● Adopted updated Investment Policy. ● Implemented Board approved Debt Management Policy in accordance with State Bill 1029 and appointed financial advisors. ● Updated the Fiscal Reserve Policy and established a new investment account at Contra Costa County for improved tracking and segregation of funds. ● Implemented an internal audit function and issued three internal audit reports. ● Streamlined signature authority matrix/limits.
<p>Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability</p>	<ul style="list-style-type: none"> ● Produced the FY 2017-18 and FY 2018-19 budgets in-house after using graphic design consultant for the FY 2016-17 budget. ● Mapped workflows in preparation for implementation of new Enterprise Resource Planning system. ● Used the Mentorship Program project to streamline the Capital Improvement Program budget information into the financial system.

Fiscal Year 2018-19 Key Metrics

Metric	Target
Service affordability maintained	Sewer Service Charge less than average of Bay Area agencies Sewer Service Charge plus Ad Valorem tax less than average of Bay Area agencies
Standard & Poor's and Moody's Credit Ratings	AAA/Aa1
Debt service coverage ratio	Greater than 2.0 times
Actual reserves as a percentage of target	100%
Reported material weaknesses or significant deficiencies in internal controls as part of annual financial audit	Zero
Operating expenditures as a percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
		Cultivate employees' understanding of District operations and their role in the agency's success.	Employee and Leadership Development, Enterprise Resiliency
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
Goal 2 – Strive to Meet Regulatory Requirements	Comply with All Federal, State, and Local Regulations Related to District Administration	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Conduct Long-Range Financial Planning	Ensure rate structure and fees are consistent with cost of service principles.	Financial Viability
		Present alternative financial plans to the Board in FY 2018-19 for necessary rate adjustments for FY 2019-20 onward, including considering the potential issuance of debt to fund CIP in conjunction with overall financial plan.	Financial Viability
		Develop alternatives for new revenues and funding sources (e.g., interagency agreements, services, recycled water).	Financial Viability

Goal	Strategy	Initiative	EUM Attribute
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Manage Costs	Effectively manage the cost of employee benefits.	Financial Viability
		Carry out targeted audits of critical/high risk functions.	Enterprise Resiliency
		Re-engineer business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization
Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce	Enhance Relationship with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$1,155,209	\$1,024,170	\$1,222,311	\$1,085,800	\$1,211,950	\$126,150	12%	(\$10,361)	-1%
Employee Benefits	\$977,212	\$858,944	\$933,092	\$877,957	\$461,426	(\$416,531)	-47%	(\$471,666)	-51%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$343,153	\$343,153	100%	\$343,153	100%
Repairs & Maintenance	\$1,000	\$0	\$1,000	\$500	\$1,000	\$500	100%	\$0	0%
Professional & Legal Services	\$113,750	\$104,244	\$225,750	\$125,750	\$243,000	\$117,250	93%	\$17,250	8%
Outside Services	\$223,500	\$243,470	\$145,900	\$137,900	\$148,800	\$10,900	8%	\$2,900	2%
Materials & Supplies	\$9,800	\$10,743	\$9,800	\$9,800	\$10,000	\$200	2%	\$200	2%
Other Expenses	\$26,930	\$11,822	\$33,130	\$17,055	\$23,275	\$6,220	36%	(\$9,855)	-30%
Total	\$2,507,401	\$2,253,392	\$2,570,983	\$2,254,762	\$2,442,604	\$187,842	8%	(\$128,379)	-5%

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Personnel Requirements

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Accountant	2.00	3.00	2.00
Accounting Technician III	3.00	3.00	3.00
Finance Administrator	2.00	2.00	2.00
Finance Manager	1.00	1.00	1.00
Payroll Analyst	1.00	1.00	0.00
Total	9.00	10.00	8.00

Significant Budget Modifications

The Finance Division Operating Budget for FY 2018-19 is \$2.5 million, a \$0.1 million or 5% decrease over the \$2.6 million budget in FY 2017-18. Salaries & Wages include the agency-wide cost of living adjustment, offset by the transfer of the Payroll Analyst to the Human Resources Division during FY 2017-18 and one Accountant vacancy repurposed to the Purchasing Division in FY 2018-19. The Professional Services budget increase is due to a required biennial actuary report in FY 2018-19. Other Expenses decrease is due to the inclusion of a non-usage allowance for tuition and professional expense reimbursement in FY 2018-19.

Finance supports the agency by providing transparent financial information and works, in conjunction with the Engineering Department, to provide the rate and debt funding to address the principal issues facing Central San. The Division plays a significant role in specifying the costs of Central San's functions, how those costs drive the need for rate adjustments and in developing financial alternatives to keep rates moderated over the long-term through financing approaches. This data is used to document why spending is necessary, that rate levels are no more than necessary to meet essential needs, provide for long-term reliability, and appropriate levels of customer service. Finance will be working with other divisions to implement a new financial system, as part of the Enterprise Resource Planning System Replacement Project. The costs of the project are primarily budgeted in the capital budget, including funding for supplemental staffing related to the project.

Human Resources

OVERVIEW

This Division manages all Human Resources services, including employee/labor relations; recruitment, testing and selection; classification and compensation; employee benefits administration; District-wide training; organizational development, and all payroll functions.

Fiscal Year 2017-18 Accomplishments

This Division had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
<p>Goal 4 – Develop and Retain a Highly Trained and Innovative Workforce</p>	<ul style="list-style-type: none"> • Completed Recruitment Training for all District employees. • Held various human resource topic related “brown bag” sessions for all District employees. • Held the second Management Academy. • Began the second Supervisory Academy. • Implemented annual Central San Mentorship Program. • Completed the Roles and Responsibilities of Public Employees Training for all District employees. • Negotiated Kaiser Permanente and Delta Dental rate decreases of five percent and four percent, respectively, for FY 2017-18 premium rates, resulting in an annual savings of \$297,130. • Implemented an additional tax-free commuter benefit to the existing Bay Area Commuter Benefit Program. • Partnered with the California Water Environment Association to assist in the development of the state-wide California Water Environment Association Testing Program.

Fiscal Year 2018-19 Key Metrics

Metric	Target
<p>New employees attending customer service training within 6 months of employment</p>	<p>100%</p>
<p>Average time to fill vacancy (from request to hire)</p>	<p>Less than 60 days</p>
<p>Turnover rate at or below Bureau of Labor Statistics’ (BLS) 2016 local government industry average</p>	<p>Less than or equal to 18.8%</p>
<p>Average annual training hours (external and internal training)</p>	<p>15 hours per full-time equivalent employee (FTE)</p>
<p>Actual versus budgeted usage of training dollars</p>	<p>Greater than 80%</p>
<p>Participation in annual Wellness Expo</p>	<p>Increase by 10% each year</p>
<p>Internal promotions (excludes entry-level positions)</p>	<p>Greater than or equal to 25%</p>
<p>Formal grievances filed</p>	<p>Zero</p>
<p>Operating expenditures as a percentage of operating budget</p>	<p>Greater than 95%</p>
<p>Performance evaluations completed on time</p>	<p>100%</p>

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
		Cultivate employees’ understanding of District operations and their role in the agency’s success.	Employee and Leadership Development, Enterprise Resiliency
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
Goal 2 – Strive to Meet Regulatory Requirements	Comply with All Federal, State, and Local Regulations Related to District Administration	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Manage Costs	Effectively manage the cost of employee benefits.	Financial Viability
		Re-engineer business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization
Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce	Ensure Adequate Staffing and Training to Meet Current and Future Operational Levels	Assess, develop, and implement District-wide training needs.	Employee and Leadership Development
		Recruit, develop, and train future leaders.	Employee and Leadership Development
	Enhance Relationship with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development
		Sustain and grow collaborative relationships with the labor bargaining units.	Stakeholder Understanding and Support
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$727,877	\$625,986	\$1,049,323	\$1,052,800	\$1,263,408	\$210,608	20%	\$214,085	20%
Employee Benefits	\$3,102,572	\$491,225	\$2,553,199	\$2,836,107	\$2,071,145	(\$764,962)	-27%	(\$482,054)	-19%
Retiree Benefits	\$5,362,300	\$7,904,628	\$5,946,000	\$5,620,900	\$4,358,400	(\$1,262,500)	-22%	(\$1,587,600)	-27%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$1,852,454	\$1,852,454	100%	\$1,852,454	100%
Additional UAAL Contributions **	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$0	0%	\$0	0%
Repairs & Maintenance	\$0	\$0	\$7,500	\$3,000	\$3,500	\$500	17%	(\$4,000)	-53%
Professional & Legal Services	\$126,100	\$104,189	\$166,450	\$166,450	\$166,450	\$0	0%	\$0	0%
Outside Services	\$249,300	\$377,165	\$319,200	\$344,200	\$345,000	\$800	0%	\$25,800	8%
Materials & Supplies	\$18,000	\$22,959	\$20,000	\$20,200	\$31,000	\$10,800	53%	\$11,000	55%
Other Expenses	\$18,115	\$19,374	\$18,115	\$20,830	\$18,080	(\$2,750)	-13%	(\$35)	0%
Total	\$12,104,264	\$12,045,527	\$12,579,787	\$12,564,487	\$12,609,437	\$44,950	0%	\$29,650	0%

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee and Retiree Benefits line item in prior years.

** Additional UAAL: Costs for additional discretionary contributions to pay down employee related liabilities for the entire Central San active and retiree base. These payments may be directed by the Board towards pension or OPEB liabilities.

Personnel Requirements

Regular Status Employees	FY2016-17 YE Actual	FY 2017-18	FY 2018-19
Human Resources Analyst	3.00	3.00	2.00
Human Resource Manager	1.00	1.00	1.00
Senior Administrative Technician	1.00	1.00	2.00
Payroll Analyst	0.00	0.00	1.00
Total	5.00	5.00	6.00

Significant Budget Modifications

The Human Resources Operating Budget for FY 2018-19 is \$12.6 million, which remained flat compared to the \$12.6 million budget in FY 2017-18. Salaries & Wages include the agency-wide cost of living adjustment, and the transfer of the Payroll Analyst position from Finance to Human Resources in FY 2017-18, which was offset by cost savings from replacing a Human Resources Analyst position with a Senior Administrative Technician position. The increase in Outside Services is due to an increased number of recruitments for vacant positions and the cost for advertising and outreach. Materials & Supplies increase is due to the transfer of the Employee Activities Organization costs from the Office of the Secretary of District, and the transfer of expenses related to the Bring your Child to Work Day event from Communication Services and Intergovernmental Relations.

Certain costs relating to all Central San employees or retirees are centrally budgeted in the Human Resources Division. The following are items budgeted in Human Resources but not specific to that division:

- Salaries and wages includes \$400,000 for Compensated Absences Accrual Payments.

- Employee benefits includes \$450,000 for Accrued Compensated Absences, \$30,000 for Unemployment expenses.
- Retiree benefits includes all costs related to retirees including health insurance, dental insurance, and life insurance.
- Unfunded Liabilities includes the costs for pension and OPEB trust payments. These costs are due primarily to past investment performance not meeting actuarial assumptions, changes in actuarial assumptions and de-pooling of Central San’s staff from other participating agencies of the Contra Costa County Employees’ Retirement Association and from OPEB prefunding only starting in 2009. These expenses are shown separately in FY 2018-19 and prospectively.

Human Resources plays an important role in meeting the overall challenges that Central San is addressing by working to ensure an engaged and motivated workforce. This includes administering the employee performance review and performance planning process; administering the labor memorandums of understanding, attracting and retaining talented employees through a competitive pay and benefit structure, and providing training programs to ensure Central San managers, supervisors and employees have the tools and knowledge to contribute to a high-performance organization.

Information Technology

OVERVIEW

This Division supports all computer hardware, software, and telecommunications needs at Central San, and assists with improvement and automation of Central San business processes.

Fiscal Year 2017-18 Accomplishments

This Division had many accomplishments related to the following Central San Goals:

Goal	Accomplishment
Goal 1 – Provide Exceptional Customer Service	<ul style="list-style-type: none"> ● Received Municipal Information Systems Association of California (MISAC) Award of Excellence for the first time. This award demonstrates that Central San has implemented best practices across the spectrum of IT services. ● Upgraded various software to latest versions including LabWorks software, WonderWare and Dynac server software, CityWorks tablets, SunGard ERP and AutoCAD software. ● Implemented expanded network monitoring tools through Solar Winds. ● Closed 2,242 help desk tickets with 98% of survey responses rating the service level as 5 stars. ● Maintained the network with better than 99.9% uptime overall.
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	<ul style="list-style-type: none"> ● Fully implemented live replication of major business systems between the Martinez campus and the Collection System Operations (CSO) division as well as our new Rocklin co-location facility. ● Automated timekeeping and leave requests with Intellitime software to eliminate manual paper methods. ● Implemented new public facing web site technology to make it easier to update, facilitate mobile devices, make our website more engaging and to transform the way we interact with our customers. ● Rolled out over 30 new iPads with CityWorks for Treatment Plant staff. ● Assisted in the acquisition of a new automatic vehicle location system for all Central San vehicles. ● Began live-streaming of Board meetings in the lobby and on web-accessible devices. ● Worked with Asset Management Division to roll out IT Pipes video inspection system. ● Worked with Secretary of the District staff to acquire and implement Novus Agenda to automate the agenda management process. ● Detected and blocked over 3,200 attacks on our internet, 9,000 malware attempts via web searches and 2,500 viruses through our email system.

Fiscal Year 2018-19 Key Metrics

Metric	Target
Information system outages affecting normal business operations	100% uptime
Data backup and recovery	Zero Lost Data
Operating expenditures as a percentage of operating budget	Greater than 95%
Percentage of performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Build External Customer Relationships and Awareness	Invest in business process changes and technologies to effectively increase access to District information and promote customer care, convenience, and self-service.	Customer Satisfaction
	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
		Cultivate employees' understanding of District operations and their role in the agency's success.	Employee and Leadership Development, Enterprise Resiliency
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
Goal 2 – Strive to Meet Regulatory Requirements	Comply with All Federal, State, and Local Regulations Related to District Administration	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Manage Costs	Re-engineer business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization, Enterprise Resiliency
Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce	Enhance Relationship with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development
Goal 5 – Maintain a Reliable Infrastructure	Protect District Personnel and Assets from Threats and Emergencies	Enhance capability to mitigate, prepare for, respond to, and recover from emergencies.	Enterprise Resiliency

		Evaluate and implement appropriate improvements to the Security Program to meet new or evolving threats.	Enterprise Resiliency
	Facilitate Long-Term Capital Renewal and Replacement	Implement the Program Management Information System (PMIS).	Operational Optimization, Infrastructure Strategy and Performance
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Select and implement new Enterprise Resource Planning (ERP) system and integrate with linked systems.	Operational Optimization
		Expand and improve the use of worthwhile mobile computing and communication technologies.	Operational Optimization
		Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$1,393,793	\$1,382,528	\$1,508,704	\$1,381,600	\$1,569,307	\$187,707	14%	\$60,603	4%
Employee Benefits	\$1,195,703	\$1,186,753	\$1,219,553	\$1,145,974	\$729,744	(\$416,230)	-36%	(\$489,809)	-40%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$509,668	\$509,668	100%	\$509,668	100%
Utilities	\$95,040	\$116,383	\$146,440	\$125,900	\$129,800	\$3,900	3%	(\$16,640)	-11%
Repairs & Maintenance	\$767,650	\$698,850	\$886,750	\$888,700	\$1,047,090	\$158,390	18%	\$160,340	18%
Outside Services	\$196,000	\$91,005	\$125,000	\$125,000	\$110,000	(\$15,000)	-12%	(\$15,000)	-12%
Materials & Supplies	\$10,200	\$21,061	\$6,200	\$6,200	\$6,200	\$0	0%	\$0	0%
Other Expenses	\$42,565	\$31,812	\$45,935	\$30,961	\$35,525	\$4,564	15%	(\$10,410)	-23%
Total	\$3,700,951	\$3,528,391	\$3,938,582	\$3,704,335	\$4,137,334	\$432,999	12%	\$198,752	5%

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Personnel Requirements

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Information Technology Analyst	1.00	1.00	0.00
Information Technology Manager	1.00	1.00	1.00
Information Technology Supervisor	2.00	2.00	2.00
Programmer Analyst	0.00	1.00	0.00
Project Manager/Business Analyst	1.00	1.00	1.00
System Administrator	2.00	2.00	2.00
Technical Support Analyst	3.00	3.00	3.00
Information Technology Analyst II	0.00	0.00	2.00
Total	10.00	11.00	11.00

Significant Budget Modifications

The Information Technology (IT) Division Operating Budget for FY 2018-19 is \$4.1 million, a \$0.2 million or 5% increase over the \$3.9 million budget in FY 2017-18. The increase in Salaries & Wages include the agency-wide cost of living adjustment and increases due to step advancements. The Repairs & Maintenance increase is due to movement of plant control software into the IT budget, costs for new software maintenance (including NovusAgenda, eBuilder Program Management Information System), and increases to annual support maintenance contracts. The Outside Services decrease is due to changes in network consultant utilization. The Other Expenses decreased is due to an off-site storage service no longer being used in FY 2018-19.

Purchasing and Materials Services

OVERVIEW

This Division provides the necessary materials, supplies, equipment, services and information to support Central San’s operations. The Division is responsible for contracting and procurement for all Central San departments (except construction contracts), and ensuring compliance with applicable federal, state and local regulations. Central San’s warehouse inventories, receives, and distributes supplies, materials and equipment to all departments in addition to providing inventory control analysis and surplus disposition.

Fiscal Year 2017-18 Accomplishments

This Division had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
<p>Goal 3 – Be a Fiscally Sound and Effective Water Sector Utility</p>	<ul style="list-style-type: none"> • Developed high level flowchart outlining the different types of procurements at the District and the associated processes and approvals with each type. • Leveraged spend through annual requirements contracts for 40% of the total procurement spend for goods and services, not including construction, construction related professional services, and utility payments. This improved efficiency, shortened the procurement processing time, and provided savings through negotiated pricing contracts. • Simplified requisition approval process from 18 different levels of approval down to three levels of approval based on position to ensure consistency and efficiency in the requisition approval process. • Implemented a work order tracking system of all requisitions, including a customer satisfaction survey for each purchasing transaction. • Promoted open competition and equal opportunity for qualified suppliers and service providers by successfully soliciting and awarding high-level service and commodity-based contracts, such as financial advisory services, timekeeping system, Pipeline newsletter printing and mail processing services, core network switch upgrade, vibration monitoring and reporting, repairing seeps in soil cap, furnishing and installing water softener system, repairing furnace #2 refractory, pharmaceutical collection program, solids residence time (SRT) controller, fire extinguisher inspection and maintenance, auditing services, vehicle wraps for Central San logos, and equipment budget items. • Implemented automatic notifications of upcoming expiring contracts to project managers to ensure contract renewals are done in a timely manner. • Provided ongoing administration of the procurement card program, including oversight, problem solving, reviewing, updating, and training. Also, received procurement card audit and made improvements in areas identified. • Managed an inventory of approximately \$2.2 million at three locations, including ordering, storing, issuing, receiving and delivering. • Completed cycle counts for 753 “A” items counted twice, 1,311 “B” items counted twice, and 3,200 “C” items counted once while maintaining a 95% count accuracy rate.
<p>Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability</p>	<ul style="list-style-type: none"> • Received the Achievement of Excellence in Procurement (AEP) Award recognizing organizational excellence in public purchasing for the 7th consecutive year. • Implemented RFP evaluations online, replacing a manual, labor-intensive process with a streamlined and fully automated process for evaluating proposals online and creating reports to substantiate the evaluation committee’s recommendation for award.

Fiscal Year 2018-19 Key Metrics

Metric	Target
Purchasing internal customer survey rating of satisfactory or better	Greater or equal to 70%
Difference in inventory value in Purchasing database vs. value submitted to Accounting	Less than 1%
Accuracy of physical inventory count vs. book value	Greater or equal to 95%
Operating expenditures as a percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Build External Customer Relationships and Awareness	Invest in business process changes and technologies to effectively increase access to District information and promote customer care, convenience, and self-service.	Customer Satisfaction
	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
		Cultivate employees’ understanding of District operations and their role in the agency’s success.	Employee and Leadership Development, Enterprise Resiliency
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
Goal 2 – Strive to Meet Regulatory Requirements	Comply with All Federal, State, and Local Regulations Related to District Administration	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Manage Costs	Re-engineer business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization, Enterprise Resiliency
Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce	Enhance Relationship with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$857,600	\$837,899	\$1,001,079	\$843,900	\$1,058,883	\$214,983	25%	\$57,804	6%
Employee Benefits	\$782,607	\$700,280	\$834,953	\$785,474	\$508,940	(\$276,534)	-35%	(\$326,013)	-39%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$346,563	\$346,563	100%	\$346,563	100%
Repairs & Maintenance	\$23,000	\$10,382	\$23,000	\$23,000	\$23,000	\$0	0%	\$0	0%
Professional & Legal Services	\$35,000	\$3,828	\$35,000	\$20,000	\$35,000	\$15,000	75%	\$0	0%
Outside Services	\$29,000	\$5,135	\$29,000	\$29,000	\$49,000	\$20,000	69%	\$20,000	69%
Materials & Supplies	\$14,000	\$17,419	\$14,000	\$14,000	\$14,000	\$0	0%	\$0	0%
Other Expenses	\$21,900	\$2,490	\$21,900	\$16,900	\$15,900	(\$1,000)	-6%	(\$6,000)	-27%
Total	\$1,763,107	\$1,577,434	\$1,958,932	\$1,732,274	\$2,051,286	\$319,012	18%	\$92,354	5%

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Personnel Requirements

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Materials Coordinator	2.00	2.00	1.00
Materials Services Supervisor	1.00	1.00	1.00
Purchasing and Materials Manager	1.00	1.00	1.00
Senior Buyer	3.00	3.00	3.00
Senior Materials Coordinator	1.00	1.00	2.00
Contracts Analyst	0.00	0.00	1.00
Total	8.00	8.00	9.00

Limited Duration Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Warehouse Summer Student	0.00	1.00	1.00
Total	0.00	1.00	1.00

Significant Budget Modifications

The Purchasing and Materials Services Division Operating Budget for FY 2018-19 is \$2.1 million, a \$0.1 million or 5% increase over the FY \$2.0 million budget in FY 2017-18. The increase in Salaries & Wages includes the agency wide cost-of-living adjustment, the movement of a position from the Finance Division (an Accountant position will be repurposed as a Contracts Analyst to support the increase in contracting related to higher capital spending in the coming years), and the promotion of a Materials Coordinator to Senior Materials Coordinator. The Division also expects to utilize a General Manager-transition position to provide overlap for potential retirements within the unit and ensure optimal transition for succession planning.

The Outside Services increase is due to a special projects consultant to assist the Division in identifying and implementing performance improvements. The Other Expenses decrease is due to a reduction in professional expense reimbursements.

The Division is helping to address the overall challenges facing Central San by working to ensure there is sufficient procurement processing capacity in light of increased contracting for infrastructure needs. This includes the new Contract Analyst position; working to implement the new Enterprise Resource Planning (ERP) system which is anticipated to significantly improve contracts management and automated procurement functionality; and providing staff with better tools for productivity and internal customer service. Purchasing, along with Capital Projects, will also work to adopt the Uniform Public Construction Cost Accounting Act. This was approved by the Board in May 2018, and will be implemented on September 1, 2018. This is expected to provide for a streamlined contracting process for smaller projects and needed work.

Risk Management

OVERVIEW

This Division protects Central San from loss or damage to its personnel and assets. It manages Workers’ Compensation, liability claims, security programs, insurance procurement, self-insurance funding, contract and insurance review, litigation support, and Central San’s Emergency Preparedness and Response Programs.

Fiscal Year 2017-18 Accomplishments

This Division had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
Goal 3 – Be a Fiscally Sound and Effective Water Sector Utility	<ul style="list-style-type: none"> • Prepared and presented Risk Management Annual Report to the Board. • Provided Temporary Modified Duty to 100% of employees with occupational injuries. • Received reimbursement from FEMA & CalOES for the January 2017 Winter Storms.
Goal 5 – Maintain a Reliable Infrastructure	<ul style="list-style-type: none"> • Initiated work on the Security Assessment Master Plan. • Completed 5-year update of the Local Hazard Mitigation Plan. • Updated various security policies. • Established the Security Coordination Committee. • Coordinated biannual Risk Control Audit of District Operations and Practices. • Updated the Emergency Operations Plan. • Completed Vital Records section of Continuity Plan. • Prepared and presented Emergency Management Annual Report to the Board.

Fiscal Year 2018-19 Key Metrics

Metric	Target
Workers’ compensation experience modifier	Less than 1.0
Temporary modified duty provided (Return to Work program)	Greater than 95% of recordable injuries
Operating expenditures as a percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
		Cultivate employees' understanding of District operations and their role in the agency's success.	Employee and Leadership Development, Enterprise Resiliency
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
		Continue to participate in CaWARN to provide mutual aid to sister agencies.	Community Sustainability
Goal 2 – Strive to Meet Regulatory Requirements	Comply with All Federal, State, and Local Regulations Related to District Administration	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Manage Costs	Evaluate and apply risk management practices to minimize loss.	Enterprise Resiliency
		Re-engineer business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization, Enterprise Resiliency
Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce	Enhance Relationship with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development
Goal 5 – Maintain a Reliable Infrastructure	Protect District Personnel and Assets from Threats and Emergencies	Enhance capability to mitigate, prepare for, respond to, and recover from emergencies.	Enterprise Resiliency
		Evaluate and implement appropriate improvements to the Security Program to meet new or evolving threats.	Enterprise Resiliency
Goal 6 - Embrace Technology, Innovation, and Environmental Sustainability	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$238,944	\$210,225	\$240,149	\$144,200	\$262,093	\$117,893	82%	\$21,944	9%
Employee Benefits	\$228,392	\$207,251	\$196,621	\$184,861	\$101,561	(\$83,300)	-45%	(\$95,060)	-48%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$87,304	\$87,304	100%	\$87,304	100%
Repairs & Maintenance	\$35,000	\$4,572	\$57,500	\$15,500	\$42,500	\$27,000	174%	(\$15,000)	-26%
Professional & Legal Services	\$61,800	\$40,806	\$28,800	\$19,000	\$26,350	\$7,350	39%	(\$2,450)	-9%
Outside Services	\$408,000	\$267,565	\$423,000	\$328,500	\$453,500	\$125,000	38%	\$30,500	7%
Self-Insurance Expense	\$920,000	\$920,000	\$585,000	\$585,000	\$779,500	\$194,500	33%	\$194,500	33%
Materials & Supplies	\$103,000	\$5,610	\$59,000	\$53,000	\$53,000	\$0	0%	(\$6,000)	-10%
Other Expenses	\$13,650	\$12,076	\$14,650	\$10,015	\$17,500	\$7,485	75%	\$2,850	19%
Total	\$2,008,786	\$1,668,104	\$1,604,720	\$1,340,076	\$1,823,308	\$483,232	36%	\$218,588	14%

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Personnel Requirements

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Risk Management Administrator	1.00	1.00	1.00
Risk Management Specialist	0.00	0.00	1.00
Risk Management Analyst	0.00	1.00	0.00
Total	1.00	2.00	2.00

Significant Budget Modifications

The Risk Management Operating Budget for FY 2018-19 is \$1.8 million, a \$0.2 million or 14% increase over the \$1.6 million budget in FY 2017-18. Salaries & Wages include the agency-wide cost of living adjustment and the reclassification of a Risk Management Technician to a Risk Management Specialist.

Increases in the FY 2018-19 budget include Outside Service, for specialized consulting service to enhance the Emergency Operations Plan and the Continuity of Operations Plan, and Self-insurance, to replenish the self-insurance fund to the required Reserve Policy target. The Repairs & Maintenance decrease is due to a transfer of camera repair expenses to the Information Technology division.

The recent fires, floods, and mudslides in California demonstrated the need for properly equipped and maintained emergency communications systems. Materials & Supplies includes funds to purchase additional interoperable radios for vehicles and operations personnel. Our goal is to have sufficient radios for an event requiring both emergency response and continuity functions.

Risk Management will expand its services in FY 2018-19 by making progress on an enterprise risk management program that uses a continuously updated risk inventory as a foundation for managing risks. This risk inventory will be used in Central San’s internal audit program, and in reporting key risks and mitigation strategies to the Board. Risk Management assists Central San in managing risks (broadly defined as anything that can impede Central San from meeting its strategic goals) effectively. Building

this program's capacity will be an important tool in helping Central San mitigate risks as the agency ramps up the level of capital spending in the coming years, and in meeting evolving regulatory requirements. Risk Management helps Central San meet these and other challenges of the environment in which the agency operates.

Office of the General Manager and Office of the Secretary of the District

Office of the General Manager - Overview

The primary mission of the Office of the General Manager is to work with the Board to establish policies and procedures, as well as the overall goals and Strategic Plan of Central San. The General Manager reports directly to the Board and provides general oversight to all Central San operations, interagency relations, legislative activities, communications, and the Strategic Plan.

Office of the General Manager - Fiscal Year 2017-18 Accomplishments and Fiscal Year 2018-19 Strategic Initiatives

This office provides direction, support and resources to Departments to effectively and efficiently accomplish the Mission, Vision and Goals of Central San. The accomplishments and FY 2018-19 Strategic Initiatives for Central San are embodied in each of the individual Divisions and programs. Highlights of Central San's accomplishments are included in the General Manager's message at the beginning of this book. Central San also documented major efficiency and operational improvements in a report entitled "Innovations and Achievements" and documented over 200 standard operating procedures District-wide.

Office of the Secretary of the District - Overview

The Secretary of the District reports directly to the Board and provides administrative support to the five elected Board Members. The Office of the Secretary of the District manages the Board and Committee meeting processes, including the preparation and distribution of agendas and minutes and the publication of notices of public hearings. It coordinates compliance with Fair Political Practices Commission regulations and the Brown Act, receives legal claims against Central San, coordinates elections with the County Elections Office, and arranges Ethics training and Brown Act training for the Board and staff. It also manages Central San's Records Management Program and responds to Public Records Act requests.

Office of the Secretary of the District

Fiscal Year 2017-18 Accomplishments

The Office of the Secretary of the District had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
Goal 1 – Provide Exceptional Customer Service	<ul style="list-style-type: none"> • Successfully transitioned new Secretary of the District upon retirement of prior Secretary of the District. • Coordinated all regular and special meetings of Board of Directors and Standing Board Committees, including publishing all agenda packets in a timely manner. • Coordinated Board Self-Assessment Workshop and annual review of Board Compensation and Benefits. • Facilitated adoption of the following new Board policies: Debt Management and Continuing Disclosure, Cost of Service Studies, Use of Temporary Employees, Reimbursement of Toastmasters Dues, and Conducting District Business Using Personal Accounts and Devices. • Coordinated biennial review of existing Board policies and facilitated amendments to the following Board policies: Board Ethics and Conduct; Standing Committee Protocols, Guidelines and Charters; Fiscal Reserves; and Investment Policy. • Facilitated newly mandated biennial Sexual Harassment Prevention Training for Board Members.
Goal 3 – Be a Fiscally Sound and Effective Water Sector Utility	<ul style="list-style-type: none"> • Retained a consultant to work with staff to upgrade the Master Records Retention Schedule and lay foundation for management of electronic records
Goal 4 – Develop and Retain a Highly Trained and Innovative Workforce	<ul style="list-style-type: none"> • Conducted employee workshop on the Brown Act/Ethics Compliance. • Updated “Guide to the Board Meeting Process” for use by staff.
Goal 6 – Embrace Technology, Innovation and Environmental Sustainability	<ul style="list-style-type: none"> • Implemented NovusAgenda management software for Board and Committee agendas.

Fiscal Year 2018-19 Key Metrics

Metric	Target
Biennial review of all existing Board policies	100%
Operating expenditures as a percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Build External Customer Relationships and Awareness	Provide high-quality customer service.	Customer Satisfaction
		Invest in business process changes and technologies to effectively increase access to District information and promote customer care, convenience, and self-service.	Customer Satisfaction
		Increase customer understanding and support for key District initiatives, programs, and services.	Stakeholder Understanding and Support
	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
		Cultivate employees’ understanding of District operations and their role in the agency’s success.	Customer Satisfaction
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
Goal 2 – Strive to Meet Regulatory Requirements	Comply with All Federal, State, and Local Regulations Related to District Administration	Review all existing Board Policies every two years to ensure relevancy.	Enterprise Resiliency
		Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce	Enhance Relationship with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$1,502,326	\$1,546,723	\$1,366,016	\$1,279,600	\$1,238,422	(\$41,178)	-3%	(\$127,594)	-9%
Employee Benefits	\$967,263	\$1,517,991	\$619,571	\$992,286	\$91,255	(\$901,031)	-91%	(\$528,316)	-85%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$333,210	\$333,210	100%	\$333,210	100%
Director Fees & Expenses	\$168,555	\$136,316	\$168,631	\$150,881	\$168,494	\$17,613	12%	(\$137)	0%
Repairs & Maintenance	\$10,800	\$7,763	\$10,800	\$10,400	\$14,300	\$3,900	38%	\$3,500	32%
Professional & Legal Services	\$145,000	\$168,886	\$150,000	\$150,000	\$175,000	\$25,000	17%	\$25,000	17%
Outside Services	\$246,000	\$87,526	\$146,000	\$133,000	\$150,000	\$17,000	13%	\$4,000	3%
Materials & Supplies	\$20,150	\$15,612	\$20,150	\$16,150	\$20,150	\$4,000	25%	\$0	0%
Other Expenses	\$559,905	\$269,151	\$148,325	\$108,325	\$388,430	\$280,105	259%	\$240,105	162%
Total	\$3,619,999	\$3,749,968	\$2,629,493	\$2,840,642	\$2,579,261	(\$261,381)	-9%	(\$50,232)	-2%

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Personnel Requirements

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Administrative Services Supervisor	1.00	1.00	1.00
Administrative Technician	0.00	0.00	1.00
Assistant to the Secretary of the District	1.00	1.00	1.00
Director of Finance & Administration	1.00	1.00	1.00
Executive Assistant	1.00	1.00	1.00
General Manager	1.00	1.00	1.00
Management Analyst	0.00	1.00	1.00
Secretary of the District	1.00	1.00	1.00
Senior Administrative Assistant	1.00	1.00	1.00
Senior Administrative Technician	2.00	3.00	2.00
Total	9.00	11.00	11.00

Limited Duration Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Clerical Summer Student	1.00	1.00	1.00
Total	1.00	1.00	1.00

Significant Budget Modifications

The Office of the General Manager/Office of the Secretary of the District's Operating Budget for FY 2018-19 is \$2.6 million, which remained flat compared to the \$2.6 million budget in FY 2017-18. Salaries & Wages include the agency-wide cost of living adjustment, offset by reductions due to staff turnover and lower costs for newer employees. Other drivers include an update of Central San's Record Retention Schedule and Procedures, resulting in an increase in Professional & Legal Services, and Fall 2018 election expenses resulting in an increase in Other Expenses.

The Office of the General Manager, budgeted in this division, leads the effort to address all of the key priorities facing Central San, as described in the General Manager's budget message. The office of the Secretary of the District assures the ongoing flow of information to and from the Board, facilitating policy direction and oversight.

Engineering and Technical Services Department



The Engineering and Technical Services Department consists of three Divisions that report to the Director of Engineering and Technical Services. The primary functions of the Engineering and Technical Services Department are the planning, design, construction and/or rehabilitation of treatment plant, collection system, and recycled water infrastructure. The Department also handles development services, including: right-of-way, property management, inspection, mainline plan review, and program management in resource recovery. Divisions within the department are responsible for environmental compliance monitoring of industrial businesses; regulatory compliance and permit monitoring; laboratory analysis; and management of the Household Hazardous Waste Collection Facility.

The Divisions that comprise this Department include:

- Capital Projects
- Environmental and Regulatory Compliance
- Planning and Development Services

Capital Projects Division

OVERVIEW

This Division conducts and manages the preliminary design, final design, public bidding, and construction management of projects to improve or rehabilitate our wastewater treatment plant, pumping stations, collection system pipelines, general facilities, safety, and recycled water infrastructure projects. In addition, this Division works as one of the primary engineering resources at Central San.

Fiscal Year 2017-18 Accomplishments

This Division had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
Goal 1 – Provide Exceptional Customer Service	<ul style="list-style-type: none"> ● Received greater than 95% customer satisfactory rating, including: 100% satisfactory customer rating on the Lafayette Sewer Renovations – Phase 11, 98% satisfactory customer rating on the Walnut Creek Sewer Renovations – Phase 11, 95% satisfactory customer rating on the Martinez Sewer Renovations – Phase 5, 80% satisfactory customer rating on the Pleasant Hill – Grayson Creek Trunk Sewer. ● Coordinated and performed emergency sewer repairs on Miner Road in Orinda, a sewer repair near the Willows Shopping Center in Concord, and a sinkhole repair at St. Mary’s College in Moraga.
Goal 5 – Maintain a Reliable Infrastructure	<ul style="list-style-type: none"> ● Completed construction of the Pleasant Hill-Grayson Creek Trunk Sewer Project, whose scope of work included installation of 10,000 feet of trunk sewer. ● Replaced approximately five miles of various sewer mains (primarily 6-inch vitrified clay sewers) with new 8-inch sewers in Lafayette, Martinez, Walnut Creek, and several locations within unincorporated Contra Costa County. ● Awarded five projects in the Collection System Program, totaling up to seven miles of new sewers for Alamo, Lafayette, Moraga, Orinda, Walnut Creek, and several other locations within unincorporated Contra Costa County. ● Initiated design of several collection system sewer replacement projects in Lafayette, Orinda, Walnut Creek, and other locations throughout the service area. ● Completed the predesign on the Pumping Station Upgrades Project, which includes the Moraga, Orinda Crossroads, and FlushKleen Pumping Stations. ● Completed construction of two wastewater treatment plant projects: 1. Pump and Blower Building Seismic Upgrades, which retrofitted the Pump and Blower Building by adding shear walls and steel braces to strengthen the building to current seismic code standards and support employee safety; and 2. The Co-Gen Optimization Project, which included installation of a carbon monoxide catalyst and evaporative cooling system to the gas turbine at the Solids Conditioning Building.
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	<ul style="list-style-type: none"> ● Completed construction of the Co-Gen Energy Optimization Project to increase energy efficiency and reduce emissions for the treatment plant. ● Supported and completed a pilot-scale facility to test newer air pollution control technology at the treatment plant. ● Supported the BioEnergy project, and other thermal solids energy production projects such as the Hypowers pilot project to produce biocrude from solids.

Fiscal Year 2018-19 Key Metrics

Metric	Target
Median customer satisfaction rating on construction projects	Greater than 95%
Miles of pipeline replaced	Greater than 0.5% of assets (7.6 miles per year for the next five years starting in FYs 2018-20)
Capital expenditures as a percentage of capital budgeted cash flow including carry forward	Greater than 90%
Operating expenditures as a percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Build External Customer Relationships and Awareness	Provide high-quality customer service.	Customer Satisfaction
	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
		Cultivate employees' understanding of District operations and their role in the agency's success.	Employee and Leadership Development, Enterprise Resiliency
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
		Minimize impacts to residents and businesses during design and construction of projects.	Customer Satisfaction
Goal 2 – Strive to Meet Regulatory Requirements	Comply with All Federal, State, and Local Regulations Related to District Administration	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Manage Costs	Review business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization, Enterprise Resiliency
Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce	Enhance Relationship with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development

Goal	Strategy	Initiative	EUM Attribute
Goal 5 – Maintain a Reliable Infrastructure	Manage Assets Optimally Throughout Their Lifecycle	Update the Ten -Year Capital Improvement Program (CIP) consistent with recommendations of the Comprehensive Wastewater Master Plan and Asset Management.	Infrastructure Strategy and Performance
	Facilitate Long-Term Capital Renewal and Replacement	Integrate data from the Asset Management Program into the analysis of long-term Capital Improvement needs based on the Ten -Year CIP.	Infrastructure Strategy and Performance
		Complete the implementation of the Program Management Information System (PMIS).	Operational Optimization, Infrastructure Strategy and Performance
	Protect District Personnel and Assets from Threats and Emergencies	Evaluate and implement appropriate improvements to the Security Program to meet new or evolving threats.	Enterprise Resiliency
		Improve the potable water system and enhance water quality testing procedures.	Product Quality
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$1,879,280	\$1,679,199	\$1,887,522	\$1,643,100	\$1,959,112	\$316,012	19%	\$71,590	4%
Employee Benefits	(\$887,526)	(\$1,053,380)	(\$1,279,905)	(\$1,347,824)	(\$1,851,611)	(\$503,787)	37%	(\$571,706)	45%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$585,833	\$585,833	100%	\$585,833	100%
Utilities	\$24,000	\$15,737	\$21,600	\$22,387	\$22,800	\$413	2%	\$1,200	6%
Repairs & Maintenance	\$19,500	\$8,862	\$3,500	\$3,000	\$3,000	\$0	0%	(\$500)	-14%
Outside Services	\$73,225	\$32,160	\$44,725	\$34,600	\$41,100	\$6,500	19%	(\$3,625)	-8%
Materials & Supplies	\$32,300	\$23,107	\$30,700	\$27,559	\$28,700	\$1,141	4%	(\$2,000)	-7%
Other Expenses	\$59,125	\$26,205	\$58,280	\$40,800	\$46,920	\$6,120	15%	(\$11,360)	-19%
Total	\$1,199,904	\$731,890	\$766,422	\$423,622	\$835,854	\$412,232	97%	\$69,432	9%

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Note: The staff in this Division are budgeted with the Capital Improvements Program. As a result, 98% of their combined salary and benefit expenses are paid for by the projects identified in the Capital Improvement Budget. The amounts above are net of the capitalized administrative overhead transfer to the Sewer Construction Fund.

Personnel Requirements

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Administrative Assistant	1.00	2.00	2.00
Assistant Engineer	8.00	8.00	7.00
Assistant Land Surveyor	2.00	2.00	2.00
Associate Engineer	5.00	7.00	7.00
Capital Projects Division Manager	1.00	1.00	1.00
Engineering Assistant III	1.00	1.00	1.00
Engineering Technician III	0.00	3.00	3.00
Land Surveyor	3.00	1.00	1.00
Senior Engineer	1.00	2.00	3.00
Senior Engineering Assistant	2.00	1.00	1.00
Total	25.00	28.00	28.00
Limited Duration Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Summer Students	4.00	4.00	3.00
Interns	6.00	3.00	3.00
Total	10.00	7.00	6.00

Significant Budget Modifications

The Capital Projects Operating Budget for FY 2018-19 is \$0.8 million, a \$70K or 9% increase over the \$0.7 million budget in FY 2017-18. Salaries & Wages include the agency-wide cost of living adjustment and a position changed from an Assistant Engineer to a Senior Engineer. The Outside Services decrease is due to work being performed internally by Central San staff and the Other Expenses decrease is due to the inclusion of a non-usage allowance for tuition and professional expense reimbursement in FY 2018-19.

The Capital Projects Division leads Central San’s efforts in maintaining and upgrading aging infrastructure, as well as implementing projects driven by the need to meet evolving regulatory requirements. The Capital Projects Division will also oversee projects related to other strategic priorities of Central San, including playing a role in maintaining a sustainable water supply, and projects related to resource recovery. The Division is building its capacities to effectively administer a significantly larger Capital Improvements Program in future years. This includes implementing a program management information system, using outside resources to supplement Central San staff, and with Purchasing, working to implement the Uniform Public Construction Cost Accounting Act on September 1, 2018.

As noted in the footnote to the Budget Overview table, most of the cost of the staff in this division are charged to the capital projects the group oversees and manage.

Environmental and Regulatory Compliance Division

OVERVIEW

This Division oversees and ensures that Central San activities and operations are in compliance with applicable federal, state, and local environmental laws, regulations, and policies. The Division ensures Central San’s permitted businesses and industrial customers comply with all applicable requirements to protect the environment as well as Central San’s assets; manages the Household Hazardous Waste Collection Program and Residential Recycled Water Fill Station; receives and interprets laboratory data and applies results to regulatory requirements, ensuring the treatment plant’s effluent meets all water quality standards; evaluates treatment plant operations to ensure compliance with all air pollution control standards; evaluates the effectiveness of regulatory compliance programs; develops and implements new programs as mandated by legislation and/or policy; monitors and analyzes legislation and new regulations that impact regulatory compliance; and represents Central San before boards, political bodies, committees, and the general public.

Fiscal Year 2017-18 Accomplishments

This Division had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
Goal 2 – Strive to Meet All Regulatory Requirements	<ul style="list-style-type: none"> • Achieved 20th year of continuous compliance with all National Pollutant Discharge Elimination System (NPDES) permit requirements. • Completed all NPDES-required analysis, monitoring, and reports to meet the Regional Water Quality Control Board (individual NPDES Permit, Nutrient Watershed Permit, PCB and Mercury Watershed Permit) requirements. • Completed all required analysis, monitoring, emissions testing, and reports to satisfy Title V Permit requirements. • Prepared the 2017 greenhouse gas (GHG) inventory and completed third-party inventory verification to meet the California Air Resource Board regulations. • Successfully maintained 2017 anthropogenic greenhouse gas (GHG) emissions below the Cap and Trade inclusion threshold. • Completed all required Pollution Prevention and Pretreatment Reports.
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	<ul style="list-style-type: none"> • 42,800 visits to the Household Hazardous Waste Collection Facility and Residential Recycled Water Fill Station by residents, small businesses, reuse customers, retail partners, and residential fill station users (through March 2018). • Managed complex emissions and liquid testing for the award-winning Wet Scrubber System Pilot Plant for proof of performance and future design parameters. • Completed liquid testing for the wet scrubber system. • Evaluated soil remedial alternatives for contaminated soil at the Surcharge Fill Area. • Implemented use of tablets in the field for Environmental Compliance Inspections.

Fiscal Year 2018-19 Key Metrics

Metric	Target
National Pollutant Discharge Elimination System (NPDES) compliance	Zero violations
Title V compliance	Zero violations
Recycled Water Title 22 compliance	Zero violations
Anthropogenic GHG emissions	Less than 25,000 metric tons CO ₂ e
Annual Environmental Compliance inspections and permitting completed on time	100%

Metric	Target
Household Hazardous Waste (HHW) management compliance	Zero violations
Potable water system monthly testing meets all water quality standards	100%
Operating expenditures as percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Build External Customer Relationships and Awareness	Provide high-quality customer service.	Customer Satisfaction
	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
		Cultivate employees’ understanding of District operations and their role in the agency’s success.	Employee and Leadership Development, Enterprise Resiliency
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
Goal 2 – Strive to Meet Regulatory Requirements	Strive to Achieve 100% Permit Compliance in Air, Water, Land, and Other Regulations	Meet existing regulations.	Product Quality
		Foster relationships with regulatory agencies.	Stakeholder Understanding and Support
		Track proposed and pending legislation or regulatory changes; plan for possible implementations.	Stakeholder Understanding and Support
		Actively manage GHG emissions in the most cost-effective and responsible manner.	Community Sustainability
	Comply with All Federal, State, and Local Regulations Related to District Administration	Evaluate existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Manage Costs	Evaluate business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization, Enterprise Resiliency

Goal	Strategy	Initiative	EUM Attribute
Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce	Enhance Relationship with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development
Goal 5 – Maintain a Reliable Infrastructure	Protect District Personnel and Assets from Threats and Emergencies	Improve and enhance the potable water system water quality testing procedures.	Product Quality
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$3,412,647	\$3,321,204	\$3,542,344	\$3,495,500	\$3,594,027	\$98,527	3%	\$51,683	1%
Employee Benefits	\$2,672,956	\$2,631,201	\$2,670,133	\$2,598,401	\$1,480,320	(\$1,118,081)	-43%	(\$1,189,813)	-45%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$1,140,247	\$1,140,247	100%	\$1,140,247	100%
Utilities	\$32,700	\$14,368	\$24,300	\$13,500	\$13,500	\$0	0%	(\$10,800)	-44%
Repairs & Maintenance	\$106,500	\$68,400	\$110,000	\$81,541	\$109,000	\$27,459	34%	(\$1,000)	-1%
Hauling & Disposal	\$423,000	\$481,909	\$474,925	\$494,383	\$538,425	\$44,042	9%	\$63,500	13%
Professional & Legal Services	\$6,000	\$0	\$6,000	\$1,000	\$6,000	\$5,000	500%	\$0	0%
Outside Services	\$859,200	\$832,577	\$570,500	\$480,200	\$594,500	\$114,300	24%	\$24,000	4%
Materials & Supplies	\$286,700	\$292,373	\$300,200	\$299,300	\$308,500	\$9,200	3%	\$8,300	3%
Other Expenses	\$133,639	\$386,941	\$147,302	\$123,026	\$150,880	\$27,854	23%	\$3,578	2%
Other Expenses-BACWA	\$310,000	\$0	\$605,816	\$403,586	\$462,000	\$58,414	14%	(\$143,816)	-24%
Total	\$8,243,342	\$8,028,974	\$8,451,520	\$7,990,437	\$8,397,399	\$406,962	5%	(\$54,121)	-1%

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Personnel Requirements

Regular Status Employees	FY 2016-17 Actual YE	FY 2017-18	FY 2018-19
Administrative Assistant	1.00	1.00	1.00
Assistant Engineer	2.00	2.00	2.00
Associate Engineer	1.00	1.00	1.00
Chemist I/II	4.00	5.00	5.00
Chemist III	1.00	1.00	1.00
Environmental and Regulatory Compliance Division Manager	1.00	1.00	1.00
Environmental Compliance Inspector I/II	6.00	6.00	6.00
Environmental Compliance Superintendent	1.00	1.00	1.00
Household Hazardous Waste Supervisor	1.00	1.00	1.00
Household Hazardous Waste Technician I/II	3.00	3.00	3.00
Laboratory Superintendent	1.00	1.00	1.00
Senior Chemist	1.00	1.00	1.00
Senior Engineer	1.00	1.00	1.00
Senior Environmental Compliance Inspector	2.00	2.00	2.00
Senior Household Hazardous Waste Technician	2.00	2.00	2.00
Total	28.00	29.00	29.00

Limited Duration Employees	FY 2016-17 Actual YE	FY 2017-18	FY 2018-19
Laboratory Assistant Summer Student	1.00	2.00	2.00
Intern	1.00	1.50	2.00
Total	2.00	3.50	4.00

Significant Budget Modifications

The Environmental and Regulatory Compliance Operating Budget for FY 2018-19 is \$8.4 million, a \$50K or 1% decrease over the \$8.5 million budget in FY 2017-18. Salaries & Wages include the agency-wide cost of living adjustment, offset by reductions due to staff turnover and lower costs for newer employees. Other changes include a decrease in Utilities due to lower telephone expenses and lower BACWA-related expenses due to lack of need for additional funding for nutrient studies. Those decreases were offset by increases in Outside Services for increased temporary staff expenses at the Household Hazardous Waste (HHW) facility and outside laboratory service expense increases and increases in Hauling & Disposal for HHW.

The Environmental and Regulatory Compliance Division plays the leading role in monitoring evolving regulation and environmental compliance requirements promulgated by State and Federal agencies, and assuring that Central San is positioned to meet these requirements.

Planning and Development Services Division

OVERVIEW

This Division provides planning and applied research for Central San’s collection system, treatment plant, and recycled water facilities and programs; oversees asset management, geographic information systems (GIS), and computerized maintenance management systems (CMMS); financial planning for rates, Capacity fees, permits, and sewer service charges; and development services, including right-of-way, property management, development inspection, permit counter operations, and mainline plan review.

Fiscal Year 2017-18 Accomplishments

This Division had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
Goal 1 – Provide Exceptional Customer Service	<ul style="list-style-type: none"> ● Received 95% satisfactory customer rating on permit counter interactions. ● Held two Sewer Summits for 10 partner agencies.
Goal 3 – Be a Fiscally Sound and Effective Water Sector Utility	<ul style="list-style-type: none"> ● Amended District Code to reference Accessory Dwelling Unit (ADU) language from Government Code Section 65852.2 (SB 229). ● Amended Capacity Fee schedule to include waiver of capacity fees for ADUs “contained within existing space” and proportionate capacity fees for new conforming ADUs.
Goal 5 – Maintain a Reliable Infrastructure	<ul style="list-style-type: none"> ● Led the Sewer System Management Plan 5-Year Update. ● Started implementation of a new Program Management Information System (PMIS) platform called e-Builder® for the Capital Improvement Program. ● Completed asset register for Pumping Stations and Treatment Plant assets. ● Completed implementation of InfoMaster® sewer renovation risk model InfoWorks® hydrodynamic model and flow calibration. ● Commenced studies to optimize treatment plant secondary and solids processes. The goals include reduced future capital improvements and increased operating efficiencies. ● Evaluated 20 District facilities and completed the District-wide Vulnerability/Security Study. ● Completed implementation of CCTV software and USA locating software to support CSO. ● Continued to support internal users and provide system administration for GIS, CMMS, & web mapping.
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	<ul style="list-style-type: none"> ● Started Phase 1 of a multi-agency coalition to plan and design a three dry ton per day innovative hydrothermal bioenergy pilot project (which received \$1.2 million in grant funding from the Department of Energy), referred to as HYPOWERS Project. ● Completed a \$1 million wet scrubber, scrubber water treatment, and lime reduction pilot to confirm performance and design criteria, which resulted in \$14 million in estimated savings from solids handling capital project. ● Evaluated interest in a public-private partnership that would develop and implement a Bioenergy Facility to process a portion of Central San’s solids and produce renewable energy. ● Started implementation of the Easement Initiative to optimize right-of-way

Goal	Accomplishment
	<p>documents for easy accessibility.</p> <ul style="list-style-type: none"> Received the San Francisco Bay Area and statewide California Water Environment Association (CWEA) Engineering and Research – Research Achievement of the Year Awards for the Wet Scrubber Pilot. Presented Migrating Legacy Applications into a Model-View-Controller Framework at the Adobe ColdFusion Summit. Gave InfoMaster® presentation at the AWWA Infrastructure Conference. Presented on HYPOWERS at the CASA/CWEA Innovation Seminar. Presented Optimization After Your Master Plan at the CWEA 2018 Annual Conference.

Fiscal Year 2018-19 Key Metrics

Metric	Target
Median customer satisfaction rating on permit counter interactions	Greater than 95%
Service affordability maintained	Sewer Service Charge less than average of Bay Area Agencies / Sewer Service Charge plus Ad Valorem tax less than average of Bay Area agencies
Gallons of recycled water distributed to external customers	Greater than 240 million gallons per year
kWh of solar power produced at Collection System Operations and Household Hazardous Waste Facility	Greater than 220,000 kWh per year (reported as a rolling average)
Reviews or pilot tests of new and promising technology	Greater than 3 pilot tests or reviews per year
Research papers and findings presented	Greater than 3 papers or presentations per year
Operating expenditures as a percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Build External Customer Relationships and Awareness	Provide high-quality customer service.	Customer Satisfaction
		Invest in business process changes and technologies to effectively increase access to District information and promote customer care, convenience, and self-service.	Customer Satisfaction
	Foster Employee Engagement and Improve	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency

Goal	Strategy	Initiative	EUM Attribute
	Interdepartmental Collaboration	Cultivate employees' understanding of District operations and their role in the agency's success.	Employee and Leadership Development, Enterprise Resiliency
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
Goal 2 – Strive to Meet Regulatory Requirements	Comply with All Federal, State, and Local Regulations Related to District Administration	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Conduct Long-Range Financial Planning	Ensure rate structure and fees are consistent with cost of service principles.	Customer Satisfaction, Financial Viability
		Present alternative financial plans to the Board in FY 2018-19 for necessary rate adjustments for FY 2019-20 onward, including considering the potential issuance of debt to fund the updated CIP in conjunction with the overall financial plan.	Financial Viability, Infrastructure Strategy and Performance
		Develop alternatives for new revenues and funding sources (i.e., interagency agreements, services, and recycled water).	Financial Viability
	Manage Costs	Evaluate business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization, Enterprise Resiliency
Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce	Enhance Relationship with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development
Goal 5 – Maintain a Reliable Infrastructure	Facilitate Long-Term Capital Renewal and Replacement	Integrate data from the Asset Management Program into the	Infrastructure Strategy and Performance

Goal	Strategy	Initiative	EUM Attribute
		analysis of long-term Capital Improvement needs based on the Ten -Year CIP.	
		Implement the Program Management Information System (PMIS).	Operational Optimization, Infrastructure Strategy and Performance
	Protect District Personnel and Assets from Threats and Emergencies	Evaluate and implement appropriate improvements to the Security Program to meet new or evolving threats.	Enterprise Resiliency
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	Augment the Region’s Water Supply	Explore partnering opportunities.	Water Resource Sustainability, Community Sustainability
		Continue to support the development of a demonstration Satellite Water Recycling Facility at Diablo Country Club.	Water Resource Sustainability, Community Sustainability
	Reduce Reliance on Non-Renewable Energy	Explore opportunities for self-generation, conservation, and efficiency.	Community Sustainability
	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$3,685,044	\$3,764,484	\$4,464,830	\$4,535,780	\$4,444,903	(\$90,877)	-2%	(\$19,927)	0%
Employee Benefits	\$1,770,926	\$1,801,061	\$2,278,748	\$2,578,183	\$761,183	(\$1,817,000)	-70%	(\$1,517,565)	-67%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$1,435,363	\$1,435,363	100%	\$1,435,363	100%
Utilities	\$120,400	\$150,713	\$137,300	\$135,600	\$136,900	\$1,300	1%	(\$400)	0%
Repairs & Maintenance	\$59,400	\$20,504	\$59,400	\$29,200	\$59,400	\$30,200	103%	\$0	0%
Professional & Legal Services	\$115,000	\$169,401	\$165,000	\$160,000	\$165,000	\$5,000	3%	\$0	0%
Outside Services	\$579,100	\$577,625	\$569,542	\$562,942	\$634,542	\$71,600	13%	\$65,000	11%
Materials & Supplies	\$37,550	\$46,333	\$47,550	\$41,150	\$57,850	\$16,700	41%	\$10,300	22%
Other Expenses	\$88,474	\$51,575	\$94,025	\$63,465	\$105,012	\$41,547	65%	\$10,987	12%
Total	\$6,455,894	\$6,581,696	\$7,816,395	\$8,106,320	\$7,800,153	(\$306,167)	-4%	(\$16,242)	0%

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Note: Some staff in this Division are budgeted with the Capital Improvements Program. As a result, 26% of their combined salary and benefit expenses are paid for by the projects identified in the Capital Improvement Budget. The amounts above are net of the capitalized administrative overhead transfer to the Sewer Construction Fund.

Personnel Requirements

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Administrative Assistant	1.00	1.00	1.00
Administrative Services Supervisor	1.00	1.00	1.00
Assistant Engineer	2.00	2.00	2.00
Associate Engineer	4.00	4.00	4.00
Construction Inspector	4.00	4.00	4.00
Development Services Supervisor	1.00	2.00	2.00
Director of Engineering and Technical Services	1.00	1.00	1.00
Engineering Assistant III	4.00	5.00	5.00
Engineering Assistant I/II	3.00	2.00	2.00
Engineering Technician I/II	1.00	1.00	1.00
GIS Analyst	2.00	2.00	2.00
GIS/CMMS Administrator	1.00	1.00	1.00
Maintenance Planner	1.00	1.00	1.00
Management Analyst	0.00	1.00	1.00
Planning and Development Services Division Manager	1.00	1.00	1.00
Program Manager	1.00	1.00	1.00
Senior Engineer	4.00	4.00	4.00
Senior Right-of-Way Agent	2.00	2.00	2.00
Total	34.00	36.00	36.00

Limited Duration Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Engineering Assistant Summer Student	7.00	8.00	5.00
Intern	4.00	4.00	3.00
Total	11.00	12.00	8.00

Significant Budget Modifications

The Planning and Development Services Operating Budget for FY 2018-19 is \$7.8 million, which remained flat compared to the \$7.8 million budget in FY 2017-18. Salaries & Wages include the agency-wide cost of living adjustment and the addition of a General Manager-transitional position for a Management Analyst in the Asset Management workgroup, offset by more time to be charged to both the Capital Improvement and Recycled Water Programs. While not funded, the division anticipates the use of a second General Manager-transitional position for a Construction Inspector to provide overlap for potential retirements within the unit and ensure optimal transition for succession planning. Outside Services is increasing to address additional fees for California Association of Sanitation Agencies (CASA), and Materials & Supplies is increasing due to additional laboratory supplies.

The Planning and Development Services Division’s budget allows Central San to meet several key challenges including:

- Maintaining customer awareness of Central San’s important responsibilities, the costs involved in meeting those responsibilities, and meeting their service level expectations.
- Customer concern about rate increases.

Both of the above are addressed through the Division’s work in maintaining the financial plan and rate setting, and the division works to balance the objectives of setting rates to fund important priorities for Central San, while keeping rate adjustments moderated and no higher than necessary.

The Division also includes the staff and program costs for Central San’s resource recovery efforts and efforts to maintain a sustainable water supply.

Operations Department



The Operations Department consists of three Divisions, Central San's Safety Program, and the Recycled Water Program who report to the Deputy General Manager. The primary function of the Operations Department is to collect, treat, and dispose of wastewater in compliance with regulatory requirements and to divert a portion of the wastewater to produce Title 22 recycled water. This includes operations and maintenance of pipelines, pumping stations and treatment facilities; oversight of power generation operations; fleet maintenance; and managing computerized control equipment and systems.

The Divisions and Programs that comprise this Department include:

- Collection System Operations
- Plant Maintenance
- Plant Operations
- Safety Program
- Recycled Water Program

Collection System Operations Division

OVERVIEW

This Division is responsible for cleaning, maintaining and repairing of over 1,500 miles of collection sewers, trunk sewers and force mains in Central San’s vast collection system, as well as maintaining the recycled water distribution system. The Division is also responsible for the maintenance of all Central San vehicles.

Fiscal Year 2017-18 Accomplishments

This Division had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
Goal 1 – Provide Exceptional Customer Service	<ul style="list-style-type: none"> • Responded to 197 customer service phone calls. • Achieved an average customer service satisfaction rating of 3.97 out of 4.0. • Average response to all emergency service calls was 40 minutes.
Goal 2 – Strive to Meet All Regulatory Requirements	<ul style="list-style-type: none"> • Sanitary sewer overflows were 2.50 per 100 miles and there were no capacity related overflows. • Cleaned 759 miles of sanitary sewers. • Televised 167 miles of sanitary sewers.
Goal 5 – Maintain a Reliable Infrastructure	<ul style="list-style-type: none"> • Completed over 987 services on Central San vehicles and equipment; on schedule 100% of time. • Completed over 16,156 cleaning schedules and work orders; completed on schedule 99% of the time. • Consolidated CCTV databases and replaced software with a more user friendly, remotely accessible software (IT Pipes). • Implemented Fleet Diagnostic and AVL for District vehicles. • Repaired two rodder assemblies in-house which is more cost effective and efficient. • Implemented a better ticket management software in USA/locating process (Dig-Smart)

Fiscal Year 2018-19 Key Metrics

Metric	Target
Average onsite response time for collection system emergency calls, during working hours	Less than 20 minutes
Average onsite response time for collection system emergency calls, after hours	Less than 40 minutes
Average customer service rating for emergency calls	At least 3.8 out of 4.0
Sanitary sewer overflows	Less than 2.5 spills per 100 miles of pipeline
Spills to public water	Less than 3 per year
Percent of spills less than 500 gallons	Greater than 95%
Pipeline cleaning schedules completed on time	Greater than 95%
Pipeline cleaning quality assurance/quality control (QA/QC)	On at least 3% of pipelines cleaned on an annual basis
Pipeline cleaning QA/QC passing rate	Greater than 98%

Metric	Target
Uptime for vehicles and equipment	100%
Operating expenditures as a percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Build External Customer Relationships and Awareness	Provide high-quality customer service.	Customer Satisfaction
	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
		Cultivate employees' understanding of District operations and their role in the agency's success.	Employee and Leadership Development, Enterprise Resiliency
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
Goal 2 – Strive to Meet Regulatory Requirements	Strive to Minimize the Number of Sanitary Sewer Overflows	Complete the collection system scheduled maintenance on time and optimize cleaning schedules.	Infrastructure Strategy and Performance
		Continue the pipeline condition assessment and cleaning quality assurance program using the system-wide CCTV program.	Infrastructure Strategy and Performance
	Comply with All Federal, State, and Local Regulations Related to District Administration	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Manage Costs	Re-engineer business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization, Enterprise Resiliency
Goal	Strategy	Initiative	EUM Attribute

<p>Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce</p>	<p>Enhance Relationship with Employees and Bargaining Units</p>	<p>Cultivate a positive work culture.</p>	<p>Employee and Leadership Development</p>
<p>Goal 5 – Maintain a Reliable Infrastructure</p>	<p>Manage Assets Optimally Throughout Their Lifecycle</p>	<p>Manage current vehicle fleet to provide maximum value.</p>	<p>Infrastructure Strategy and Performance</p>
<p>Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability</p>	<p>Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations</p>	<p>Continue developing and investing in cost-effective innovation, technology, and applied research and development.</p>	<p>Operational Optimization</p>

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$6,107,988	\$5,733,334	\$6,164,374	\$6,302,900	\$6,272,384	(\$30,516)	0%	\$108,010	2%
Employee Benefits	\$5,433,375	\$4,898,696	\$5,087,527	\$4,919,416	\$3,031,274	(\$1,888,142)	-38%	(\$2,056,253)	-40%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$1,942,922	\$1,942,922	100%	\$1,942,922	100%
Utilities	\$139,400	\$164,312	\$142,400	\$156,100	\$145,400	(\$10,700)	-7%	\$3,000	2%
Repairs & Maintenance	\$1,631,502	\$1,823,744	\$1,624,304	\$1,416,904	\$1,474,504	\$57,600	4%	(\$149,800)	-9%
Hauling & Disposal	\$131,000	\$122,098	\$131,000	\$131,000	\$131,000	\$0	0%	\$0	0%
Professional & Legal Services	\$5,000	\$9,498	\$7,500	\$7,500	\$7,500	\$0	0%	\$0	0%
Outside Services	\$106,700	\$144,183	\$110,600	\$61,700	\$59,680	(\$2,020)	-3%	(\$50,920)	-46%
Materials & Supplies	\$774,150	\$742,705	\$749,550	\$728,651	\$756,951	\$28,300	4%	\$7,401	1%
Other Expenses	\$142,938	\$121,704	\$138,958	\$124,473	\$138,445	\$13,972	11%	(\$513)	0%
Total	\$14,472,053	\$13,760,274	\$14,156,213	\$13,848,644	\$13,960,060	\$111,416	1%	(\$196,153)	-1%

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Personnel Requirements

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Administrative Assistant	1.00	1.00	1.00
Senior Administrative Assistant	1.00	1.00	1.00
Administrative Services Supervisor	0.00	0.00	0.00
Administrative Technician	1.00	2.00	2.00
Collection System Maintenance Scheduler	1.00	1.00	1.00
Collection System Operations Division Manager	1.00	1.00	1.00
Construction Equipment Operator	2.00	2.00	2.00
Field Operations Superintendent	1.00	1.00	1.00
Maintenance Crew Leader	17.00	18.00	18.00
Maintenance Crew Member I/II	18.00	18.00	18.00
Maintenance Supervisor	4.00	4.00	4.00
Senior Engineer	1.00	1.00	1.00
Utility Worker	2.00	2.00	2.00
Vehicle and Equipment Mechanic	3.00	3.00	3.00
Vehicle Maintenance and Equipment Maintenance Supervisor	1.00	1.00	1.00
Total	54.00	56.00	56.00

Limited Duration Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Laborer Summer Student	2.00	3.00	3.00
Clerical Summer Student	1.00	1.00	1.00
Total	3.00	4.00	4.00

Significant Budget Modifications

The Collection System Operations Operating Budget for FY 2018-19 is \$14.0 million, a \$0.2 million or 1% decrease over the \$14.2 million budget in FY 2017-18. Salaries & Wages include the agency-wide cost of living adjustment, offset by an increase in the vacancy factor. Repairs and Maintenance is decreasing due to the elimination of the cost of bypass pumping by Rain for Rent and transferring the cost of Verizon Network Fleet to the IT Budget. Outside Services is decreasing due to eliminating the temporary agency employees used in FY 2017-18.

Plant Maintenance Division

OVERVIEW

This Division is responsible for maintaining all mechanical, electrical, and instrumentation equipment and systems for the treatment plant, laboratory, and 18 pumping stations as well as all buildings and grounds at the Martinez campus. The Division also consists of a Reliability Engineering Workgroup that provides technical support for maintenance planning and manages the Preventative Maintenance Program, and the Pumping Station Workgroup that operates and maintains the 18 pumping stations.

Fiscal Year 2017-18 Accomplishments

This Division had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
Goal 2 – Strive to Meet Regulatory Requirements	<ul style="list-style-type: none"> ● Maintained all equipment and systems to achieve the National Association of Clean Water Agencies Peak Performance Platinum Award for the 20th consecutive year.
Goal 5 – Maintain a Reliable Infrastructure	<ul style="list-style-type: none"> ● Received the following California Water Environment Association Awards: <ul style="list-style-type: none"> ○ 2017 Electrical Technician of the Year – Regional Level ○ 2017 Mechanical Technician of the Year – Regional and State Level ○ Gimmicks and Gadgets – State Level ● Continued to enhance the new Cityworks Computerized Maintenance Management System for the treatment plant and pumping stations. ● Completed enhancement to the Lubrication Program. ● Continued to develop the Reliability Centered Maintenance Program. This effort established a framework for Central San to improve maintenance efficiency and functional reliability of assets. ● Expanded use of condition-based and predictive technologies to identify potential problems at the treatment plant and pumping stations. ● Implemented the Staff Training and Development Program for the Mechanical Shop.
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	<ul style="list-style-type: none"> ● Designed and installed a new primary tank flight monitoring system. ● Installed motor quick disconnects on key treatment plant equipment. ● Installed shaft grounding rings on certain motors to minimize premature motor bearing failure. ● Fabricated a bar screen lifting device to simplify the process of replacing worn out bar screen grinders. ● Designed and fabricated: <ul style="list-style-type: none"> ○ Customized control handles for the Rodder Truck Operators; a device to assist the Rodder Truck Operators when loading 1,400 feet of coiled rod; ○ a piping system, water separator, and waste chute for the grit washers; ○ and bracing and fiberglass platforms for the emergency bypass vaults. ● Redesigned and implemented Furnace No. 2's center shaft drive from a hydraulic system to a variable frequency drive. ● Installed an Auto Lube System.

Fiscal Year 2018-19 Key Metrics

Metric	Target
Safety-prioritized work orders completed on time	100%
Regulatory Title V work orders completed on time	100%
Planned treatment plant preventative maintenance completed on time	Greater than 95%
Planned pump station preventative maintenance completed on time	Greater than 95%
kWh of electricity produced	Greater than 18 million kWh per year (reported as a rolling average)
Operating expenditures as a percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
		Cultivate employees' understanding of District operations and their role in the agency's success.	Employee and Leadership Development, Enterprise Resiliency
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
Goal 2 – Strive to Meet Regulatory Requirements	Strive to Achieve 100% Permit Compliance in Air, Water, Land, and Other Regulations	Actively manage GHG emissions in the most cost-effective and responsible manner.	Community Sustainability
	Comply with All Federal, State, and Local Regulations Related to District Administration	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency

Goal	Strategy	Initiative	EUM Attribute
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Manage Costs	Re-engineer business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization, Enterprise Resiliency
Goal 4 – Recruit, Develop and Retain a Highly Trained and Safe Workforce	Enhance Relationship with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development
Goal 5 – Maintain a Reliable Infrastructure	Manage Assets Optimally throughout Their Lifecycle	Continue maintenance on assets using a reliability-based approach.	Infrastructure Strategy and Performance
Goal 6 – Embrace Technology, Innovation and Environmental Sustainability	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget (Reallocated w/ Plant Operations)*	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$5,259,306	\$5,088,411	\$5,501,480	\$5,247,500	\$5,727,357	\$479,857	9%	\$225,877	4%
Employee Benefits	\$4,355,893	\$4,134,911	\$4,304,142	\$4,058,312	\$2,455,560	(\$1,602,752)	-39%	(\$1,848,582)	-43%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$1,751,735	\$1,751,735	100%	\$1,751,735	100%
Chemicals	\$430,000	\$328,092	\$300,000	\$250,000	\$250,000	\$0	0%	(\$50,000)	-17%
Utilities	\$518,550	\$610,841	\$508,150	\$515,750	\$516,550	\$800	0%	\$8,400	2%
Repairs & Maintenance	\$2,416,300	\$1,916,183	\$2,408,300	\$2,411,800	\$2,528,450	\$116,650	5%	\$120,150	5%
Hauling & Disposal	\$138,800	\$155,247	\$158,800	\$163,800	\$163,800	\$0	0%	\$5,000	3%
Outside Services	\$237,650	\$164,987	\$257,750	\$246,250	\$236,200	(\$10,050)	-4%	(\$21,550)	-8%
Materials & Supplies	\$539,200	\$586,753	\$559,200	\$581,700	\$575,200	(\$6,500)	-1%	\$16,000	3%
Other Expenses	\$140,001	\$140,913	\$140,836	\$144,836	\$161,611	\$16,775	12%	\$20,775	15%
Total	\$14,035,700	\$13,126,339	\$14,138,658	\$13,619,948	\$14,366,463	\$746,515	5%	\$227,805	2%

+ Reallocated

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Personnel Requirements

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Assistant Engineer	1.00	1.00	1.00
Buildings and Grounds Supervisor	1.00	1.00	1.00
Electrical Shop Supervisor	1.00	1.00	1.00
Electrical Technician	4.00	4.00	4.00
Instrument Shop Supervisor	1.00	1.00	1.00
Instrument Technician	2.00	3.00	3.00
Machinist	2.00	2.00	2.00
Maintenance Crew Leader	1.00	1.00	1.00
Maintenance Planner	3.00	3.00	3.00
Maintenance Technician I/II, Mechanical	1.00	2.00	2.00
Maintenance Technician III, Mechanical	7.00	7.00	7.00
Mechanical Supervisor	1.00	2.00	2.00
Painter	1.00	1.00	1.00
Plant Maintenance Division Manager	1.00	1.00	1.00
Plant Maintenance Superintendent	1.00	1.00	1.00
Pumping Stations Operator I/II	4.00	4.00	4.00
Pumping Stations Operator III	2.00	2.00	2.00
Pumping Stations Supervisor	1.00	1.00	1.00
Senior Engineer	1.00	1.00	1.00
Utility Worker	7.00	7.00	7.00
Total	43.00	46.00	46.00

Limited Duration Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Laborer Summer Student	7.00	10.00	11.00
Engineering Assistant Summer Student	1.00	0.00	1.00
Intern	1.00	1.00	1.00
Total	9.00	11.00	13.00

Significant Budget Modifications

The Plant Maintenance Operating Budget for FY 2018-19 is \$14.4 million, a \$0.2 million or 2% increase over the \$14.1 million budget in FY 2017-18. Salaries & Wages include the agency-wide cost of living adjustment and the addition of a General Manager-transitional position for a Maintenance Technician III, Mechanical. The increase in Repairs & Maintenance relates to outside repairs and maintenance due to increased work related to Multiple Hearth Furnace work.

The Plant Maintenance Division Budget directly addresses several of the principle issues facing Central San by optimizing the Maintenance Program to ensure that equipment and system reliability meets all safety, service level, and regulatory requirements. The Division strives to continuously improve overall maintenance effectiveness and reliability over the lifecycle of an asset, including active participation in all phases of design, installation, operation, maintenance, and replacement planning.

Plant Operations Division

OVERVIEW

This Division operates and maintains Central San’s treatment plant in Martinez. The treatment plant has a permitted capacity of 53.8 million gallons per day (MGD) and treats an average of 44.0 MGD. The treatment plant also produces 2.5 MGD of recycled water. This Division’s budget also includes the administrative services for the Plant Operations and Plant Maintenance Divisions.

Fiscal Year 2017-18 Accomplishments

This Division had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
Goal 2 – Strive to Meet Regulatory Requirements	<ul style="list-style-type: none"> • The treatment plant received the National Association of Clean Water Agencies Peak Performance Platinum Award for the 20th consecutive year. • Assisted with preparations and testing for the new Environmental Protection Agency 129 Sewage Sludge Incinerator Regulations. • Worked with the Regulatory Workgroup to ensure the annual anthropogenic greenhouse gas emissions remained below 25,000 metric tons of carbon dioxide.
Goal 3 – Be a Fiscally Sound and Effective Water Sector Utility	<ul style="list-style-type: none"> • Implemented Cogeneration British Thermal Unit (BTU) control to save energy and simplify operation. • Extended the life of the Dynac Historian Server that stores all treatment plant historical data. • Saved \$50,000 by purchasing hardware for the Input/Output Replacement Project at a discounted rate.
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	<ul style="list-style-type: none"> • Improved resiliency against the ultraviolet disinfection bypass events by installing shutdown-delay timers and enhancing the outlet gate logic. • Piloted sludge blanket detectors in the primary sedimentation basins and secondary clarifiers. • Transitioned control of the induced draft fan from an obsolete local controller into the modern furnace programmable logic controller. • Enhanced furnace oxygen control by improving automatic rate control of the air ports for Hearth No. 10.

Fiscal Year 2018-19 Key Metrics

Metric	Target
NPDES compliance	Zero Violations
Title V compliance	Zero Violations
Recycled Water Title 22 compliance	Zero Violations
Anthropogenic GHG emissions	Less than 25,000 metric tons CO ₂ e
Operating expenditures as a percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Division will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
		Cultivate employees' understanding of District operations and their role in the agency's success.	Employee and Leadership Development, Enterprise Resiliency
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
Goal 2 – Strive to Meet Regulatory Requirements	Strive to Achieve 100% Permit Compliance in Air, Water, Land, and Other Regulations	Meet existing regulations.	Product Quality
		Actively manage GHG emissions in the most cost-effective and responsible manner.	Community Sustainability
		Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Manage Costs	Re-engineer business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization, Enterprise Resiliency
Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce	Enhance Relationship with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget (Reallocated w/ Plant Maintenance)*	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$5,161,486	\$5,186,179	\$5,391,494	\$5,621,700	\$5,317,180	(\$304,520)	-5%	(\$74,314)	-1%
Employee Benefits	\$4,001,927	\$4,154,327	\$3,793,932	\$3,821,078	\$2,031,456	(\$1,789,622)	-47%	(\$1,762,476)	-46%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$1,538,428	\$1,538,428	100%	\$1,538,428	100%
Chemicals	\$1,406,000	\$1,046,350	\$1,098,000	\$1,052,000	\$1,125,000	\$73,000	7%	\$27,000	2%
Utilities	\$3,210,700	\$3,416,933	\$3,484,600	\$3,121,800	\$3,002,600	(\$119,200)	-4%	(\$482,000)	-14%
Repairs & Maintenance	\$50,200	\$41,349	\$4,200	\$11,000	\$4,200	(\$6,800)	-62%	\$0	0%
Hauling & Disposal	\$238,000	\$230,207	\$249,000	\$248,000	\$283,000	\$35,000	14%	\$34,000	14%
Professional & Legal Services	\$4,000	\$3,422	\$4,000	\$1,000	\$1,000	\$0	0%	(\$3,000)	-75%
Outside Services	\$74,000	\$21,556	\$42,000	\$3,000	\$22,000	\$19,000	633%	(\$20,000)	-48%
Materials & Supplies	\$152,900	\$135,994	\$147,900	\$137,400	\$144,900	\$7,500	5%	(\$3,000)	-2%
Other Expenses	\$560,632	\$463,868	\$671,850	\$617,602	\$662,200	\$44,598	7%	(\$9,650)	-1%
Total	\$14,859,845	\$14,700,185	\$14,886,976	\$14,634,580	\$14,131,964	(\$502,616)	-3%	(\$755,012)	-5%

+ Reallocated

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Personnel Requirements

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Administrative Assistant	2.00	2.00	2.00
Administrative Services Supervisor	1.00	1.00	1.00
Associate Control Systems Engineer	0.00	0.00	0.00
Control Systems Engineer	1.00	2.00	2.00
Control Systems Technician	1.00	1.00	1.00
Deputy General Manager	1.00	1.00	1.00
Plant Operations Division Manager	1.00	1.00	1.00
Plant Operations Superintendent	1.00	1.00	1.00
Plant Operations Training Coordinator	1.00	1.00	1.00
Plant Operator I/II	2.00	2.00	4.00
Plant Operator III	5.00	5.00	1.00
Senior Engineer	1.00	1.00	1.00
Senior Plant Operator	13.00	14.00	16.00
Shift Supervisor	7.00	7.00	7.00
Total	37.00	39.00	39.00

Limited Duration Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Summer Engineering Assistant	0.00	0.00	1.00
Total	0.00	0.00	1.00

Significant Budget Modifications

The Plant Operations Operating Budget for FY 2018-19 is \$14.1 million, a \$0.8 million or 5% decrease over the \$14.9 million budgeted in FY 2017-18. Salaries & Wages include the agency-wide cost of living adjustment offset by reductions due to staff turnover and lower costs for new employees. A General Manager-transitional position for a Control Systems Engineer continues to be filled and budgeted in FY 2018-19. Utilities are decreasing due to improvements to the Cogeneration System that lowers the need to import from Pacific Gas and Electric. Other reductions are due to the lower cost of pre-purchased natural gas for FY 2018-19 that also lowers the cost of landfill gas, which is priced proportionally to natural gas. The increase in Hauling & Disposal is due to the commission of the new screens at the headworks (screenings are now removed from the flow and are hauled to the landfill). The decrease in Outside Services is due to lower than expected technical services expenses for training.

This Plant Operations Budget, flat overall from the current fiscal year to next fiscal year, provides Central San staff the resources necessary to continue to meet or exceed our evolving regulatory requirements and optimized operations to address the public’s concerns regarding increased sewer service rates.

Safety Program

OVERVIEW

The Safety Workgroup oversees and administers the Safety Program. The primary objective of the Safety Program is to reduce injuries, accidents, and environmental impact while ensuring compliance. The Safety Workgroup achieves this by providing high quality training; comprehensive workplace evaluation; incident response; hazardous materials management from acquisition to disposal; and managing regulatory information.

Fiscal Year 2017-18 Accomplishments

This Program had several accomplishments related to the following Central San Goals:

Goal	Accomplishment
Goal 4 – Develop and Retain a Highly Trained and Innovative Workforce	<ul style="list-style-type: none"> Conducted 120 hours of classroom training over 81 training sessions on 35 safety training subjects and completed 322 Safety Tailgates. Recipient of the 2017 California Water Environment Association's Statewide – Safety Plant of the Year Award.
Goal 5 – Maintain a Reliable Infrastructure	<ul style="list-style-type: none"> Worked closely with the Capital Projects Division to provide design reviews, submittal reviews, contractor orientations, and construction safety oversight. Completed 111 Safety Work Orders.
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	<ul style="list-style-type: none"> Removed over 221 tons of hazardous waste. Implemented online access to safety data sheets through MSDSONline.com. Implemented iAuditor application to allow safety inspections to be conducted via cellphone or tablet. Updated and serialized Safety Directive Manuals and instituted paperless online access.

Fiscal Year 2018-19 Key Metrics

Metric	Target
Employee injury and illness lost time incident rate less than 2016 Bureau of Labor Statistics' California Sewage Treatment Facilities Rate	Less than 6.8%
Operating expenditures as a percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Program will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
		Cultivate employees' understanding of District operations and their role in the agency's success.	Employee and Leadership Development, Enterprise Resiliency
	Maintain a Strong Reputation in the Community	Continue to participate in industry trade organizations and apply for certifications and awards.	Employee and Leadership Development
Goal 2 – Strive to Meet Regulatory Requirements	Comply with All Federal, State, and Local Regulations Related to District Administration	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Manage Costs	Re-engineer business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization, Enterprise Resiliency
Goal 4 – Recruit, Develop, and Retain a Highly Trained and Safe Workforce	Enhance Relationship with Employees and Bargaining Units	Cultivate a positive work culture.	Employee and Leadership Development
	Meet or Exceed Industry Safety Standards	Achieve consistent improvement on State of California and Bay Area industry injury rate.	Employee and Leadership Development
		Enhance the safety culture through improved training and communications.	Employee and Leadership Development
Goal 5 – Maintain a Reliable Infrastructure	Protect District Personnel and Assets from Threats and Emergencies	Enhance capability to mitigate, prepare for, respond to, and recover from emergencies.	Enterprise Resiliency
		Evaluate and implement appropriate improvements to the Security Program to meet new or evolving threats.	Enterprise Resiliency

Goal	Strategy	Initiative	EUM Attribute
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$349,884	\$364,506	\$364,050	\$315,000	\$353,959	\$38,959	12%	(\$10,091)	-3%
Employee Benefits	\$312,759	\$337,448	\$317,020	\$294,917	\$141,539	(\$153,378)	-52%	(\$175,481)	-55%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$209,464	\$209,464	100%	\$209,464	100%
Chemicals	\$0	\$0	\$0	\$0	\$0	\$0	0%	\$0	0%
Utilities	\$0	\$0	\$0	\$0	\$0	\$0	0%	\$0	0%
Repairs & Maintenance	\$71,000	\$60,465	\$73,500	\$73,500	\$74,700	\$1,200	2%	\$1,200	2%
Hauling & Disposal	\$10,250	\$9,705	\$10,250	\$10,250	\$10,250	\$0	0%	\$0	0%
Professional & Legal Services	\$2,500	\$0	\$2,500	\$2,500	\$2,500	\$0	0%	\$0	0%
Outside Services	\$87,000	\$26,651	\$68,000	\$65,500	\$61,000	(\$4,500)	-7%	(\$7,000)	-10%
Materials & Supplies	\$34,500	\$30,033	\$27,500	\$28,500	\$28,100	(\$400)	-1%	\$600	2%
Other Expenses	\$45,575	\$43,122	\$54,075	\$53,100	\$56,600	\$3,500	7%	\$2,525	5%
Total	\$913,468	\$871,929	\$916,895	\$843,267	\$938,112	\$94,845	11%	\$21,217	2%

* Unfunded Liabilities were broken out in FY 2018-19 and included in Employee Benefits line item in prior years.

Personnel Requirements

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Operations Safety Specialist	2.00	2.00	2.00
Safety Officer	1.00	1.00	1.00
Total	3.00	3.00	3.00

Significant Budget Modifications

The Safety Program Operating Budget for FY 2018-19 is \$0.9 million, which remained flat compared to the \$0.9 million budget in FY 2017-18. Salaries & Wages include the agency-wide cost of living adjustment offset by reductions due to staff turnover and lower costs for a new employee. There are only minor adjustments to other expense categories.

Recycled Water Program

OVERVIEW

The Recycled Water Program is a reflection of Central San’s continued efforts to utilize the valuable resources available in treated wastewater and to augment the region’s water supply. Central San began to separately track the Recycled Water Program financials in FY 2016-17, so staff continues to work to accurately budget the anticipated expenses and revenues. This Program draws resources from several Divisions to provide support for the production and distribution of recycled water to Zone 1 commercial and municipal customers, construction contractors, and residential customers through the Residential Fill Station. This Program also includes planning and regulatory support for the existing system and planned expansions, including the Satellite Water Recycling Facility (SWRF) program.

Fiscal Year 2017-18 Accomplishments

This Program had several accomplishments related to the following Central San Goal:

Goal	Accomplishment
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	<ul style="list-style-type: none"> • Executed a Memorandum of Understanding with the Contra Costa Water District and Santa Clara Valley Water District to complete a preliminary feasibility evaluation of the Refinery Recycled Water Exchange Project. • Continued supporting development of the Diablo Country Club’s 0.4 MGD SWRF Demonstration Project: including completing the CEQA Initial Study, holding two Open House Community Input Meetings, and supporting Diablo Country Club’s Design-Build procurement process. • Continued operating the Residential Fill Station, which served over 8,969 customers and delivered 1.94 million gallons of recycled water (as of May 21, 2018w). • Connected new businesses to the recycled water distribution system for landscape irrigation, including “The Veranda” development in Concord. • Continued pursuit of grant funding for existing and planned projects, as part of the Western Recycled Water Coalition.

Fiscal Year 2018-19 Key Metrics

Metric	Target
Recycled Water Title 22 compliance	Zero Violations
Gallons of recycled water distributed to external customers	Greater than 240 million gallons per year
Operating expenditures as a percentage of operating budget	Greater than 95%
Performance evaluations completed on time	100%

Fiscal Year 2018-19 Strategic Initiatives

This Program will support the following Central San Goals and Strategies:

Goal	Strategy	Initiative	EUM Attribute
Goal 1 – Provide Exceptional Customer Service and Maintain an Excellent Reputation in the Community	Build Customer Relationships and Awareness	Provide high-quality customer service.	Customer Satisfaction
	Foster Employee Engagement and Interdepartmental Collaboration	Establish opportunities for internal partnerships and cross-divisional collaborations.	Enterprise Resiliency
Goal 2 – Strive to Meet Regulatory Requirements	Strive to Achieve 100% Permit Compliance in Air, Water, Land, and Other Regulations	Meet existing regulations and plan for future regulations.	Product Quality
		Foster relationships with regulatory agencies.	Stakeholder Understanding and Support
	Comply with All Federal, State, and Local Regulations Related to District Administration	Re-examine existing Department and Administrative Procedures to ensure compliance with applicable laws and regulations.	Enterprise Resiliency
Goal 3 – Be a Fiscally Responsible and Effective Wastewater Utility	Conduct Long-Range Financial Planning	Develop alternatives for new revenues and funding sources (i.e. interagency agreements, services, and recycled water).	Financial Viability
	Manage Costs	Re-engineer business processes and complete optimization studies to identify opportunities to reduce costs and align with best practices.	Operational Optimization, Enterprise Resiliency
Goal 6 – Embrace Technology, Innovation, and Environmental Sustainability	Augment the Region's Water Supply	Explore partnering opportunities.	Water Resource Sustainability, Community Sustainability
		Continue to support the development of a demonstration Satellite Water Recycling Facility at Diablo Country Club.	Water Resource Sustainability, Community Sustainability
		Continue to provide recycled water to residents and businesses; evaluate and process new customer requests.	Customer Service Satisfaction, Water Resource Sustainability
	Encourage the Review and Testing of Technology to Optimize and Modernize Business Operations	Continue developing and investing in cost-effective innovation, technology, and applied research and development.	Operational Optimization

Budget Overview by Expense Category Treatment

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$274,733	\$193,469	\$228,440	\$168,400	\$225,100	\$56,700	34%	(\$3,340)	-1%
Employee Benefits	\$200,402	\$187,888	\$231,580	\$171,800	\$213,900	\$42,100	25%	(\$17,680)	-8%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$0	\$0	0%	\$0	0%
Chemicals	\$84,000	\$51,648	\$84,000	\$77,600	\$84,000	\$6,400	8%	\$0	0%
Utilities	\$175,000	\$191,526	\$175,000	\$175,000	\$175,000	\$0	0%	\$0	0%
Repairs & Maintenance	\$6,300	\$1,842	\$6,000	\$3,000	\$6,000	\$3,000	100%	\$0	0%
Hauling & Disposal	\$0	\$0	\$0	\$0	\$0	\$0	0%	\$0	0%
Professional & Legal Services	\$0	\$0	\$0	\$0	\$0	\$0	0%	\$0	0%
Outside Services	\$0	\$0	\$500	\$500	\$500	\$0	0%	\$0	0%
Materials & Supplies	\$1,003	\$4,696	\$1,000	\$1,000	\$1,000	\$0	0%	\$0	0%
Other Expenses	\$0	\$0	\$6,600	\$6,600	\$6,600	\$0	0%	\$0	0%
Total	\$741,438	\$631,069	\$733,120	\$603,900	\$712,100	\$108,200	18%	(\$21,020)	-3%

Distribution (including Distribution, Residential Fill, SWRF, Refinery ReW Exchange)

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Salaries & Wages	\$488,414	\$169,463	\$188,650	\$249,980	\$340,500	\$90,520	36%	\$151,850	80%
Employee Benefits	\$276,746	\$70,639	\$102,948	\$180,465	\$211,344	\$30,879	17%	\$108,396	105%
Unfunded Liabilities *	\$0	\$0	\$0	\$0	\$0	\$0	0%	\$0	0%
Chemicals	\$0	\$0	\$0	\$0	\$0	\$0	0%	\$0	0%
Utilities	\$0	\$0	\$0	\$0	\$0	\$0	0%	\$0	0%
Repairs & Maintenance	\$23,700	\$0	\$23,000	\$10,000	\$23,000	\$13,000	130%	\$0	0%
Hauling & Disposal	\$0	\$0	\$0	\$0	\$0	\$0	0%	\$0	0%
Professional & Legal Services	\$14,000	\$36,275	\$14,000	\$1,500	\$14,000	\$12,500	833%	\$0	0%
Outside Services	\$202,500	\$28,877	\$202,000	\$127,500	\$214,000	\$86,500	68%	\$12,000	6%
Materials & Supplies	\$4,897	\$47	\$4,900	\$4,550	\$10,900	\$6,350	140%	\$6,000	122%
Other Expenses	\$50,024	\$34,269	\$50,024	\$50,060	\$26,950	(\$23,110)	-46%	(\$23,074)	-46%
Total	\$1,060,281	\$339,569	\$585,522	\$624,055	\$840,694	\$216,639	35%	\$255,172	44%

* Unfunded Liabilities are included in the Employee Benefits line item for Recycled Water.

Total Recycled Water

Account Description	FY 2016-17 Budget	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Projected Variance	Percent Variance	Budget to Budget Variance	Percent Variance
Total Rec Water Expenses	\$1,801,719	\$970,638	\$1,318,642	\$1,227,955	\$1,552,794	\$324,839	26%	\$234,152	18%

Personnel Requirements

Several Divisions support the Recycled Water Program. Personnel for the Recycled Water Program are shown in their respective Divisions and total 2.68 full time equivalents. A portion of their labor costs, as appropriate to their time spent on the Program, are included in the Recycled Water Budget. In addition, the Budget includes funding for three temporary staff to operate the Residential Fill Station and one intern to support recycled water planning.

Regular Status Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Program Manager	0.35	0.50	0.50
Engineering and Technical Services Department Staff	0.75	0.70	0.85
Operations Department Staff	0.95	1.15	1.33
Total	2.05	2.35	2.68

Limited Duration Employees	FY 2016-17 YE Actual	FY 2017-18	FY 2018-19
Fill Station Temporary	3.00	8.00	3.00
Intern	0.00	0.00	1.00
Total	3.00	8.00	4.00

Significant Budget Modifications

The Recycled Water Program Operating Budget for FY 2018-19 is \$1.6 million, a \$0.2 million or 18% increase over the \$1.3 million budget in FY 2017-18. Salaries & Wages include the agency-wide cost of living adjustment, plus increased labor costs for Distribution, Residential Fill, and SWRF sub-programs. These increases are a result of additional staff anticipated to be working on recycled water in FY 2018-19, due to expected continued demand for the Residential Fill Station. In FY 2018-19, the Residential Fill Station Program will be fully staffed and budgeted with three temporary employees, compared to a straight budget amount of \$65,000 in FY 2017-18. The Recycled Water Program helps Central San address several of the challenges presented by the environment in which it operates. These challenges include the need for all water sector agencies in the arid west to play a role in maintaining a sustainable water supply, with recent drought experiences, and the continuing effects of climate change. The Program also addresses the increased focus on resource recovery in the wastewater industry.

Financial Summary for Recycled Water Program

Recycled Water Expense Summary	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Budget Variance	Percent Variance
Treatment Plant O&M	\$631,069	\$733,120	\$603,900	\$712,100	(\$21,020)	-3%
Treatment Plant Capital	\$275,405	\$330,000	\$1,630,000	\$2,757,000	\$2,427,000	735%
Distribution O&M	\$339,569	\$585,522	\$624,055	\$840,694	\$255,172	44%
Distribution Capital	\$326,550	\$130,000	\$45,000	\$100,000	(\$30,000)	-23%

Total Combined Expense	\$1,572,593	\$1,778,642	\$2,902,955	\$4,409,794	\$2,631,152	753%
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Recycled Water Revenue Summary	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget	Budget to Budget Variance	Percent Variance
Treatment Plant (Value not charged)	\$437,565	\$463,411	\$1,001,947	\$1,455,207	\$991,795	214%
Zone 1 Revenue	\$386,709	\$373,500	\$377,000	\$420,000	\$46,500	12%
Residential Fill (Value not charged)	\$219,751	\$83,779	\$139,132	\$232,185	\$148,406	177%
Satellite Reimbursement	\$92,800	\$141,900	\$32,242	\$81,700	(\$60,200)	-42%
City of Concord Reimbursement	\$520,882	\$404,237	\$868,183	\$1,289,671	\$885,434	219%

Total Combined Revenue	\$1,657,707	\$1,466,828	\$2,418,504	\$3,478,763	\$2,011,935	580%
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Regarding the FY 2018-19 budget Revenue figures noted above, the \$420,000 Zone 1 Revenue is entirely allocated to O&M (See Table 5 in Financial Summary). The \$1,289,671 City of Concord Reimbursement is contained within the \$14,800,000 for O&M (See Table 5 in Financial Summary) and \$7,150,000 for Capital (see Table 11 in Financial Summary). The \$81,700 Satellite Reimbursement is contained within the \$333,000 Other Revenues (see Table 5 in Financial Summary).

Self-Insurance Program

Central San has self-insured a portion of its liability and property risks since July 1, 1986, when the Board approved the establishment of the Self Insurance Fund (SIF). Central San currently self-insures general and auto liability risks up to \$500,000 per occurrence and purchases a \$15 million excess liability insurance policy above that retention.

At this time, Central San does not purchase insurance coverage for earthquake or flood losses because insurance programs currently available in California are very expensive for the scope and limits of coverage provided. As a result, Central San self-insures these risks.

Fund Allocation

In 1994, the Government Accounting Standards Board issued statement No. 10 (GASB-10) which established requirements on how public agencies must fund their self-insured risks. To assure compliance with GASB-10, Central San restructured the SIF into three sub-funds. Each of the three sub-funds was established to pay for specific losses and expenses. In FY 2015-16, sub-fund B was retired and funds for its risks were transferred to sub-fund C.

Table 1 presents a recent financial history and projection of the SIF and shows the FY 2018-19 SIF budget. The SIF revenue for FY 2018-19 is projected to be \$960,250, and expenses are projected to be \$924,500, resulting in net SIF reserves of \$6,735,776. The budgeted revenues include the allocation of \$779,500 from the FY 2018-19 O&M Budget to the SIF.

Sub-Fund A: Actuarially-Based Risks

Sub-Fund A is used to pay claims and expenses within Central San's self-insured liability retention. Claims in excess of this retention are covered by the excess insurance policy that renews annually on July 1.

Under the requirements of GASB-10, risks that can be actuarially studied must be funded based on an actuarial study performed at least every two years. General liability and automobile liability risks are readily studied throughout the insurance and self-insurance industry to project funding levels for future losses. Central San obtained an actuarial review of its self-insured general liability and automobile liability risks in October 2016. The next actuarial report will be performed in August 2018 using loss data through June 30, 2018.

The Board established a policy to maintain the Sub-Fund A reserve at three times the amount of Central San's self-insured retention. The current \$500,000 retention requires a \$1.5 million reserve. This reserve is used to pay claims and expenses throughout the year and is replenished the following fiscal year.

Table 2 shows budgeted revenue for FY 2018-19 of \$26,712 with expenses of \$345,000, for a decrease of \$318,288. This amount will be transferred from Sub-Fund C in order to maintain the minimum reserve at \$1.5 million.

Sub-Fund B: Non-Actuarially-Based Risks

Sub-Fund B has been retired and all reserves for these risks were transferred to Sub-Fund C in FY 2015-16.

Sub-Fund C: Non-GASB-10 Risks

This Sub-Fund C has historically covered Risk Management program expenses including insurance premiums, self-insured property losses, potential losses from uninsurable risks, and the costs of initiating claims and lawsuits against others. As noted above, this fund now includes reserves for non-GASB-10 risks and catastrophic losses.

The Board established a policy to maintain this reserve at \$5 million. This reserve is used to pay claims and expenses throughout the year and is replenished the following fiscal year. This fund also receives the annual O&M contribution and then re-allocates funds needed to maintain the required reserve in Sub-Fund A.

Table 3 shows budgeted revenue for FY 2018-19 of \$933,538, which includes a transfer from the O&M Fund.

Tables and Figures

Table 1 - Self Insurance Fund (SIF) Summary Overview

Account Description	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget
Revenues:				
SIF Allocation from O&M Fund	\$920,000	\$585,000	\$585,000	\$779,500
Insurance Allocation from HHW	\$21,674	\$75,000	\$62,500	\$65,000
Subrogation Recovery	\$56,226	\$0	\$1,440	\$0
Interest Income	\$46,792	\$67,000	\$85,777	\$115,750
Total Revenue	\$1,044,692	\$727,000	\$734,717	\$960,250
Expenditures:				
Claims Adjusting	\$0	\$0	\$0	\$0
Insurance Consulting	\$0	\$0	\$0	\$6,500
Loss Payments	\$68,258	\$265,000	\$88,000	\$253,000
Losses: Audit adjustment for GASB 10	(\$192,921)	\$0	\$0	\$0
Legal Services	\$2,736	\$21,500	\$2,500	\$20,000
Technical Services	\$267,691	\$75,000	\$50,000	\$75,000
Insurance Premiums	\$552,029	\$575,000	\$540,000	\$570,000
Total Expenses	\$697,793	\$936,500	\$680,500	\$924,500
Revenue Over Expense	\$346,899	(\$209,500)	\$54,217	\$35,750
Projected Reserves *:				
Beginning of Year	\$6,298,910	\$6,714,380	\$6,645,809	\$6,700,026
Reserve Policy Transfer	\$0	\$0	\$0	\$0
Revenue over Expense	\$346,899	(\$209,500)	\$54,217	\$35,750
End of Year Projected Reserves	\$6,645,809	\$6,504,880	\$6,700,026	\$6,735,776
Allocated Reserves:				
Actuarial Reserves-GASB 10 (Fund A)	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Non-Actuarial Reserves-GASB 10 (Fund C)	\$5,145,809	\$5,004,879	\$5,200,026	\$5,235,776
Total Allocated Reserves	\$6,645,809	\$6,504,880	\$6,700,026	\$6,735,776

*Projected reserves may differ from actual reserves due to entries related to the accrual method of accounting.

Table 2 - SIF - Sub-Fund A

Account Description	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget
Projected Reserves- Beginning of Year	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Revenues:				
O&M	\$0	\$0	\$0	\$0
Subrogation Recovery	\$0	\$0	\$0	\$0
Interest	\$10,832	\$15,462	\$19,785	\$26,712
Total Revenue	\$10,832	\$15,462	\$19,785	\$26,712
Expenses:				
Losses	\$65,707	\$250,000	\$85,000	\$250,000
Losses: Audit adjustment for GASB 10	(\$192,921)	\$0	\$0	\$0
Legal Services	\$1,034	\$20,000	\$2,500	\$20,000
Technical	\$79,843	\$75,000	\$50,000	\$75,000
Total Expenses	(\$46,337)	\$345,000	\$137,500	\$345,000
Revenue Over Expense	\$57,169	(\$329,538)	(\$117,715)	(\$318,288)
Projected Reserves *:				
Transfer (to)/from Sub-Fund C	(\$57,169)	\$329,538	\$117,715	\$318,288
Reserve increase transfer from Fund C	\$0	\$0	\$0	\$0
Total Reserves Projected End of Year	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000

Projected reserves may differ from actual reserves due to entries related to the accrual method of accounting.

Table 3 - SIF - Sub-Fund C

Account Description	FY 2016-17 Actual	FY 2017-18 Budget	FY 2017-18 Projected	FY 2018-19 Budget
Beginning Reserves	\$4,798,910	\$5,214,379	\$5,145,809	\$5,200,026
Revenues:				
O&M	\$920,000	\$585,000	\$585,000	\$779,500
Subrogation Recovery	\$56,226	\$0	\$1,440	\$0
Insurance Recovery from HHW Partners	\$21,674	\$75,000	\$62,500	\$65,000
Interest	\$35,960	\$51,538	\$65,992	\$89,038
Total Revenue	\$1,033,860	\$711,538	\$714,932	\$933,538
Expenses:				
Losses	\$2,551	\$15,000	\$3,000	\$3,000
Legal	\$1,702	\$1,500	\$0	\$0
Technical	\$187,849	\$0	\$0	\$0
Insurance Premiums	\$552,028	\$575,000	\$540,000	\$570,000
Insurance Consulting Services	\$0	\$0	\$0	\$6,500
Claims Adjustment	\$0	\$0	\$0	\$0
Total Expenses	\$744,130	\$591,500	\$543,000	\$579,500
Revenue Over Expense	\$289,730	\$120,038	\$171,932	\$354,038
Projected Reserves:				
Transfer (to)/from Sub-Fund A	\$57,169	(\$329,538)	(\$117,715)	(\$318,288)
Transfer (to)/from Sub-Fund B	\$0	\$0	\$0	\$0
Reserve Increase to Sub-Fund A	\$0	\$0	\$0	\$0
Reserve Policy Transfers	\$0	\$0	\$0	\$0
Total Reserves Projected End of Year	\$5,145,809	\$5,004,879	\$5,200,026	\$5,235,776

* Projected reserves may differ from actual reserves due to entries related to the accrual method of accounting.

Figure 1 - History of Revenue, Expense, and Reserve Balance

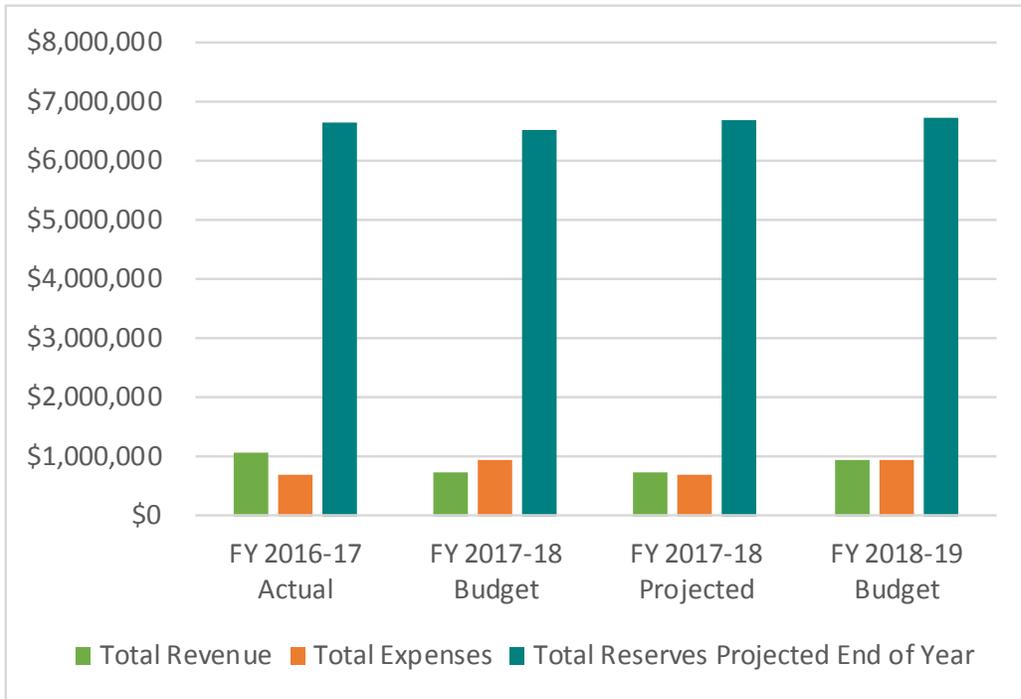


Figure 2 - History of Loss Payment and Insurance Premiums

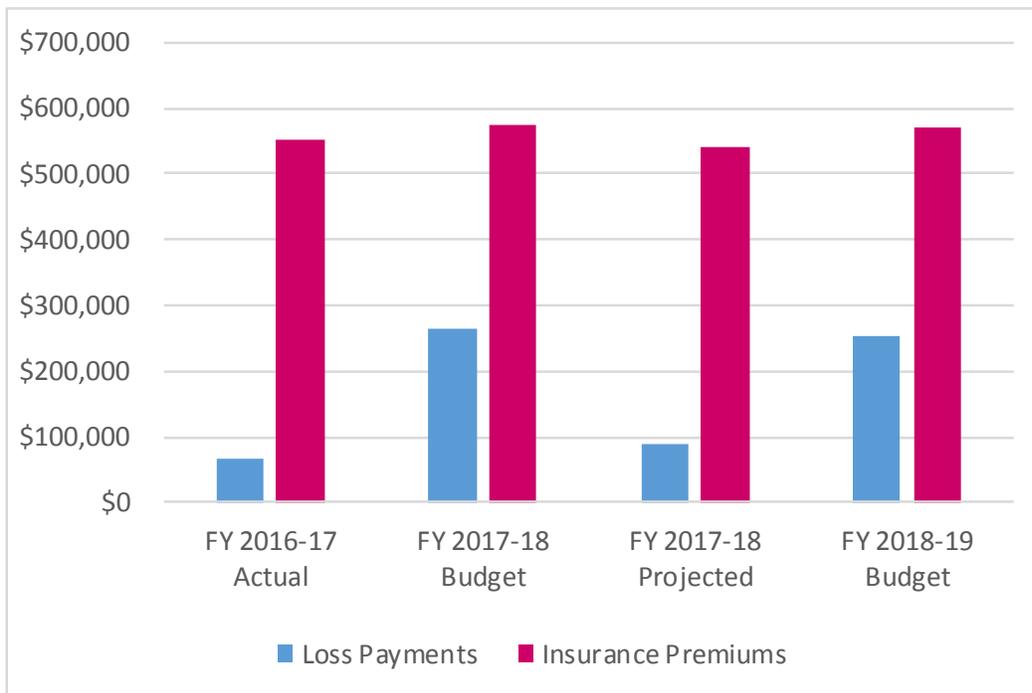


Figure 3 - Reserves by Sub-Fund

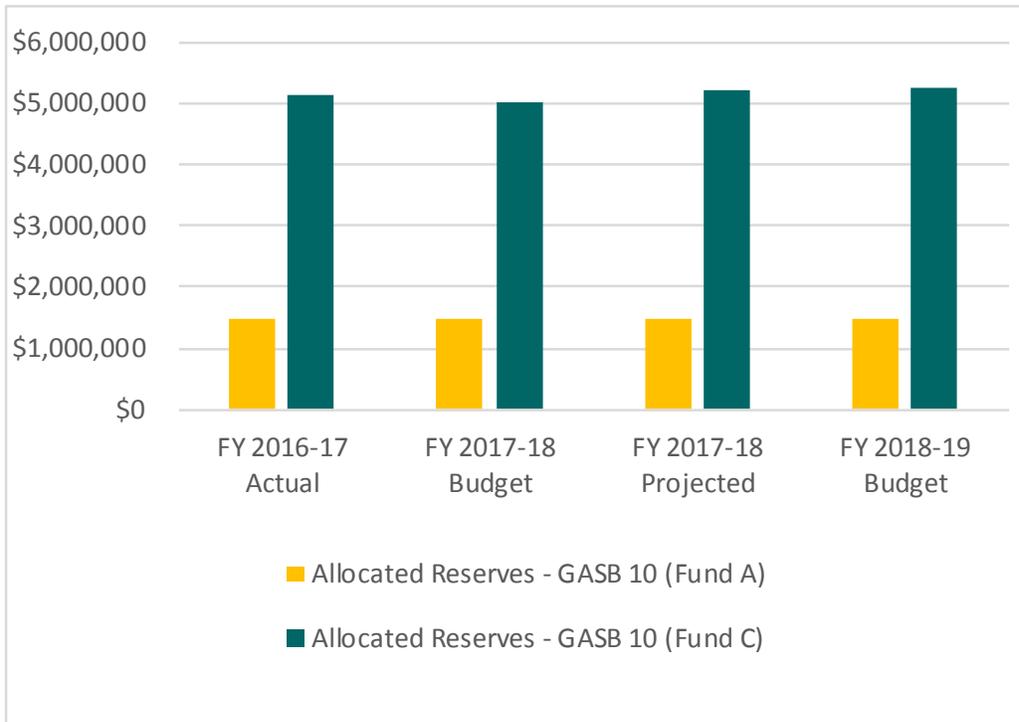
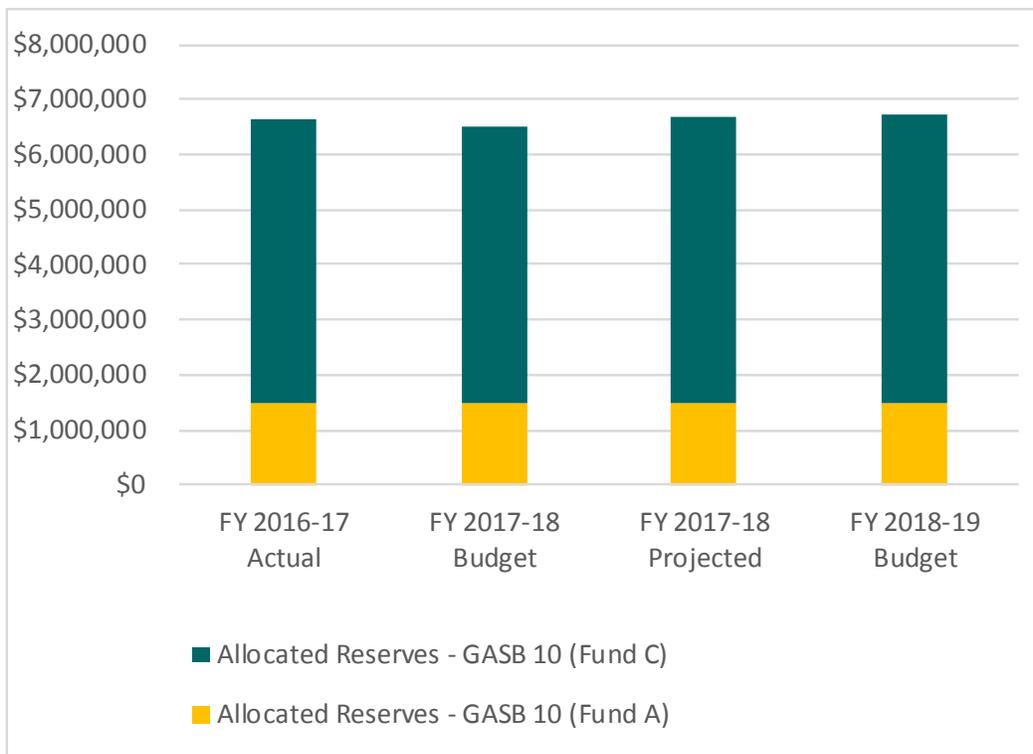


Figure 4 - History of Reserves



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Capital Improvement Program

Overview

Central San funds an extensive Capital Improvement Program designed to preserve, maintain, and enhance Central San’s assets, meet regulatory requirements, accommodate the community's needs, and protect public health and the environment. Capital improvements are construction or renovation activities that add value to Central San’s fixed assets (pipelines, buildings, facilities, and equipment) or significantly extend their useful life.

Capital Expenditures Definition

Capital expenditures are cash outlays by Central San that result in the acquisition or construction of a capital asset. A capital asset is any asset of significant value, over \$5,000, that has a useful life expectancy of one year or more. Examples of capital assets include treatment plant renovations, collection system sewer replacements, equipment replacements, vehicle acquisitions, buildings, and land. Land is always considered a capital asset, regardless of value. All capital assets and improvements acquired or constructed are included in the Capital Improvement Program.

Capital Program Process

Annually, Central San updates its Ten-Year Capital Improvement Plan (CIP). The CIP identifies and prioritizes capital projects needed to accomplish Central San’s Strategic Plan and provides the basis for project scheduling, staffing, and long-range financial planning. The CIP also serves as the framework for rate setting and decisions based on planned expenditures. The CIP undergoes several levels of review by Central San as detailed in the Ten-Year CIP Section. Once a project is determined to be necessary, based on operational or maintenance needs or condition of the existing asset, the project is listed in the Capital Improvement Budget (CIB). In addition, new or rescheduled projects may occur during any given year due to urgent requirements or unforeseen circumstances. These projects are referred to as contingency projects and are included in the CIB as needed.

The CIB provides a detailed presentation of the estimated capital expenditures for the first year of the CIP beginning on July 1 and ending on June 30, referred to as a fiscal year. Since the majority of capital projects take longer than a year to complete, future years are presented and estimated to predict the potential budget appropriation for the current projects. The CIB includes expenditures for the planning, design, and construction of capital projects and is categorized in four programs: Collection System; Treatment Plant; General Improvements; and Recycled Water. All CIB projects are reviewed and prioritized yearly, especially as projects are refined during the predesign phase which include comprehensive condition assessments. The CIB also includes two types of contingency funding of capital projects, which provide for project contingency determined at the time of award of any project and CIB contingency. The CIB contingency can be used in any program and is intended to cover contingency projects and potential budget overruns. By adopting the CIB, the Board authorizes staff to pursue work on the identified projects in all four programs with firm individual project budgets. In addition, any previously approved budget may carry forward to the current fiscal year. Staff reports to the Board the final CIB expenditures after the end of each fiscal year.

Capital Revenue

The Capital Program is funded by the Sewer Construction Fund’s fees and charges listed below which are discussed in detail in the Financial Summary.

- Capacity Fees
- Pumped Zone Fees
- Property Taxes
- Interest
- Sewer Service Charges
- Reimbursement from Others

While Central San generally follows a pay-as-you-go philosophy, Sewer Service Charge rate increases can be mitigated by utilizing bond funding to spread the payment over time.

CIB Project Prioritization

The projects included in the FY 2018-19 CIB have been prioritized to ensure the best use of available and approved funds. Each project was evaluated using a prioritization scoring system that includes input from stakeholders within the Operations and Engineering Departments. The prioritization scoring system uses existing Central San prioritization strategies, including guidelines developed by the Water Environment & Reuse Foundation and prioritization procedures from the National Association of Clean Water Agencies member agencies.

Each project is assigned a priority ranking of **Critical, Very High, High, or Medium** based on the project’s score. The criteria used to develop the scores take into consideration the "triple bottom line plus," or social, environmental, financial, and technical benefits of the project and their applicability to Central San’s Vision, Mission, and Values. New projects that were identified as part of the Comprehensive Wastewater Master Plan were prioritized through discussions and workshops with Central San staff. Criteria fell into three categories: 1) Essential Commitments; 2) Project Benefits; and 3) Operational Reliability, as summarized below:

Criteria Category: Essential Commitments
Complies with Regulatory Requirements and Mandates
Meets Commitment with Outside Agency or Existing Contract
Reduces Potential Health or Safety Hazards
Implements Board of Directors’ Policy/Priority
Increases Capacity to Meet Projected Build-out
Criteria Category: Project Benefits
Impacts Phasing or Implementation Schedule for Other Projects
Optimizes Capital Expenditures
Reduces Operations and Maintenance Costs
Reduces Social Impacts
Increases Sustainable Use of Natural or Existing Resources
Reduces Environmental Impacts
Supports Timely Adoption of Technology Improvements
Criteria Category: Operational Reliability
Consistent with Asset Management Program
Improves Reliability and System Performance
Improves Facility-Wide Resiliency

FY 2017-18 Accomplishments

- **Pleasant Hill - Grayson Creek Trunk Sewer Project:** This project started construction activities in June 2016 and installed approximately 10,000 feet of 18-inch to 24-inch diameter trunk sewers and abandoned several sewers along Grayson Creek. The new sewers provide a backbone system enabling future replacement of the 60-plus-year-old residential sewers in the Gregory Gardens neighborhoods. Construction occurred within residential neighborhoods along Westover Drive and Pleasant Hill Road. The Notice of Completion for the project was issued on December 12, 2017.



Sewer Installation in Pleasant Hill Using Pilot-Tube Boring

- **Renovation Projects in the Cities of Lafayette, Martinez, Orinda, and Walnut Creek:** Several projects have replaced or rehabilitated approximately 28,000 feet (5.3 miles) of sewers, most of which were old 6-inch vitrified clay pipes. Construction included sewer replacement, new manholes, and other infrastructure improvements in public right-of-way and back yard easements. Trenchless technology was utilized where possible for cost effectiveness and to minimize construction impacts. Central San staff also designed and bid approximately 36,500 feet (6.9 miles) of sewer replacement this fiscal year.



Sewer Replacement in a Residential Neighborhood

- **Headworks Screening Upgrade Project:** This project will remove the screenings and plastics from the influent wastewater. Removal and disposal of screenings will protect downstream facilities, extend equipment life, and reduce maintenance of process water equipment. The project is 70 percent complete. The contractor has installed two of the four new multi-rake bar screens, the washer/compactors and the screening disposal facility. Final completion is expected by December 2018.



New Screens Installed for the Headworks Screening Upgrades Project



Removal of Screen Materials at the Headworks

- **Pump and Blower Building Seismic Project:** This project seismically updated the Pump and Blower Building to current structural and building code standards. The building houses the primary and final effluent pumps, and electrical and mechanical systems required to operate the entire treatment plant. The project is substantially complete and will be accepted and closed in FY 2018-19.



Pump and Blower Building Seismic Upgrade Project Construction

- **Wet Scrubber Pilot on Furnace Emissions:** The Wet Scrubber Pilot was conducted in 2017 and validated new scrubber technology by testing scrubber performance. The pilot allowed staff to gain valuable operations experience and confirmed design criteria for air and liquid streams under the Solids Handling Facility Improvements Project.



Wet Scrubber Pilot Team

- **Pre-design of the Pumping Station Upgrades:** The completed pre-design has identified recommendations for the final design of the Moraga, Orinda Crossroads, and Flush Kleen Pumping Stations. Planning efforts for the Martinez, Maltby, and Fairview Pumping Stations will continue into next fiscal year.



Orinda Crossroads Pumping Station

- Pre-design of the Solids Handling Facility Improvements:** The completed pre-design has identified solutions to rehabilitate and replace the sludge dewatering, sludge handling, sludge blending, and ash handling systems; furnace air pollution control equipment; and structural upgrades to the building housing this equipment.



3-D Model Rendition of the Solids Handling Facility Improvement Project

FY 2018-19 CIB

The FY 2018-19 CIB for ongoing and rescheduled projects is \$45.3 million. The estimated budget needed to complete these projects in future fiscal years is estimated at \$307.3 million. Combined, the total estimated budget to complete the identified projects in the FY 2018-19 CIB is \$352.6 million. The 2018 Ten-Year CIP is projected to be \$805.7 million as in Table 1:

Table 1: FY 2018-19 CIB per Program

Program	FY 2018-19 (1)	Future FYs Under Active 2018-19 CIB Projects (2)	Total Estimated Budget to Complete Active Projects (1)+(2)	FY 2018 Ten Year CIP Comparison
Collection System	\$19,347,000	\$109,085,540	\$128,432,540	\$308,958,000
Treatment Plant	\$16,865,000	\$158,460,500	\$175,325,500	\$428,207,000
General Improvements	\$4,750,000	\$11,418,800	\$16,168,800	\$25,432,000
Recycled Water	\$2,857,000	\$20,387,500	\$23,244,500	\$23,675,000
Contingency	\$1,500,000	\$8,000,000	\$9,500,000	\$19,500,000
Totals:	\$45,319,000*	\$307,352,340*	\$352,671,340	\$805,772,000

*Approval of FY 2018-19 projects may commit approximately \$31.2 million in future fiscal years. For additional information on proposed yearly budgets, please reference the 2018 Ten-Year CIP Section.

FY 2018-19 CIB Major Project Emphasis

Although the CIB is comprised of budgets for many individual projects, there are several major projects that together account for most of the total capital budget. In FY 2018-19, the emphasis will be on twelve large projects (those projects over \$1 million), which together account for \$33.5 million or 74 percent of the total CIB for the year. Each major project is summarized as follows:

1. Solids Handling Facility Improvements		
FY 2018-19 Budget: \$5,715,000	Estimated total project cost:	\$82,100,000
	Estimated completion date:	FY 2023-24
This project will improve the Solids Handling Facility at the treatment plant by replacing the old centrifuges, improving sludge blending, and most importantly replacing the vintage wet scrubber on the incinerators. Other improvements are being evaluated under this project, such as ash handling improvements.		
2. North Orinda Sewer Renovation – Phase 7		
FY 2018-19 Budget: \$3,731,000	Estimated total project cost:	\$4,367,000
	Estimated completion date:	January 2019
This project will replace or rehabilitate up to approximately 8,600 feet of small-diameter sewers located in both public right-of-way and easements within the northern portion of the City of Orinda, north of Highway 24.		
3. Lafayette Sewer Renovation – Phase 12		
FY 2018-19 Budget: \$3,397,600	Estimated total project cost:	\$4,033,600
	Estimated completion date:	January 2019
This project will replace or rehabilitate up to approximately 8,800 feet of small-diameter sewers located in both public right-of-way and easements within the City of Lafayette.		
4. Walnut Creek Sewer Renovation – Phase 12		
FY 2018-19 Budget: \$3,100,000	Estimated total project cost:	\$4,550,000
	Estimated completion date:	December 2018
This project will replace or rehabilitate up to approximately 8,500 feet of small-diameter sewers located in both public right-of-way and easements within the City of Walnut Creek.		
5. Mechanical and Concrete Renovations		
FY 2018-19 Budget: \$3,000,000	Estimated total project cost:	\$7,300,000
	Estimated completion date:	FY 2019-2020
This project will rehabilitate or replace gates and other mechanical equipment, and existing concrete structures with leaks or cracks.		
6. South Orinda Sewer Renovation – Phase 6		
FY 2018-19 Budget: \$2,758,873	Estimated total project cost:	\$4,721,000
	Estimated completion date:	December 2018
This project will replace or rehabilitate up to approximately 8,900 feet of small-diameter sewers located in both public right-of-way and easements within the southern portion of the City of Orinda, south of Highway 24.		

7. Pump Station Upgrades – Phase 1		
FY 2018-19 Budget: \$2,697,000	Estimated total project cost:	\$27,180,000
	Estimated completion date:	FY 2022-23
<p>This project will make several structural, electrical, and instrumentation improvements at the Moraga, Flush Kleen, and Orinda Crossroads Pumping Stations identified during a recent condition assessments. Replacement includes generators, piping, diesel engines, transfer switches, electrical equipment and other critical items found to be deficient or nearing the end of their useful life.</p>		
8. Collection System Sewer Renovation – Phase 1		
FY 2018-19 Budget: \$2,612,527	Estimated total project cost:	\$56,379,067
	Estimated completion date:	FY 2021-22
<p>This project is for sewer selection planning and design work for new sewer replacement projects totaling up to 36,500 feet of replacement.</p>		
9. Filter Plant & Clearwell Improvements		
FY 2018-19 Budget: \$2,457,000	Estimated total project cost:	\$22,360,000
	Estimated completion date:	FY 2023-24
<p>This project will make several structural, mechanical, electrical, and instrumentation improvements at the recycled water facilities Filter Plant and Clearwell identified during recent condition assessments. Replacement include equipment and other critical items found to be deficient or nearing the end of its useful life.</p>		
10. Information Technology (IT) Development		
FY 2018-19 Budget: \$1,750,000	Estimated total project cost:	\$7,324,794
	Estimated completion date:	FY 2025-26
<p>This project is the implementation of the IT Master Plan which includes the new Enterprise Resource Planning System (ERP), network infrastructure upgrades, Disaster Recovery/Business Continuity, Cloud based technology improvements, business application suite improvements, increasing mobile presence, Desktop technology refreshment, and Web redesign and enhancement.</p>		
11. Energy Recovery and Blower Replacement		
FY 2018-19 Budget: \$1,200,000	Estimated total project cost:	\$60,150,000
	Estimated completion date:	FY 2026-27
<p>This project will evaluate the condition of the treatment plant energy recovery and aeration blower systems. The project will evaluate the replacement and recommend improvements to the existing steam system, waste heat recovery, steam turbines, and improve the secondary treatment systems related to aeration energy requirements and activated sludge processes.</p>		
12. Plant Operations Building (POB) Seismic Upgrades		
FY 2018-19 Budget: \$1,100,000	Estimated total project cost:	\$2,530,000
	Estimated completion date:	FY 2020-21
<p>The POB houses staff for the Plant Operations and Plant Maintenance Divisions, the main Control Room, Control System Servers, Board Room, and the Multi-Purpose Room which also serves as the Emergency Operations Center. POB seismic improvements will be made to meet the Damage Control Performance Level.</p>		

CIB Modifications

The recommended CIB includes several changes compared to the previous budget. A major change has been the addition of a brief statement to each project description concerning operations and maintenance (O&M) impacts resulting from the capital improvement. Historically, all projects evaluate, analyze, and consider O&M impacts during project development. This administrative change is to highlight and coordinate these impacts with the Operating Budget. Insignificant impacts are minor cost savings or

increases to the current Operating Budget up to \$25,000. Significant impacts are costs that increase or decrease the Operating Budget over \$25,000. These impacts are usually not fully determined until after the planning phase of a project.

Other changes include the rescheduling, consolidation, phasing, modification of scope and renaming of projects as following:

Rescheduled Projects

- Water System Upgrades was authorized by the Board on December 21, 2017. This project will replace the existing air gap tank and system, replace backflow preventers, add testing stations, and include reliability and safety improvements for the potable water system at the treatment plant. The estimated total budget is \$800,000 and this scope was included and bid under the Piping Renovation – Phase 9, DP 7330.
- The Recycled Water Clearwell Repairs was authorized by the Board on March 1, 2018 and construction was awarded on April 5, 2018. This project will clean the west cell of the Clearwell, dispose of the solids, install a modular cover, and repair the east cell cover at a total estimated project cost of \$1.7 million. The budget was funded by the IT Development Project, Ultraviolet Disinfection Project, and included as a contingency project in the FY 2017-18 CIB.

Consolidation or Phasing of Existing Projects:

- The Piping Renovation – Phase 9, DP 7330, scope and budget was combined with the Treatment Plant Urgent Repairs, DP 7314, and the Water System Upgrades.
- The South Orinda Sewer Renovation – Phase 6, DP 8433, scope and budget was combined with the Collection System Urgent Repairs, DP 8434, and the Pipe Burst Blanket Contract 2017-2020, DP 8440.
- The Pumping Station Upgrades in the Collection System Program has been split into two project phases. Phase 1 will include renovation of the Moraga, Orinda Crossroads, and Flush Kleen Pumping Stations. Phase 2 will include renovation of the Martinez, Fairview, and Maltby Pumping Stations.

Modification of Scope:

- The Mechanical and Concrete Renovations, DP 7351, included up to \$800,000 of expedited construction efforts to replace the primary sedimentation tank rails, and new chain and flights.

Renaming of Projects:

- Renamed the Aeration and Energy Upgrades Project, DP 7349, to “Energy Recovery and Blower Replacement” in the Treatment Plant Program.

CEQA Compliance

The CIB is exempt from the California Environmental Quality Act (CEQA) because it is a planning study (Central San CEQA Guidelines Section 15262). Some projects included in this CIB are designated as exempt under CEQA. If appropriate, a Notice of Exemption may be filed for such projects following a future action of the Board, such as an award of a construction contract. Other projects in the CIB are designated as needing a "Negative Declaration" or "Environmental Impact Report" to comply with CEQA. Non-exempt CEQA projects will be considered for Board approval on a case-by-case basis after preparation and certification of the appropriate CEQA documentation.

The table below presents the CEQA compliance status of projects for which staff is requesting an authorization of Sewer Construction Funds. The types of CEQA documentation anticipated being required for each project are listed below:

- *Exemption:* Staff will recommend an Exemption Finding, if still appropriate, when each project receives approval consideration at a future Board meeting.
- *Negative Declaration:* Staff will prepare a Negative Declaration for the project. Board consideration of approval of the project would follow its approval of the Negative Declaration.
- *Environmental Impact Report (EIR):* Staff will direct preparation of an EIR. Board consideration of approval of the project would follow certification of the EIR.
- *CEQA Documents Completed:* For these projects, CEQA compliance has already been achieved through documents previously prepared and approved.

CEQA Compliance Summary for FY 2018-19

Program/Project		Exemption	CEQA Document Required
COLLECTION SYSTEM PROGRAM			
5991	Pleasant Hill Sewer Renovation – Phase 2	X	
6602	South Jackson Contractual Assessment District (CAD)	X	
6603	North Jackson Contractual Assessment District (CAD)	X	
8249	CSO Dump Pad Modification	X	
8419	Collection System Planning	X	
8433	South Orinda Sewer Renovation – Phase 6	X	
8435	Walnut Creek Sewer Renovation – Phase 12	X	
8436	Pump Station Upgrades Phase 1	X	
8441	Cured-in-Place Pipe (CIPP) Blanket Contract	X	
8442	Pumping Station Equipment and Piping Replacement – Phase 2	X	
8443	Large Diameter Pipeline Inspection Program	X	
8444	Force Main Inspection Program	X	
8445	North Orinda Sewer Renovation – Phase 7	X	
8446	Lafayette Sewer Renovation - Phase 12	X	
8447	Pumping Station Security Improvements	X	
8448	Manhole Modification Project	X	
8449	Collection System Modeling Support	X	
8450	Development Sewerage Support	X	
8451	Collection System Sewer Renovation	X	
TBD	Pumping Stations Upgrades – Phase 2	X	Planning is exempt; more information is needed on future aspects of this project to determine the appropriate CEQA documentation.

Program/Project		Exemption	CEQA Document Required
TREATMENT PLANT PROGRAM			
7291	Pump and Blower Building Seismic Upgrade	X	
7292	Switchgear Refurbishment – Phase 2	X	
7304	Programmable Logic Controller (PLC) Systems Upgrades	X	
7315	Applied Research and Innovations	X	
7317	Plant Control System Network Upgrades	X	
7320	Plant Energy Optimization (Cogen)	X	
7322	Fire Protection System – Phase 2	X	
7326	Equipment Replacement	X	
7327	Headworks Screenings Upgrade	X	
7328	Influent Pump Electrical Improvements	X	
7329	Furnace Burner Upgrades	X	
7330	Piping Renovation – Phase 9	X	
7339	Plant Control System I/O Replacement	X	
7341	Walnut Creek/Grayson Creek Levee Rehab		Contra Costa County Flood Control and Water Conservation District will be the Lead Agency and will determine the appropriate CEQA documentation.
7348	Solids Handling Facility Improvements	X	
7349	Energy Recovery and Blower Replacement	X	
7351	Mechanical and Concrete Renovations	X	
7352	UV Disinfection Upgrades	X	
7353	Outfall Improvements – Phase 7	X	
7354	Treatment Plant Security Improvements	X	
7355	Odor Control Upgrades – Phase 1	X	
7357	Plant-Wide Instrumentation Upgrades	X	
7358	Innovative Renewable Energy Project	X	Planning is exempt; more information is needed on future aspects of this project to determine the appropriate CEQA documentation. Will also likely require NEPA compliance as directed by DOE.
7359	Solids Conditioning Building Roof Replacement	X	
7360	Existing Plant Facilities As-Is Drawings	X	
7362	Plant Operations Building (POB) Seismic Upgrades	X	
7363	Treatment Plant Planning	X	
7364	Treatment Plant Safety Enhancement – Phase 5	X	

Program/Project		Exemption	CEQA Document Required
GENERAL IMPROVEMENTS PROGRAM			
8207	General Security and Access	X	
8227	Geographic Data Integration (GDI) Treatment Plant	X	
8230	Capital Legal Services	X	
8236	District Easement Acquisition	X	
8238	Asset Management Program Development	X	
8240	Information Technology (IT) Development	X	
8243	Server Room Relocation	X	
8247	Property and Building Improvements	X	
8248	Cyber Security	X	
8516	Equipment Acquisition	X	
8517	Vehicle Replacement Program	X	
RECYCLED WATER PROGRAM			
7306	Zone 1 Recycled Water	X	
7346	Recycled Water Distribution System Surge Analysis	X	
7361	Filter Plant and Clearwell Improvements	X	
7365	Recycled Water Clearwell Repairs	X	
TBD	Recycle Water Distribution System Renovations Program	X	

CIB – Collection System Program

The following are the major points of emphasis for the FY 2018-19 Collection System Program:

- Renovate sewers as they reach the end of their useful lives to avoid structural failure, sanitary sewer overflows, and control maintenance costs;
- Improve the reliability and operations of the pumping stations; and
- Comply with the Riverwatch settlement agreement.

The process for project identification, prioritization, and scheduling takes into consideration the following seven major components:

- Reduce impacts to customers/residents and the communities;
- Results from Central San’s InfoMaster® model, which is an advanced Geographic Information System integrated risk-based analytical asset management and capital planning tool;
- Results from Central San’s TV Inspection Program that identify lines in need of rehabilitation or replacement;
- Collection System Operations (CSO) maintenance records including overflows and stoppages;
- The Pumping Station Inventory Update, which identified necessary reliability improvements;
- Collection System Master Plan, which identified capacity limitations in the collection system; and
- Coordination with capital improvement programs for paving and pipeline projects of other agencies/utilities.

This process allows staff to establish priorities and schedules for the individual elements of the system that are incorporated into the capital budget and plan. Assessment tools, such as InfoMaster® and Closed-Circuit TV inspection, are utilized to confirm the need for projects. After priorities and schedules are set, projects proceed to design and construction. At each step of the process, the level of accuracy in project scope, schedule, and cost improves. The Collection System Program is comprised of the following projects, and planned expenditures.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Example of Project Driver(s)

Each project is described on the following pages. Each project summary includes project name, description, prioritization, purpose, operating department impact and funding source, location, budgetary information and drivers (i.e., what is the main impetus for a project). The main driver(s) for each project is (are) identified by highlighting in orange background color and **bold** text. Driver(s) that is (are) not

as significant or not relevant is (are) displayed in gray.

All projects in this program are summarized, including planned expenditures, in the following Table 2:

CIB Table 2 – FY 2018-19 Collection System Program Budget/Project Summary

Project Number	Project	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total Project Cost
5991	Pleasant Hill Sewer Renovation - Phase 2	\$460,000	\$0	\$0	\$0	\$460,000
6602	South Jackson Contractual Assessment District (CAD)	\$411,290	\$0	\$0	\$0	\$411,290
6603	North Jackson Contractual Assessment District (CAD)	\$400,000	\$0	\$0	\$0	\$400,000
8249	CSO Dump Pad Modifications	\$60,000	\$0	\$0	\$0	\$60,000
8419	Collection System Planning	\$870,000	\$100,000	\$206,000	\$412,000	\$1,588,000
8433	S. Orinda Sewer Renovation - Phase 6	\$1,962,127	\$2,758,873	\$0	\$0	\$4,721,000
8435	Walnut Creek Sewer Renovation - Phase 12	\$1,450,000	\$3,100,000	\$0	\$0	\$4,550,000
8436	Pump Station Upgrades - Phase 1	\$1,300,000	\$2,697,000	\$5,315,000	\$17,868,000	\$27,180,000
8441	CIPP Contract 2017-2020	\$300,000	\$100,000	\$103,000	\$0	\$503,000
8442	Pump Station Equipment & Piping Replacement - Phase 2	\$36,000	\$25,000	\$103,000	\$436,000	\$600,000
8443	Large Diameter Pipeline Inspection Program	\$200,000	\$50,000	\$515,000	\$1,030,000	\$1,795,000
8444	Force Main Inspection Program	\$75,000	\$50,000	\$0	\$0	\$125,000
8445	North Orinda Sewer Renovation - Phase 7	\$636,000	\$3,731,000	\$0	\$0	\$4,367,000
8446	Lafayette Sewer Renovation - Phase 12	\$636,000	\$3,397,600	\$0	\$0	\$4,033,600
8447	Pump Station Security Improvements	\$131,000	\$25,000	\$51,500	\$360,500	\$568,000
8448	Manhole Modifications	\$400,000	\$300,000	\$309,000	\$1,236,000	\$2,245,000
8449	Collection System Modeling Support	\$100,000	\$100,000	\$103,000	\$206,000	\$509,000
8450	Development Sewerage Support	\$400,000	\$250,000	\$309,000	\$1,236,000	\$2,195,000
8451	Collection System Sewer Renovation Phase 1	\$50,000	\$2,612,527	\$18,181,540	\$35,535,000	\$56,379,067
TBD	Pump Stations Upgrades - Phase 2	\$0	\$50,000	\$907,000	\$24,663,000	\$25,620,000
	Total Program	\$9,877,417	\$19,347,000	\$26,103,040	\$82,982,500	\$138,309,957

Pleasant Hill Sewer Renovation – Phase 2

Project Name	Pleasant Hill Sewer Renovation – Phase 2	Project No.	5991
Program:	Collection System	Phase:	Design
Priority Rank:	Very High	Ranking Score:	60

Purpose:

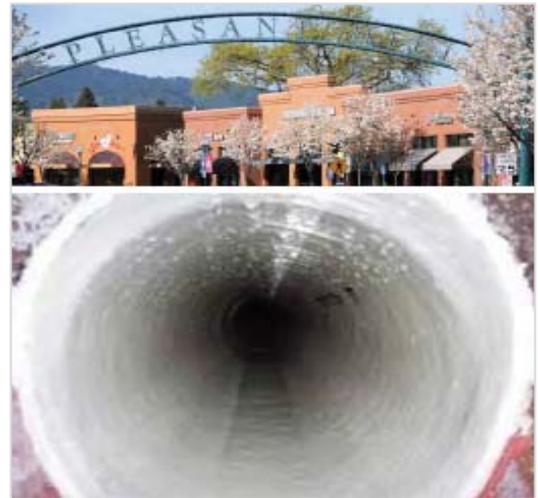
To replace and renovate small diameter sewers within the City of Pleasant Hill.

Drivers:

Central San’s 1,500+ mile collection system has pipe segments that range in age from new to more than 100 years old. Some of the pipe segments are at or near the end of their useful life as evidenced by their need for frequent maintenance, high rate of infiltration, and/or threat of structural collapse.

More than 300 miles of the small diameter sewers in the collection system were constructed prior to 1956. The methods and materials of construction used at that time do not currently perform well, and they are the source of over 90 percent of the dry weather SSOs. Central San implemented a sewer renovation program in 1991 to replace small diameter sewers to control future maintenance requirements and costs, to minimize the number of overflows, to limit the quantity of rainfall entering the collection system, and to improve the level of service provided to customers.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The Pleasant Hill Sewer Renovation – Phase 2 Project will replace or rehabilitate small diameter sewers located in both public right-of-way and easements within the City of Pleasant Hill. Design and construction for this project will be included and coordinated with the Collection System Sewer Renovation – Phase 1 Project.

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): City of Pleasant Hill

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$183,000	\$0	\$0	\$0	\$183,000
Design:	\$277,000	\$0	\$0	\$0	\$277,000
Construction:	\$0	\$0	\$0	\$0	\$0
FY Total:	\$460,000	\$0	\$0	\$0	\$460,000

South Jackson Contractual Assessment District

Project Name	South Jackson CAD	Project No.	6602
Program:	Collection System	Phase:	Construction
Priority Rank	Board Approved	Ranking Score:	N/A

Purpose:

To provide a financing mechanism for the extension of public sewers into areas that are currently served by septic tanks, referred to as Contractual Assessment Districts (CADs).

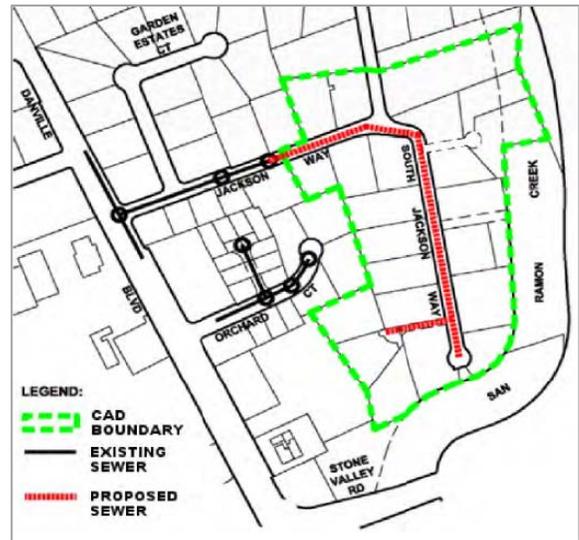
Drivers:

In certain instances, the cost to extend public sewers into an area serviced by septic tanks can be an extreme financial burden for one owner or even a small group of owners. Central San developed the CAD Program to address this financial burden. The CAD process provides a means to finance the cost of sewer improvements over time at a fixed interest rate. The CAD assessments are placed on the customers' property tax bills each year until the entire amount is reimbursed to Central San. Each CAD is presented to the Board of Directors for approval.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Description:

The South Jackson Way CAD in Alamo will install approximately 1,200 feet of 8-inch sewer and infrastructure to serve 22 properties. This is a cost neutral project offset and paid for by the participating property owners.



Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues and repaid by the CAD participants.

Location(s): Unincorporated Alamo

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$411,290	\$0	\$0	\$0	\$411,290
FY Total:	\$411,290	\$0	\$0	\$0	\$411,290

North Jackson Contractual Assessment District

Project Name	North Jackson CAD	Project No.	6603
Program:	Collection System	Phase:	Construction
Priority Rank	Board Approved	Ranking Score:	N/A

Purpose:

To provide a financing mechanism for the extension of public sewers into areas that are currently served by septic tanks, referred to as Contractual Assessment Districts (CADs).

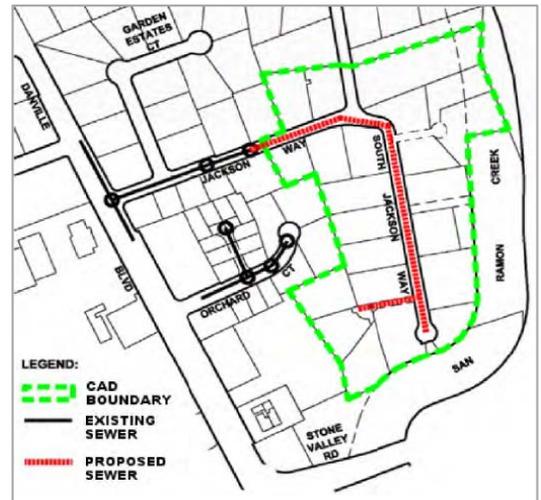
Drivers:

In certain instances, the cost to extend public sewers into an area serviced by septic tanks can be an extreme financial burden for one owner or even a small group of owners.

Central San developed the CAD Program to address this financial burden. The CAD process provides a means to finance the cost of sewer improvements over time at a fixed interest rate. The CAD assessments are placed on the customers' property tax bills each year until the entire amount is reimbursed to Central San. Each CAD is presented to the Board of Directors for approval.

Description:

The North Jackson Way CAD in Alamo will install approximately 1,150 feet of 8-inch sewer and infrastructure to serve up to 14 properties. This is a cost neutral project offset and paid for by the participating property owners.



Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues and repaid by the CAD participants.

Location(s): Unincorporated Alamo

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$400,000	\$0	\$0	\$0	\$400,000
FY Total:	\$400,000	\$0	\$0	\$0	\$400,000

CSO Dump Pad Modifications

Project Name	CSO Dump Pad Modifications	Project No.	8249
Program:	Collection System Program	Phase:	Design
Priority Rank:	Very High	Ranking Score:	60

Purpose:

This project will reconfigure the CSO dump pad to improve safety and efficiency.

Drivers:

The current CSO dump pad slopes towards the front of the truck. Water flows under the trucks as they are unloaded to the trench drain which the crews then have to walk through to get to the truck. The truck needs to be unloaded slowly to prevent it from overflowing the drain.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Description:

The following are major elements included in the project:

- Demolition of the existing concrete dump pad
- Regrade the site
- Installation of new concrete



Operating Department Impact and Funding Source:

This project will not have an impact on operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Collection System Operations Facility in Walnut Creek

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$5,000	\$0	\$0	\$0	\$5,000
Construction:	\$55,000	\$0	\$0	\$0	\$55,000
FY Total:	\$60,000	\$0	\$0	\$0	\$60,000

Collection System Planning

Project Name	Collection System Planning	Project No.	8419
Program:	Collection System	Phase:	Planning
Priority Rank:	Critical	Ranking Score:	70

Purpose:

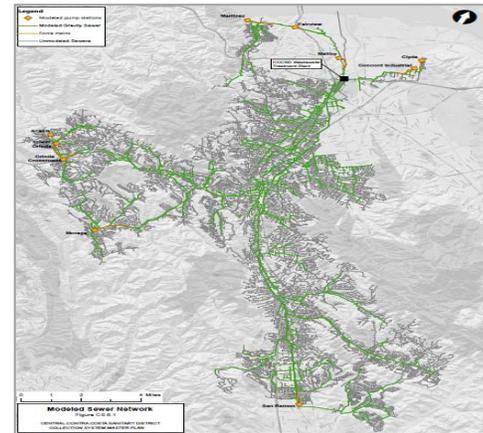
To complete technical evaluations to address regulatory drivers, assess collection system replacement needs, evaluate sewer capacities, and investigate optimization opportunities.

Drivers:

There are several important collection system and pumping station planning efforts. An InfoMaster® sewer replacement risk model is maintained by staff and used to identify and prioritize the gravity sewers in most need of renovation, update the long-term strategy for sewer replacement, and confirm long-term capital improvement plan project costs and timing.

This project also includes developing the InfoMaster® framework needed to incorporate force main and large diameter sewer inspection results into a risk-based, long-term renovation and inspection strategy. As collection system and pumping station optimizations and innovative technologies are identified, staff will continue to evaluate and determine if a pilot project would be beneficial.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The following are major elements included in the project:

- Perform capacity evaluations for proposed developments and special discharge requests
- Update InfoMaster® sewer replacement risk model and long-term sewer replacement strategy
- Update InfoMaster® to incorporate main and large diameter inspection results to develop long-term renovation and inspection strategies
- Evaluate new technologies and pilots applicable to collection system/pumping station operations

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Collection System and Pumping Stations

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$870,000	\$100,000	\$206,000	\$412,000	\$1,588,000
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$0	\$0	\$0	\$0	\$0
FY Total:	\$870,000	\$100,000	\$206,000	\$412,000	\$1,588,000

South Orinda Sewer Renovation – Phase 6

Project Name	South Orinda Sewer Renovation – Phase 6	Project No.	8433
Program:	Collection System	Phase:	Design/Construction
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To replace and renovate small diameter sewers within the southern portion of the City of Orinda.

Drivers:

Central San’s 1,500+ mile collection system has pipe segments that range in age from new to more than 100 years old. Some of the pipe segments are at or near the end of their useful life as evidenced by their need for frequent maintenance, high rate of infiltration, and/or threat of structural collapse.

More than 300 miles of the small diameter sewers in the collection system were constructed prior to 1956. The methods and materials of construction used at that time do not currently perform well, and they are the source of over 90 percent of the dry weather SSOs. Central San implemented a sewer renovation program in 1991 to replace small diameter sewers to control future maintenance requirements and costs, to minimize the number of overflows, to limit the quantity of rainfall entering the collection system, and to improve the level of service provided to customers.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The South Orinda Sewer Renovation – Phase 6 Project will replace or rehabilitate up to approximately 8,900 feet of small diameter sewers located in both public right-of-way and easements within the southern portion of the City of Orinda, south of Highway 24.

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): City of Orinda

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$150,000	\$0	\$0	\$0	\$150,000
Design:	\$400,000	\$0	\$0	\$0	\$400,000
Construction:	\$1,412,127	\$2,758,873	\$0	\$0	\$4,171,000
FY Total:	\$1,962,127	\$2,758,873	\$0	\$0	\$4,721,000

Walnut Creek Sewer Renovation – Phase 12

Project Name	Walnut Creek Sewer Renovation – Phase 12	Project No.	8435
Program:	Collection System	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To replace and renovate small diameter sewers within the City of Walnut Creek.

Drivers:

Central San’s 1,500+ mile collection system has pipe segments that range in age from new to more than 100 years old. Some of the pipe segments are at or near the end of their useful life as evidenced by their need for frequent maintenance, high rate of infiltration, and/or threat of structural collapse.

More than 300 miles of the small diameter sewers in the collection system were constructed prior to 1956. The methods and materials of construction used at that time do not currently perform well, and they are the source of over 90 percent of the dry weather SSOs. Central San implemented a sewer renovation program in 1991 to replace small diameter sewers to control future maintenance requirements and costs, to minimize the number of overflows, to limit the quantity of rainfall entering the collection system, and to improve the level of service provided to customers.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The Walnut Creek Sewer Renovation - Phase 12 Project will replace or rehabilitate up to approximately 8,500 feet of small diameter sewers located in both public right-of-way and easements.

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): City of Walnut Creek and Unincorporated Contra Costa County

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$150,000	\$0	\$0	\$0	\$150,000
Design:	\$400,000	\$0	\$0	\$0	\$400,000
Construction:	\$900,000	\$3,100,000	\$0	\$0	\$4,000,000
FY Total:	\$1,450,000	\$3,100,000	\$0	\$0	\$4,550,000

Pumping Station Upgrades – Phase 1

Project Name	Pumping Station Upgrades – Phase 1	Project No.	8436
Program:	Collection System	Phase:	Design
Priority Rank:	Critical	Ranking Score:	80

Purpose:

To address aging infrastructure and reliability needs at the Moraga, Flush Kleen, and Orinda Crossroads Pumping Stations. This project also includes the replacement of the metering in the North Main Metering Vault.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Drivers:

As part of the Comprehensive Wastewater Master Plan (CWMP), a comprehensive condition assessment of the pumping stations has identified several structural, mechanical, electrical, and instrumentation improvements. An Arc Flash Study has also identified several improvements required at these pumping stations.



Description:

The following are major elements included in the project:

- Add grinder(s) at the Moraga Pumping Station
- Construct surge tank canopy at Orinda Crossroads Pumping Station
- Replace wet weather diesel engines at Moraga and Orinda Crossroads Pumping Stations
- Replace backup generators and automatic transfer switch improvements
- Recondition or replace pumps, valves, and gates
- Repair/recoat piping and concrete
- Major electrical/controls replacement, including Arc Flash Study recommendations
- Replace worn control panels and seismically brace control panels and electrical cabinets
- Improve safety devices such as replacement of gas detection systems and eye wash stations
- Replace the flowmeter inside the Concord North Main Metering Vault

Operating Department Impact and Funding Source:

Impacts on the operating budgets has yet to be determined. Project expenditures are funded from Capital Revenues.

Location(s): Moraga, Flush Kleen, and Orinda Crossroads Pumping Stations, and Concord Main Metering Vault

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$450,000	\$0	\$0	\$0	\$450,000
Design:	\$850,000	\$2,400,000	\$0	\$0	\$3,250,000
Construction:	\$0	\$297,000	\$5,315,000	\$17,868,000	\$23,480,000
FY Total:	\$1,300,000	\$2,697,000	\$5,315,000	\$17,868,000	\$27,180,000

Cured-In-Place Pipe (CIPP) Contract 2017-2020

Project Name	CIPP Contract 2017-2020	Project No.	8441
Program:	Collection System	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	75

Purpose:

Use cured-in-place pipe (CIPP) technology to repair any urgent pipelines which require immediate action.

Drivers:

Urgent pipeline projects which require immediate repairs may arise anytime during a fiscal year. Some of these repairs cannot be completed by Central San's CSO crews and there is typically not enough time to wait for incorporation into a sewer renovation project.

Description:

This project will include bidding and executing a blanket contract that will allow Central San to use a contractor to perform urgent CIPP work.

CIPP repair work may be triggered by one of the following situations:

- Structural failure of a pipe
- Imminent threat of pipe break or collapse
- Potential for a SSO

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Collection System

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$100,000	\$0	\$0	\$0	\$100,000
Construction:	\$200,000	\$100,000	\$103,000	\$0	\$403,000
FY Total:	\$300,000	\$100,000	\$103,000	\$0	\$503,000

Pumping Station (PS) Equipment and Piping Replacement - Phase 2

Project Name	PS Equipment & Piping Replacement - Phase 2	Project No.	8442
Program:	Collection System	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To replace or recondition failed and obsolete pumps, piping, valves, and other pumping station equipment; and to provide proper emergency response equipment and critical spare parts at pumping stations.

Drivers:

This project has been an ongoing replacement of aging equipment and piping in poor condition at the pumping stations.

Additionally, emergency response equipment and critical spare parts are identified to improve resiliency and reliable operations during emergency conditions, power failures, and severe wet weather conditions.

Selection of equipment is completed by Plant Operations, Plant Maintenance, and Engineering staff in coordination with the ongoing Asset Management Program.

Description:

The following are major elements included in the project:

- Install control and isolation valves for shutdown and pumping station protection
- Revise control strategies and equipment response times
- Flood protection measures and critical equipment
- Emergency bypass pumping equipment and piping
- Recondition major equipment to meet original factory specifications
- Purchase critical spare parts for major pumping station equipment

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Pumping Stations

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$36,000	\$25,000	\$103,000	\$436,000	\$600,000
FY Total:	\$36,000	\$25,000	\$103,000	\$436,000	\$600,000

Large Diameter Pipeline Inspection Program

Project Name	Large Diameter Pipeline Inspection Program	Project No.	8443
Program:	Collection System	Phase:	Planning
Priority Rank:	Critical	Ranking Score:	70

Purpose:

To assess the condition of large diameter trunks and interceptors and confirm the timing for replacement needs.

Drivers:

Central San owns 76 miles of wastewater trunks and interceptors ranging from 24-inches to 102-inches in diameter. The typical lifespan of large diameter sewers ranges from 50 to 150 years depending on pipe material, hydraulic, operating, and environmental conditions. Nearly half of Central San's large diameter pipes are over 50 years in age and should be evaluated for remaining life.

Although Central San performs CCTV inspection of large diameter sewers, CCTV inspection is not always practical and does not always provide an accurate condition assessment. For example, CCTV cannot detect external corrosion and cannot assess the condition of the pipe invert when sediment is present. A combination of CCTV inspection, enhanced CCTV with laser profiling, sonar, hydrogen sulfide monitoring, and visual walk-over surveys are recommended to assess the condition of large diameter sewers. Inspection information can be used to ensure replacement of pipelines prior to failure and appropriate timing of replacement.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

A phased large diameter inspection program was developed and prioritized based on pipeline age and consequence of failure:

- Inspect nine miles of high-risk large diameter pipelines every five years
- Inspect six miles per year of medium-risk large diameter pipelines for the first three years followed by three miles per year after the first three years (seven-year inspection frequency)
- Inspect eight miles per year of low-risk large diameter pipelines (seven-year inspection frequency)

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Collection System

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$200,000	\$50,000	\$515,000	\$1,030,000	\$1,795,000
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$0	\$0	\$0	\$0	\$0
FY Total:	\$200,000	\$50,000	\$515,000	\$1,030,000	\$1,795,000

Force Main Inspection Program

Project Name	Force Main Inspection Program	Project No.	8444
Program:	Collection System	Phase:	Planning
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To assess the condition of force mains and confirm the timing for replacement needs.

Drivers:

Central San maintains 31 force mains with a combined length of approximately 23 miles. More than 65 percent of the force mains are made of metallic materials which are prone to corrosion. The typical lifespan of force mains ranges from 50 to 100 years. Over half of the existing force mains were installed 40 or more years ago. The remaining lifespan of individual force mains are difficult to estimate without inspection-based condition assessment results.

Force main failure methods include internal corrosion, external corrosion, mechanical failures due to high pressure and surge events or due to external loads and stresses, and force main material or installation defects. Recommended force main inspection methods include CCTV inspection, pressure transient monitoring, acoustic leak detection, and electromagnetic inspection.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Source: puretechltd.com

Description:

A phased force main inspection program was developed and prioritized based on force main age and consequence of failure:

- FYs 2017-20, inspect force mains at Moraga, Orinda Crossroads, Lower Orinda, Bates Boulevard, and Wagner Ranch Pumping Stations
- FYs 2020-27, inspect force mains at San Ramon, Martinez, Fairview, Maltby, Clyde, Concord Industrial, and Acacia Pumping Stations
- Other pumping stations have a lower risk and will be inspected in a later phase

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Collection System

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$75,000	\$50,000	\$0	\$0	\$125,000
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$0	\$0	\$0	\$0	\$0
FY Total:	\$75,000	\$50,000	\$0	\$0	\$125,000

North Orinda Sewer Renovation – Phase 7

Project Name	North Orinda Sewer Renovation – Phase 7	Project No.	8445
Program:	Collection System	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To replace and renovate small diameter sewers within the northern portion of the City of Orinda.

Drivers:

Central San’s 1,500+ mile collection system has pipe segments that range in age from new to more than 100 years old. Some of the pipe segments are at or near the end of their useful life as evidenced by their need for frequent maintenance, high rate of infiltration, and/or threat of structural collapse.

More than 300 miles of the small diameter sewers in the collection system were constructed prior to 1956. The methods and materials of construction used at that time do not currently perform well, and they are the source of over 90 percent of the dry weather SSOs. Central San implemented a sewer renovation program in 1991 to replace small diameter sewers to control future maintenance requirements and costs, to minimize the number of overflows, to limit the quantity of rainfall entering the collection system, and to improve the level of service provided to customers.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The North Orinda Sewer Renovation – Phase 7 Project will replace or rehabilitate up to approximately 8,600 feet of small diameter sewers located in both public right-of-way and easements within the northern portion of the City of Orinda, north of Highway 24.

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): City of Orinda

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$203,000	\$0	\$0	\$0	\$203,000
Design:	\$322,000	\$0	\$0	\$0	\$322,000
Construction:	\$111,000	\$3,731,000	\$0	\$0	\$3,842,000
FY Total:	\$636,000	\$3,731,000	\$0	\$0	\$4,367,000

Lafayette Sewer Renovation – Phase 12

Project Name	Lafayette Sewer Renovation – Phase 12	Project No.	8446
Program:	Collection System	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To replace and renovate small diameter sewers within the City of Lafayette.

Drivers:

Central San’s 1,500+ mile collection system has pipe segments that range in age from new to more than 100 years old. Some of the pipe segments are at or near the end of their useful life as evidenced by their need for frequent maintenance, high rate of infiltration, and/or threat of structural collapse.

More than 300 miles of the small diameter sewers in the collection system were constructed prior to 1956. The methods and materials of construction used at that time do not currently perform well, and they are the source of over 90 percent of the dry weather SSOs. Central San implemented a sewer renovation program in 1991 to replace small diameter sewers to control future maintenance requirements and costs, to minimize the number of overflows, to limit the quantity of rainfall entering the collection system, and to improve the level of service provided to customers.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The Lafayette Sewer Renovation – Phase 12 Project will replace or rehabilitate up to approximately 8,800 feet of small diameter sewers located in both public right-of-way and easements within the City of Lafayette.

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): City of Lafayette

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$150,000	\$0	\$0	\$0	\$150,000
Design:	\$320,000	\$0	\$0	\$0	\$320,000
Construction:	\$166,000	\$3,397,600	\$0	\$0	\$3,563,600
FY Total:	\$636,000	\$3,397,600	\$0	\$0	\$4,033,600

Pumping Station Security Improvements

Project Name	Pumping Station Security Improvements	Project No.	8447
Program:	Collection System	Phase:	Design
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To improve physical security at the pumping stations and to protect existing critical assets.

Drivers:

In addition to worker safety, there are many critical assets that require physical security improvements to minimize the risk.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

In FY 2016-17, a comprehensive security study was completed for major Central San facilities that utilized the principles of American Water Works Association J100 Risk Analysis and Management for Critical Asset Protection methodology (RAMCAP® J100).

RAMCAP® J100 is a comprehensive approach that enables the estimation of relative risks across multiple assets while considering both malevolent and natural hazards. The RAMCAP J100 method is a 7-step process including: 1) Asset Characterization; 2) Threat Characterization; 3) Consequence Analysis; 4) Vulnerability Analysis; 5) Threat Analysis; 6) Risk/Resilience Analysis; and 7) Risk/Resilience Management.



Description:

Findings related to the pumping stations will be implemented under this project. Some improvements may be implemented in collaboration with other capital programs. In general, recommendations include:

- Increased surveillance and intrusion detection
- Access control improvements
- Perimeter fencing repair
- Increased signage and other miscellaneous security improvements

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Pumping Stations

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$131,000	\$0	\$0	\$0	\$131,000
Construction:	\$0	\$25,000	\$51,500	\$360,500	\$437,000
FY Total:	\$131,000	\$25,000	\$51,500	\$360,500	\$568,000

Manhole Modifications

Project Name	Manhole Modifications	Project No.	8448
Program:	Collection System	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To replace, repair, or raise manhole covers and top blocks to match roadway elevations in coordination with pavement restoration plans with agencies or existing conditions.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Drivers:

Central San's collection system includes over 37,000 manholes. Many of these manholes are in paved roadways, public right-of-way and private roadways, and throughout the entire service area. Continual replacement of manhole covers or repairing top blocks are needed on a yearly basis as the system ages or the roadways are rebuilt.



Description:

This project will fund the replacement or raising of manhole covers and repairing top blocks either through construction projects or reimbursements through other agency contractors through joint powers agreements.

Operating Department Impact and Funding Source:

This project does not have an impact on the operating budgets. However, if Operations were to self-perform, it would have a significant impact. Project expenditures are funded from Capital Revenues.

Location(s): Collection System

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$400,000	\$300,000	\$309,000	\$1,236,000	\$2,245,000
FY Total:	\$400,000	\$300,000	\$309,000	\$1,236,000	\$2,245,000

Collection System Modeling Support

Project Name	Collection System Modeling Support	Project No.	8449
Program:	Collection System	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To maintain and update the InfoWorks® hydrodynamic collection system model.

Drivers:

A new InfoWorks® Integrated Catchment Modeling (ICM) hydrodynamic collection system model was configured and calibrated for 190 miles of the trunk sewer system. The new model replaced an old steady-state static model that was no longer supported by vendors and did not offer the same level of accuracy or useful output information that is available with new vendor-supported state-of-the-art hydrodynamic models.

The new model is used for several critical Central San operations such as evaluating sewer capacities, identifying capacity deficiencies, developing sewer sizing criteria, evaluating impacts from increased flows due to development (paid by permit or plan review fees) and special discharges, evaluating re-routing options, and providing hydraulic grade line information that is helpful during emergencies or sewer renovation work.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The following are major elements included in the project:

- Complete migration from the previous steady-state static model to the new InfoWorks® ICM model
- Complete expansion of the trunk sewer model into high priority development areas where anticipated sewer capacity evaluations will be required
- Identify critical areas with model predicted surcharge conditions and install level monitors or smart manhole covers

Operating Department Impact and Funding Source:

This project will have a minor impact on the operating budget due to software updating and licensing costs. Project expenditures are funded from Capital Revenues.

Location(s): Collection System

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$100,000	\$100,000	\$103,000	\$206,000	\$509,000
FY Total:	\$100,000	\$100,000	\$103,000	\$206,000	\$509,000

Development Sewerage Support

Project Name	Development Sewerage Support	Project No.	8450
Program:	Collection System	Phase:	Construction
Priority Rank:	N/A	Ranking Score:	N/A

Purpose:

To provide for appropriate capitalization of Central San force account labor and other expenses for planning, design, and construction of developer installed sewer facilities.

Drivers:

Central San requires property owners to pay for main sewer extensions needed to serve their property. Where sewers are designed and installed by developers or other private parties, Central San planning, plan review, right-of-way, inspection and record drawing/mapping efforts are required to ensure that installed sewers meet Central San’s Standard Specifications for Design and Construction. These activities are capitalized under this project.

A portion of the revenue collected for plan review and inspection is credited to the Sewer Construction Fund and offsets some of the expenditures made under this capital project.

Description:

This is a cost-neutral project offset by development fees. The costs for the sewer infrastructure will ultimately be paid by the developers. This project will be used to fund right-of-way, survey, and consultant costs for developer installed sewer facilities.

Operating Department Impact and Funding Source:

This project will have a minor impact on the operating budgets; however, these costs are recovered under fees paid for by developers. Project expenditures are funded from Capital Revenues.

Location(s): Collection System

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$400,000	\$250,000	\$309,000	\$1,236,000	\$2,195,000
FY Total:	\$400,000	\$250,000	\$309,000	\$1,236,000	\$2,195,000

Collection System Sewer Renovation – Phase 1

Project Name	CS Sewer Renovation – Phase 1	Project No.	8451
Program:	Collection System	Phase:	Design/ Construction
Priority Rank:	Critical	Ranking Score:	65

Purpose:

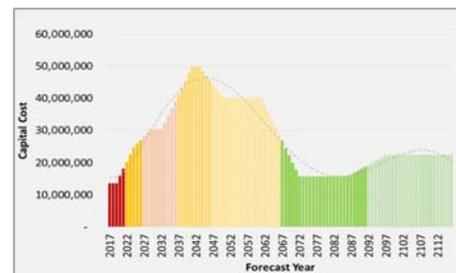
To plan and design for sewer replacement projects for collection system sewers that are near the end of their useful lives.

Drivers:

Nearly all Central San’s sewers will reach the end of their useful lives within the next 100 years. The bulk of the replacement is recommended beyond the Ten-Year CIP. Continual replacement will provide the best possible protection against SSOs. The InfoMaster® sewer replacement risk model was developed to prioritize the timing for sewer replacement and to develop a risk-based sewer replacement program. In the first five years, Central San is planning to replace an average of 7.6 miles per year followed by approximately 8.6 miles per year for the next five years.

Replacement for years 10 through 20 in the CIP increases to potentially 18.4 miles per year. The Collection System Sewer Renovation – Phase 1 will span the next five fiscal years (FYs 2018-23).

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

This project is for sewer selection planning and design work for new sewer replacement projects totaling up to 36,500 feet of replacement. These designs will be bid and split into individual projects for construction and will span two fiscal years. These projects include:

- Walnut Creek Sewer Renovation – Phase 13
- Lafayette Sewer Renovation – Phase 13
- Danville Sewer Renovation – Phase 3
- Martinez Sewer Renovation – Phase 6
- South Orinda Sewer Renovation – Phase 6
- Miscellaneous sewer replacements in Alamo, Danville, Moraga, Unincorporated Contra Costa County, and other locations or jurisdictions in the service area.

Operating Department Impact and Funding Source:

Impacts on the operating budgets has yet to be determined. Project expenditures are funded from Capital Revenues.

Location(s): Collection System

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$50,000	\$600,000	\$618,000	\$1,236,000	\$2,504,000
Design:	\$0	\$1,400,000	\$2,051,740	\$2,884,000	\$6,335,740
Construction:	\$0	\$612,527	\$15,511,800	\$31,415,000	\$47,539,327
FY Total:	\$50,000	\$2,612,527	\$18,181,540	\$35,535,000	\$56,379,067

Pumping Stations Upgrades – Phase 2

Project Name	Pumping Stations Upgrades – Phase 2	Project No.	TBD
Program:	Collection System	Phase:	Design
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To address aging infrastructure and reliability needs at the Martinez, Fairview, and Maltby Pumping Stations.

Drivers:

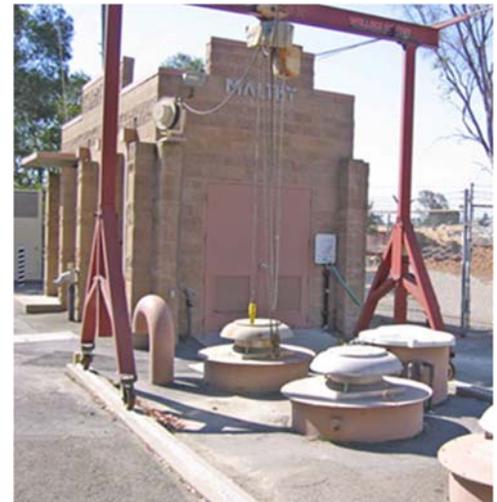
As part of the CWMP, a comprehensive condition assessment of the pumping stations has identified several structural, mechanical, electrical, and instrumentation improvements. An Arc Flash Study has also identified several improvements required at these pumping stations. This project, previously referred to as the Moraga/Crossroads Pumping Station Project (DP 8436), was combined with the Fairview/Maltby Project (DP 8429 Closed).

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Description:

The following are major elements included in the project:

- Replace corroded steel dry pits with new wetwells at the Fairview and Maltby Pumping Stations
- Replace backup generators, electrical, instrumentations and controls improvements
- Rehabilitate or replace flow meters at Martinez, Fairview, and Maltby Pumping Stations
- Recondition or replace pumps, valves, and gates
- Repair/recoat piping and concrete
- Major electrical/controls replacement, including Arc Flash Study recommendations
- Replace worn control panels and seismically brace control panels and electrical cabinets
- Improve safety devices such as replacement of gas detection systems and eye wash stations



Operating Department Impact and Funding Source:

Impacts on the operating budgets has yet to be determined. Project expenditures are funded from Capital Revenues.

Location(s): Martinez, Fairview, and Maltby Pumping Stations

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$50,000	\$0	\$0	\$50,000
Design:	\$0	\$0	\$907,000	\$2,300,000	\$3,207,000
Construction:	\$0	\$0	\$0	\$22,363,000	\$22,363,000
FY Total:	\$0	\$50,000	\$907,000	\$24,663,000	\$25,620,000

CIB – Treatment Plant Program

The following are the major points of emphasis for the FY 2018-19 Treatment Plant Program:

- Replace equipment as they reach the end of their useful lives to avoid structural and mechanical failures, reduce downtime, and control maintenance costs;
- Upgrade Central San facilities to seismic building codes and standards;
- Respond to regulatory requirements related to pending air emissions regulations; and
- Increase sustainability and energy related projects.

Asset Rehabilitation and Replacement Projects

Projects in this subprogram are targeted at asset preservation, rehabilitation, and replacement. The main projects in this program are the Piping Renovations – Phase 9 Project and Mechanical and Concrete Renovations Project, which will improve the process reliability of the treatment plant by renovating and/or replacing various piping, instrumentation, equipment, and repair concrete structures. Other projects include Ultraviolet (UV) Disinfection Equipment Upgrades, DP 7362, and Plant-Wide Instrumentation Upgrades, DP 7357, which will extend the useful life of existing equipment and/or facilities. The construction of the Headworks Screenings Upgrade Project, DP 7327, will continue from the previous year. Another significant project will be the continuation and completion of the final design of the Solids Handling Facility Improvements Project, DP 7348, which includes sludge blend tanks, solids dewatering equipment replacement (feed pumps, centrifuges, cake pumps), wet scrubber, ash handling improvements, as well as associated electrical, instrumentations and controls improvements.

Regulatory Compliance/Planning/Safety Projects

This subprogram includes projects that emphasize preparing for future regulations and treatment plant planning, which includes pilot testing various new technologies. Work will be implemented to comply with pending new air permitting requirements and the installation of incinerator emissions improvements is included in the Solids Handling Facility Improvements Project. Safety and security improvements will continue under this subprogram. Solids Conditioning Building and multiple hearth furnaces seismic improvements evaluation and design will continue under the Solids Handling Facility Improvements Project. The Plant Operations Division office building seismic improvement project will also begin.

Expansion Projects

There are no projects in the Expansion Program in FY 2018-19.

Sustainability/ Resiliency /Energy Projects

Under this subprogram, aeration and energy related projects will be initiated.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Example of Project Driver(s)

Each project is described on the following pages. Each project summary includes project name, description, prioritization, purpose, operating department impact and funding source, location, budgetary information and drivers (i.e., what is the main impetus for a project). The main driver(s) for each project is (are) identified by highlighting in orange background color and **bold** text. Driver(s) that is (are) not as significant or not relevant is (are) displayed in gray.

All projects in this program are summarized, including planned expenditures, in the following Table 3:

CIB Table 3 – FY 2018-19 Treatment Plant Program Budget/Project Summary

Project Number	Project	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total Project Cost
7291	Pump & Blower Building Seismic Upgrade	\$6,582,000	\$0	\$0	\$0	\$6,582,000
7292	Switchgear Refurbishment - Phase 2	\$770,000	\$200,000	\$226,600	\$0	\$1,196,600
7304	PLC Systems Upgrades	\$575,000	\$110,000	\$113,300	\$226,600	\$1,024,900
7315	Applied Research & Innovations	\$557,274	\$300,000	\$515,000	\$1,030,000	\$2,402,274
7317	Plant Control System Network Upgrades	\$330,000	\$100,000	\$0	\$0	\$430,000
7320	Plant Energy Optimization (Co Gen)	\$1,094,000	\$0	\$0	\$0	\$1,094,000
7322	Fire Protection System - Phase 2	\$1,406,000	\$0	\$0	\$0	\$1,406,000
7326	Equipment Replacement	\$1,166,000	\$250,000	\$0	\$0	\$1,416,000
7327	Headworks Screenings Upgrade	\$8,144,000	\$76,000	\$0	\$0	\$8,220,000
7328	Influent Pump Electrical Improvements	\$100,000	\$510,000	\$1,380,000	\$2,758,000	\$4,748,000
7329	Furnace Burner Upgrades	\$220,000	\$0	\$0	\$0	\$220,000
7330	Piping Renovation - Phase 9	\$2,566,000	\$614,000	\$0	\$0	\$3,180,000
7339	Plant Control System I/O Replacement	\$470,000	\$900,000	\$1,133,000	\$1,839,000	\$4,342,000
7341	Walnut Creek/Grayson Creek Levee Rehab	\$100,000	\$0	\$515,000	\$515,000	\$1,130,000
7348	Solids Handling Facility Improvements	\$4,975,000	\$5,715,000	\$11,130,000	\$60,280,000	\$82,100,000
7349	Energy Recovery and Blower Replacement	\$300,000	\$1,200,000	\$3,713,000	\$54,937,000	\$60,150,000
7351	Mechanical and Concrete Renovations	\$1,300,000	\$3,000,000	\$3,000,000	\$0	\$7,300,000
7352	UV Disinfection Upgrades	\$0	\$500,000	\$300,000	\$300,000	\$1,100,000
7353	Outfall Improvements - Phase 7	\$0	\$400,000	\$2,240,000	\$1,812,000	\$4,452,000
7354	Treatment Plant Security Improvements	\$87,000	\$50,000	\$788,000	\$915,000	\$1,840,000
7355	Odor Control Upgrades - Phase 1	\$44,000	\$200,000	\$824,000	\$2,935,000	\$4,003,000
7357	Plant-Wide Instrumentation Upgrades	\$100,000	\$190,000	\$515,000	\$1,236,000	\$2,041,000
7358	Innovative Renewable Energy Project	\$300,000	\$0	\$100,000	\$200,000	\$600,000
7359	Solids Conditioning Building Roof Replacement	\$500,000	\$800,000	\$0	\$0	\$1,300,000
7360	Existing Plant Facilities As-Is Drawings	\$100,000	\$100,000	\$103,000	\$51,500	\$354,500
7362	Plant Operations Building (POB) Seismic Upgrades	\$400,000	\$1,100,000	\$1,030,000	\$0	\$2,530,000
7363	Treatment Plant Planning	\$450,000	\$450,000	\$566,500	\$1,133,000	\$2,599,500
7364	Treatment Plant Safety Enhancement - Phase 5	\$0	\$100,000	\$100,000	\$0	\$200,000
	Total Program	\$32,636,274	\$16,865,000	\$28,292,400	\$130,168,100	\$207,961,774

Pump and Blower Building Seismic Upgrade

Project Name	Pump and Blower Building Seismic Upgrade	Project No.	7291
Program:	Treatment Plant	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	65

Purpose:

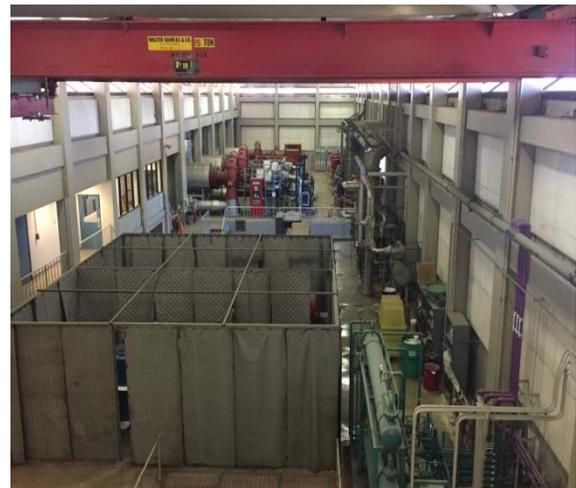
To improve the seismic safety of the Pump and Blower Building.

Drivers:

In January 2008, the State of California adopted the 2007 California Building Code (2007 CBC). Among the updates in the 2007 CBC were significant changes to seismic design. In 2009, a seismic evaluation was completed for the treatment plant facilities (Martinez Wastewater Treatment Plant Seismic Vulnerability Assessment of Selected Facilities, December 2009). Included in the evaluation were recommendations to bring the Pump and Blower Building up-to-date with current seismic design standards.

The Pump and Blower Building houses equipment that is critical for treatment plant operation including the aeration turbines, primary effluent pumps, standby effluent pumps, final effluent pump, plant air system, 3W pumps, and critical electrical rooms.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

Construct seismic improvements to the Pump and Blower Building as recommended by the 2009 Vulnerability Assessment to improve seismic safety. Major components include concrete shearwalls, structural steel bracings, modifying columns and beams, and other specialty seismic design upgrades to Life Safety Plus standards.

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Pump and Blower Building

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$715,000	\$0	\$0	\$0	\$715,000
Construction:	\$5,867,000	\$0	\$0	\$0	\$5,867,000
FY Total:	\$6,582,000	\$0	\$0	\$0	\$6,582,000

Switchgear Refurbishment – Phase 2

Project Name	Switchgear Refurbishment – Phase 2	Project No.	7292
Program:	Treatment Plant	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	70

Purpose:

To refurbish electrical switchgears in order to maintain the reliability of critical electrical infrastructure at the treatment plant.

Drivers:

The electrical switchgear throughout the treatment plant was installed in the 1970s and has been well maintained using preventive techniques.

Inspections in 2003 and 2004 showed that several trip units on the circuit breakers required replacement. Circuit breakers have been sent out for Class 1 reconditioning and trip unit replacement on an as-needed basis.

Description:

This project is a multi-year program to repair and replace treatment plant electrical equipment including:

- Refurbish or replace approximately 66 480V circuit breakers over a five-year period
- Replace 2400V circuit breakers and air breakers at key substations (e.g. Substations 52 and 82)
- Replace protective relays for various switchgear throughout the treatment plant



Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Several Substations within the Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$770,000	\$200,000	\$226,600	\$0	\$1,196,600
FY Total:	\$770,000	\$200,000	\$226,600	\$0	\$1,196,600

PLC Systems Upgrades

Project Name	PLC Systems Upgrades	Project No.	7304
Program:	Treatment Plant	Phase	Construction
Priority Rank	Very High	Ranking Score	50

Purpose:

To upgrade programmable logic control (PLC) systems to current technology for increased performance and improved compatibility to develop and maintain programming standards.

Drivers:

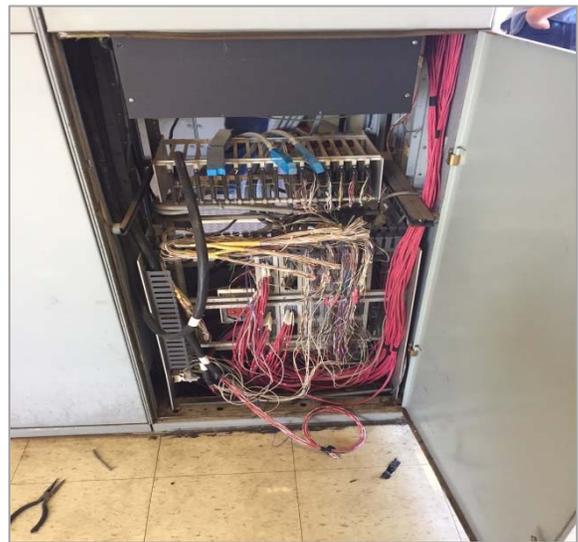
The first PLCs were installed at the treatment plant in the mid-1980s. The number of PLCs has increased from the original two PLCs to more than 30 PLCs. Programming software for the newer PLCs no longer runs efficiently on the older programming units.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Description:

The following are major elements included in the project:

- Upgrade hardware and software necessary to maintain new PLC applications
- Replace older computers with newer computers capable of running current software
- Upgrade older PLC models to maintain compatibility with new equipment, instrumentation, and controls
- Develop and document programming standards for PLC and Supervisory Control and Data Acquisition (SCADA)



Operating Department Impact and Funding Source:

This project will have minor savings for the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Miscellaneous Areas within the Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$96,700	\$0	\$0	\$0	\$96,700
Construction:	\$478,300	\$110,000	\$113,300	\$226,600	\$928,200
FY Total:	\$575,000	\$110,000	\$113,300	\$226,600	\$1,024,900

Applied Research & Innovations

Project Name	Applied Research & Innovations	Project No.	7315
Program:	Treatment Plant	Phase:	Planning
Priority Rank	Very High	Ranking Score:	50

Purpose:

To implement applied research projects that evaluate promising technologies, processes, and innovations.

Drivers:

One of Central San’s goals is to embrace innovation and to be a leader in the wastewater industry. There are several emerging and innovative nutrient removal and solids handling technologies that may offer significant savings and reduced footprint requirements when compared to conventional technologies. Innovations in equipment and instrumentation that may be beneficial will be considered.

Prior to implementing any major renovations for nutrient removal or converting solids handling technologies, staff will evaluate the feasibility of emerging technologies and implement applied research pilots. These pilots will help verify the compatibility with wastewater and facilities, increase understanding of the technology, and help determine whether to consider the technology.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

Examples of some applied research opportunities being considered include:

- Nutrient removal technologies such as membrane aerated bioreactors or aerobic granular sludge
- New technologies for large diameter and force main condition assessment

Operating Department Impact and Funding Source:

The impacts to operating budgets have not yet been determined. Project expenditures are funded from Capital Revenues.

Location(s): Miscellaneous Areas within the Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$557,274	\$300,000	\$515,000	\$1,030,000	\$2,402,274
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$0	\$0	\$0	\$0	\$0
FY Total:	\$557,274	\$300,000	\$515,000	\$1,030,000	\$2,402,274

Plant Control System Network Upgrades

Project Name	Plant Control System Network Upgrades	Project No.	7317
Program:	Treatment Plant	Phase:	Construction
Priority Rank	Very High	Ranking Score:	60

Purpose:

To upgrade the Plant Control System Ethernet Network to Industrial Ethernet standards.

Drivers:

In 2006, Central San’s treatment plant installed a new Ethernet based supervisory control and data acquisition (SCADA) system. At the time the SCADA system was installed, Ethernet was limited to the servers only and was redundant. Over time, the Ethernet system expanded to the entire treatment plant, but the redundancy was not maintained. Currently, the primary path for treatment plant data traffic runs over the Ethernet system that is neither redundant nor sufficiently reliable to meet control system standards.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The following are major elements included in the project to meet industry standard redundancy and reliability standards:

- Install and configure industrial type Ethernet switches
- Install fiber optic lines for the Treatment Plant Control System
- Install industrial wireless network

Operating Department Impact and Funding Source:

This project will have minor savings for the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Miscellaneous Areas within the Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$330,000	\$100,000	\$0	\$0	\$430,000
FY Total:	\$330,000	\$100,000	\$0	\$0	\$430,000

Plant Energy Optimization – Cogeneration

Project Name	Plant Energy Optimization	Project No.	7320
Program:	Treatment Plant	Phase:	Construction
Priority Rank	Critical	Ranking Score:	70

Purpose:

To increase energy efficiency, on-site energy production, and decrease greenhouse gas emissions for the treatment plant.

Drivers:

The purpose of this project is to increase energy efficiency, reduce utility costs, and decrease carbon monoxide (CO) emissions at the treatment plant. There has been a significant increase in Pacific Gas & Electric Company costs due to CO emission limits imposed by the Bay Area Quality Management District on the cogeneration system (Cogen). Based on current utility bills, the yearly import increase is approximately \$300,000. This Project will reduce CO emissions by installing an oxidation catalyst and increase energy efficiency during hot weather operations by installing an evaporative cooling system. These improvements will help ensure regulatory compliance and reduce electrical costs.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The following energy efficiency measures include:

- Add a CO catalyst
- Add an evaporative cooler system on the intake of the Cogen
- Replace the reverse osmosis water system to the Cogen
- Modify the Cogen controls system for project elements

Operating Department Impact and Funding Source:

This project will have significant impacts (energy savings) to the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Solids Conditioning Building

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$80,000	\$0	\$0	\$0	\$80,000
Design:	\$320,000	\$0	\$0	\$0	\$320,000
Construction:	\$694,000	\$0	\$0	\$0	\$694,000
FY Total:	\$1,094,000	\$0	\$0	\$0	\$1,094,000

Fire Protection System – Phase 2

Project Name	Fire Protection System – Phase 2	Project No.	7322
Program:	Treatment Plant	Phase:	Construction
Priority Rank	Critical	Ranking Score:	65

Purpose:

To upgrade or replace treatment plant fire alarm systems.

Drivers:

Most of the fire alarm system was built in the late 1970s, and the fire alarm control panel was upgraded in the early 2000s. There are seven existing fire systems (alarm, monitoring, and suppression types) at the treatment plant. The existing fire systems are the primary notifications to the control-room operators and the occupied buildings in the event of a fire. Wiring and devices on the fire alarm system continue to be problematic and are in frequent need of repair. Repairs to the fire alarm system have become extremely complex and difficult; therefore, long-term reliable improvements to the fire alarm system are needed.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Description:

Staff anticipates the recommended improvements will be implemented over a multi-year fire improvement program:

- Phase 1 of the project, completed in 2013, replaced the outdated Headquarters Office Building fire system and corrected limited treatment plant deficiencies
- Phase 2 includes a comprehensive evaluation and implementation of recommended improvements for life safety of occupied (public and staff) areas of all staffed and critical process areas in the treatment plant



Operating Department Impact and Funding Source:

This project will have insignificant impact to the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Miscellaneous Areas within the Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$162,000	\$0	\$0	\$0	\$162,000
Design:	\$200,000	\$0	\$0	\$0	\$200,000
Construction:	\$1,044,000	\$0	\$0	\$0	\$1,044,000
FY Total:	\$1,406,000	\$0	\$0	\$0	\$1,406,000

Equipment Replacement

Project Name	Equipment Replacement	Project No.	7326
Program:	Treatment Plant	Phase:	Construction
Priority Rank	Critical	Ranking Score:	80

Purpose:

To replace pumping systems, mechanical equipment, and minor process support facilities throughout the treatment plant.

Drivers:

Several major pieces of equipment are reaching the end of their useful life and require replacement/upgrading or reconditioning. This project will be coordinated with the Asset Management Program to reduce maintenance costs, increase reliability, and improve operations through replacement or reconditioning of technologically obsolete, worn out, maintenance intensive equipment, or equipment that is no longer serviceable or supported by its manufacturer.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Description:

This project is a multi-year program to repair and replace equipment such as:

- Pumps and impellers
- Miscellaneous steam system components, traps, and accessories
- Miscellaneous air conditioning systems for buildings and motor control center rooms
- Various small pumping systems and generators
- Miscellaneous support equipment such as cranes, elevators, etc.
- Other equipment in need of immediate repair as identified by the Asset Management Program, and Maintenance and Operations staff



Operating Department Impact and Funding Source:

This project will have insignificant impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Miscellaneous Areas within the Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$1,166,000	\$250,000	\$0	\$0	\$1,416,000
FY Total:	\$1,166,000	\$250,000	\$0	\$0	\$1,416,000

Headworks Screenings Upgrade

Project Name	Headworks Screenings Upgrade	Project No.	7327
Program:	Treatment Plant	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	75

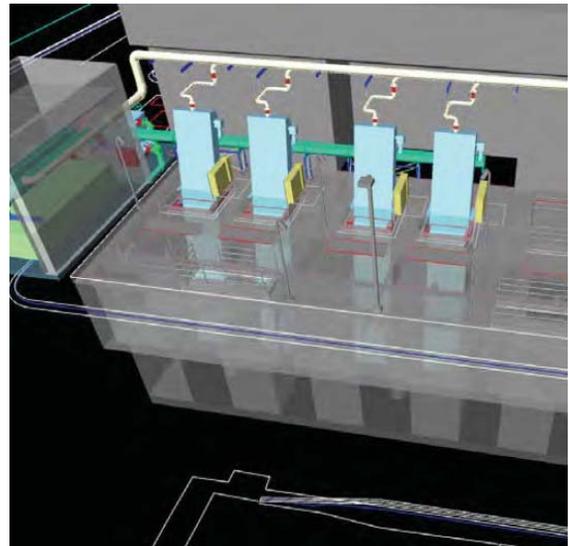
Purpose:

To separate and remove screenings and plastics from the influent wastewater.

Drivers:

The current screenings operation utilizes coarse bar screens installed approximately 25 years ago at the Headworks to separate screenings. The screenings are then processed by grinders and reintroduced immediately downstream of the screens. This operation does not remove any of the plastics in the wastewater which contribute to fouling of numerous liquid and solids stream processes and equipment and may contribute to furnace acid gas emission impacting future regulations. Screenings removal will optimize operations, protect downstream treatment plant facilities, extend downstream equipment life, minimize screenings downtime due to grinder hopper overload, and reduce equipment maintenance.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The project investigated the current Headworks screening operation and recommended the most strategic and cost-effective screenings removal improvements. The project includes the following major elements:

- Replace four existing ¾-inch bar screens with four new multi-rake ¼-inch bar screens
- Install new screenings washer/compactors, sluiceway, and screenings handling facility
- Replace two existing 4-inch bar racks with two re-purposed existing ¾-inch bar screens, hoppers, and grinders

Operating Department Impact and Funding Source:

This project will have significant impact (increased disposal costs) on the operating budgets. The project also includes minor energy savings and long-term reduction of equipment maintenance. Project expenditures are funded from Capital Revenues.

Location(s): Headworks Facility

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$200,000	\$0	\$0	\$0	\$200,000
Design:	\$750,000	\$0	\$0	\$0	\$750,000
Construction:	\$7,194,000	\$76,000	\$0	\$0	\$7,270,000
FY Total:	\$8,144,000	\$76,000	\$0	\$0	\$8,220,000

Influent Pump Electrical Improvements

Project Name	Influent Pump Electrical Improvements	Project No.	7328
Program:	Treatment Plant	Phase:	Planning
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To address aging electrical components of the influent pumps and improve reliability.

Drivers:

The Influent Pump Facility is critical to operations. During wet weather, some of the pumps convey wastewater to the holding basins. Without the pumps, wastewater cannot be treated or stored in the basins. The Influent Pump motors are in a dry pit room below grade that is susceptible to flooding. A leak in the piping or flooding of the connected tunnels would potentially submerge the motors and the entire treatment plant would experience a catastrophic shutdown. Electrical improvements are recommended to improve reliability and resiliency. The Influent Pumps PLCs and variable frequency drives (VFDs) are outdated technology installed over 20 years ago and are becoming increasingly difficult to maintain. These VFDs have experienced multiple failure recently and are essential to managing flows, particularly during wet weather events.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

Several major improvements in the influent pumping process area include:

- Replace Influent Pumps VFDs and upgrade Influent Pumps PLCs
- Replace Influent Pumps motor(s) with immersible motor(s) or elevate to withstand flooding
- Replace Headworks Rooftop Chiller and related piping
- Add Influent Pump No. 6 for reliability and redundancy during peak wet weather events

Operating Department Impact and Funding Source:

The impacts to the operating budgets have not yet been determined. Project expenditures are funded from Capital Revenues.

Location(s): Influent Pump Station (Headworks Facility)

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$100,000	\$0	\$0	\$0	\$100,000
Design:	\$0	\$510,000	\$140,000	\$0	\$650,000
Construction:	\$0	\$0	\$1,240,000	\$2,758,000	\$3,998,000
FY Total:	\$100,000	\$510,000	\$1,380,000	\$2,758,000	\$4,748,000

Furnace Burner Upgrades

Project Name	Furnace Burner Upgrades	Project No.	7329
Program:	Treatment Plant	Phase:	Design
Priority Rank:	Critical	Ranking Score:	75

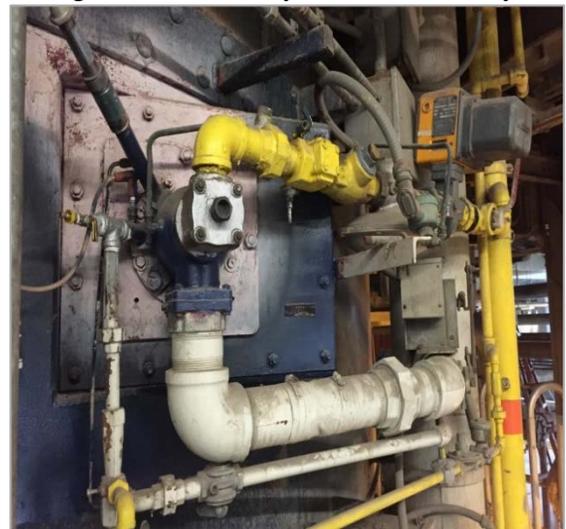
Purpose:

To improve the operational flexibility of the existing multiple hearth furnaces to comply with emission requirements and reduce supplemental fuel energy consumption. This project is being combined with the Solids Handling Facility Improvements.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Drivers:

The furnaces were constructed during the early 1970s and became fully operational in 1985. They were originally designed to incinerate commingled solid waste and sludge; however, they have historically only incinerated wastewater solids. As a result, some of the burners are not optimally sized for the actual furnace loading or for current landfill gas usage, which results in increased difficulty for consistently maintaining proper temperatures in the furnace. In addition, some of the burners, mounts, piping, and associated equipment are reaching the end of their useful lives and need to be replaced. The fuel gas piping to the burners has also developed leaks that require continued attention to meet leak guidelines. Many of the components of the control system are becoming obsolete.



Description:

The following elements are included in the project:

- Replace original fuel gas system piping using welded joints
- Evaluate diesel fuel as an additional furnace fuel source for emergency use
- Replace fuel system components for two to four of the afterburners (top hearth) and decrease burner output to low oxides of nitrogen /high mix burners for improved temperature control
- Replace main burners and controls with new low oxides of nitrogen burners and modern controls

Operating Department Impact and Funding Source:

This project will have significant impact (energy savings) on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Solids Conditioning Building

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$30,000	\$0	\$0	\$0	\$30,000
Design:	\$190,000	\$0	\$0	\$0	\$190,000
Construction:	\$0	\$0	\$0	\$0	\$0
FY Total:	\$220,000	\$0	\$0	\$0	\$220,000

Piping Renovation – Phase 9

Project Name	Piping Renovation – Phase 9	Project No.	7330
Program:	Treatment Plant	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	70

Purpose:

To inspect, rehabilitate, and replace above-grade and below-grade piping and related systems at the treatment plant.

Drivers:

During the main treatment plant improvements project in the 1970s (Stage 5A project), numerous above-grade and below-grade piping systems were installed throughout the treatment plant. These pipes convey wastewater, sludge, steam, air, and other utility services between various process areas. Many of these piping systems have been in operation for over 40 years without any major rehabilitation or replacement. Some piping systems are leaking due to corrosion and the condition of some systems is unknown because they have not been visually inspected.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The following are major elements included in the project:

- Replace miscellaneous chemical systems piping
- Replace piping, valves, and pumps throughout the treatment plant
- Replace boiler feedwater valves and steam flow transmitters
- Replace miscellaneous sludge piping, pumps, valves, floor drains, and water piping
- Replace equipment identified by the Asset Management Program, and Operations and Maintenance staff
- Water system upgrades (contingency project) and includes scope of the Treatment Plant Urgent Repairs (Project 7314 Closed)

Operating Department Impact and Funding Source:

This project will have insignificant impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Miscellaneous Areas within the Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$230,000	\$0	\$0	\$0	\$230,000
Design:	\$450,000	\$0	\$0	\$0	\$450,000
Construction:	\$1,886,000	\$614,000	\$0	\$0	\$2,500,000
FY Total:	\$2,566,000	\$614,000	\$0	\$0	\$3,180,000

Plant Control System I/O Replacement

Project Name	Plant Control System I/O Replacement	Project No.	7339
Program:	Treatment Plant	Phase:	Planning/Design
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To upgrade obsolete PLC Input and Output (I/O) cards and associated systems with current technology to maintain reliable operation and vendor support.

Drivers:

PLC I/O cards are critical for equipment and instrumentation communication to the treatment plant control system for process control and monitoring. The first treatment plant PLC I/O card was installed in the mid-1980s. The number of I/O cards in use has increased from only a few to nearly 1,800 cards. Approximately 1,100 of these I/O cards are currently obsolete. Replacement units cannot be purchased from the manufacturer, nor are they fully supported. Central San maintains an inventory of over 100 spare I/O cards to reactively replace units as they fail.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

This is a multi-phase effort to replace obsolete I/O cards and improve associated control system components. The following are major elements included in the project.

- Replace obsolete I/O with modern Schneider X80 I/O
- Retrofit I/O communication including network cards and communication cabling
- Provide uninterruptible power system (UPS) power to I/O panels
- Upgrade field wiring and devices as necessary
- Provide as-built documentation of the updated system

Operating Department Impact and Funding Source:

This project will have insignificant impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Miscellaneous Areas within the Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$200,000	\$0	\$0	\$0	\$200,000
Design:	\$270,000	\$0	\$300,000	\$0	\$570,000
Construction:	\$0	\$900,000	\$833,000	\$1,839,000	\$3,572,000
FY Total:	\$470,000	\$900,000	\$1,133,000	\$1,839,000	\$4,342,000

Walnut Creek/Grayson Creek Levee Rehab

Project Name	Walnut Creek/Grayson Creek Levee Rehab	Project No.	7341
Program:	Treatment Plant	Phase:	Design
Priority Rank:	High	Ranking Score:	40

Purpose:

To reduce the risk of flood damage to the treatment plant by raising levees through a project led by the Contra Costa County Flood Control and Water Conservation District (FCD).

Drivers:

The treatment plant site is bordered by Walnut and Grayson Creeks with levees that were built by the FCD and US Army Corps of Engineers, and currently owned and maintained by the FCD. Overtopping of the levees could catastrophically disable treatment plant operations, result in significant facility damage, negatively impact the environment due to discharge of untreated sewage, and impair the local economy. In 2007, the FCD implemented an interim flood control measure to desilt lower Walnut Creek channel and raise the western levees of Walnut and Grayson Creeks. Based on recent modeling, the levees currently provide protection from a 30-year storm. The current flood protection standard by the California Department of Water Resources is to provide protection against at least a 200-year storm with three feet of freeboard, consider for sea level rise, and climate change.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

Due to the critical nature of the treatment plant facilities, the levees will be raised to provide a protection level of a 200-year to 500-year storm with adequate freeboard. The FCD will be the lead agency, and Central San will provide support for design review and construction coordination. Both agencies have agreed to equally share the estimated project cost of \$2.2 million. Central San anticipates accepting and storing soil on buffer property that can be used as levee material to provide in-kind contributions of up to \$500,000. Staff will continue to evaluate in-kind financial contributions.

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Along the Walnut Creek and Grayson Creek Levees, Kiewit Buffer Property

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$100,000	\$0	\$0	\$0	\$100,000
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$0	\$0	\$515,000	\$515,000	\$1,030,000
FY Total:	\$100,000	\$0	\$515,000	\$515,000	\$1,130,000

Solids Handling Facility Improvements

Project Name	Solids Handling Facility Improvements	Project No.	7348
Program:	Treatment Plant	Phase:	Design
Priority Rank:	Critical	Ranking Score:	75

Purpose:

To rehabilitate and replace the sludge dewatering, sludge handling, sludge blending, ash handling, furnace air pollution control equipment, and structural upgrades to the building housing this equipment.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Drivers:

The existing furnaces have significant remaining useful life; however, other solids equipment requires replacements. The centrifuges and cake pumps have been in service for over 25 years, are costly to maintain, and spare parts are difficult to obtain. Mixing improvements are recommended for the sludge blending/storage tanks for reliable dewatering. Ash handling equipment is in poor condition and upgrades are recommended to reliably meet ash regulatory requirements. A more efficient wet scrubber and other air pollution control improvements will be needed to reliably comply with current and future air regulations. The Solids Conditioning Building (SCB) that houses the furnaces, cogeneration unit, and other critical equipment does not meet current seismic standards and the building is close to the Concord Fault. Electrical and control systems associated with this equipment will need to be replaced during the project.

Description: The following are major elements included in the project:

- Replace wet scrubber with a new venturi scrubber capable of waste heat boiler bypass
- Replace centrifuges, cake pumps, and sludge blending, storage, and mixing systems
- Furnace burner upgrades, ash handling improvements to reduce fugitive ash emissions and improve reliability and modify emergency sludge loadout facility
- Seismic improvements for the furnaces and SCB
- Replace electrical and control systems to accommodate new equipment



Operating Department Impact and Funding Source:

This project will have significant impact (energy savings) on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Solids Conditioning Building

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$1,000,000	\$0	\$0	\$0	\$1,000,000
Design:	\$3,975,000	\$5,715,000	\$1,000,000	\$0	\$10,690,000
Construction:	\$0	\$0	\$10,130,000	\$60,280,000	\$70,410,000
FY Total:	\$4,975,000	\$5,715,000	\$11,130,000	\$60,280,000	\$82,100,000

Energy Recovery and Blower Replacement

Project Name	Energy Recovery and Blower Upgrades	Project No.	7349
Program:	Treatment Plant	Phase:	Planning
Priority Rank:	Critical	Ranking Score:	80

Purpose:

To replace and improve the existing steam system, waste heat recovery, steam turbines, and improve the secondary treatment systems related to aeration energy requirements.

Drivers: Central San’s energy recovery system uses waste heat from the incinerator and cogeneration turbine to produce steam primarily for aeration blowers and other systems. The existing aeration system is from the 1970s and is outdated, inefficient, experiences significant air leaks, and has limited turndown capabilities. The existing steam piping, valves, and related equipment require a detailed assessment. Although it is advantageous to recover waste heat for producing aeration, it also creates a complicated interconnection. Disruptions in solids and steam systems can impact reliability of the secondary process. Similarly, disruptions in blower operation can impact the boiler, steam system, and impacting solids emission controls.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description: Several major energy and aeration replacements and modifications are included:

- Evaluate the condition of the existing steam generation, steam driven systems and turbine and more efficient options to produce power from our future waste heat recovery system;
- Evaluate modifications to existing Aeration tanks and the activated sludge system, including the secondary clarifiers and the hydraulics; and
- Determine impact from future related projects such as optimization for nutrient removal (BACWA Level 1) and the possible implementation and impact of a 20 million gallons per day recycled project that would produce high quality recycled water with very low/no ammonia and low total dissolved solids to feed the two local oil refineries.

Operating Department Impact and Funding Source:

Impacts to the operating budgets have not yet been determined. Project expenditures are funded from Capital Revenues.

Location(s): Pump and Blower Building, Solids Conditioning Building, Aeration Basins, Primary/Secondary Facilities, and Other Treatment Plant Areas

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$300,000	\$1,200,000	\$1,030,000	\$0	\$2,530,000
Design:	\$0	\$0	\$2,683,000	\$3,713,000	\$6,396,000
Construction:	\$0	\$0	\$0	\$51,224,000	\$51,224,000
FY Total:	\$300,000	\$1,200,000	\$3,713,000	\$54,937,000	\$60,150,000

Mechanical and Concrete Renovations

Project Name	Mechanical and Concrete Renovations	Project No.	7351
Program:	Treatment Plant	Phase:	Design/Construction
Priority Rank:	Critical	Ranking Score:	70

Purpose:

To rehabilitate or replace gates and other mechanical equipment, and existing concrete structures with leaks or severe cracking.

Drivers:

The gates, concrete, and other miscellaneous equipment and surfaces within the Headworks, Pre-Aeration, and Primary

Treatment areas are exposed to corrosive environments. Slide gates throughout these areas are essential for being able to stop and re-direct flows as required for preventive maintenance of facilities and for emergency and wet weather scenarios. Many of the slide gates have unreliable actuators, show signs of corrosion, have deteriorating seals and wedges, and in some cases, have been inoperable. Additionally, there are some structures and concrete surfaces that have spalling concrete,

corroded reinforcing bars, and show signs of significant cracking. Some concrete areas require coating to prevent further corrosion. This project is to address these aging infrastructure needs and improve the safety and reliability of existing systems.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

Several major elements are included in this project:

- Repair concrete for the West Gallery, Structure D, Primary Sedimentation Tanks, Primary Effluent Channel, Influent Structure, and Influent Structures 1 and 1A
- Replace or rehabilitate influent structure gates actuators, Influent Structure 1 and 1A gates, Pre-Aeration gates, Primary Influent gates, and Primary Effluent Channel stop plate
- Replace or rehabilitate existing polyvinyl chloride liner, 60-inch and 72-inch pipelines at Structure C, primary collector chain and flights, embedded rails, grit washers and piping, and primary scum piping and grinders

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Headworks, Pre-Aeration, and Primary Treatment Areas

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$600,000	\$500,000	\$0	\$0	\$1,100,000
Construction:	\$700,000	\$2,500,000	\$3,000,000	\$0	\$6,200,000
FY Total:	\$1,300,000	\$3,000,000	\$3,000,000	\$0	\$7,300,000

UV Disinfection Upgrades

Project Name	UV Disinfection Upgrades	Project No.	7352
Program:	Treatment Plant	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	65

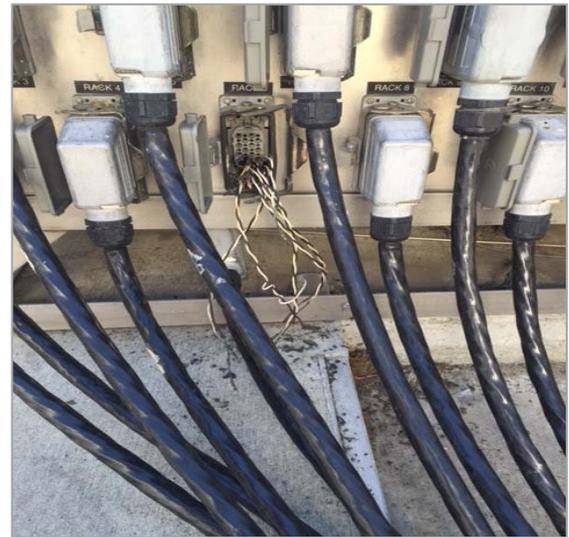
Purpose:

To rehabilitate components of the UV disinfection system and improve reliability.

Drivers:

The UV system was constructed in the mid-1990s. The old denitrification tanks were re-purposed for constructing the UV channels and some piping modifications were completed to route secondary effluent to the UV system. The existing UV technology is old, inefficient, and does not have the same controls capabilities and automated cleaning capabilities as newer UV technology. The existing system requires significant cleaning and maintenance. The existing electrical connections are worn and in some cases, have failed. Until the existing UV system can be replaced, there are several improvements needed to improve the reliability of the existing disinfection system. A new system is planning to be installed in the next several years.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

Several major elements are included in the project:

- Replace conduits and connectors between the ballasts and UV banks
- Repair and replace components of the existing UV chemical cleaning system
- Rehabilitate or replace the UV gates, actuators, stems, and seals
- Investigate methods to reduce sunlight over UV channels

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): UV Disinfection Facility

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$0	\$500,000	\$300,000	\$300,000	\$1,100,000
FY Total:	\$0	\$500,000	\$300,000	\$300,000	\$1,100,000

Outfall Improvements – Phase 7

Project Name	Outfall Improvements – Phase 7	Project No.	7353
Program:	Treatment Plant	Phase:	Planning
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To inspect the land and submarine portions of the Outfall pipeline to maintain the pipeline or repair and meet regulatory requirements.

Drivers:

Central San’s National Pollutant Discharge Elimination System Permit requires proper operation and maintenance of the Outfall pipeline that discharges treated final effluent to Suisun Bay. Every five to ten years, the 3.5 mile, 72-inch reinforced concrete Outfall pipeline built in 1958 is drained and inspected to verify pipeline alignment and condition of the pipeline and seals. As part of the last 2012 Outfall Improvements Project, over 1,500 pipe joints were inspected, and 368 joints were repaired with new seals. Of the 1,500 joints, approximately 950 have been replaced.

During the project, final effluent is routed to the Wet Weather Holding Basins and temporarily discharged for several weeks through the overflow weir structure to Walnut Creek in accordance with permit requirements.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The last inspection of the Outfall was in 2013 and is due for a new inspection. This project will include many elements as completed during the previous phase:

- Coordinate inspection and temporary bypass approval with the Regional Water Quality Control Board (RWQCB), and obtain all other necessary permits
- Test the land portion of the Outfall and install new joint seals as necessary
- Repair access manholes and inclinometers, and update pipeline survey data
- Modify 9,000 structure/final effluent facilities as required for future Filter Plant work

Operating Department Impact and Funding Source:

The impacts to the operating budgets have not yet been determined. Project expenditures are funded from Capital Revenues.

Location(s): Treatment Plant, Martinez, Suisun Bay

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$200,000	\$0	\$0	\$200,000
Design:	\$0	\$200,000	\$240,000	\$0	\$440,000
Construction:	\$0	\$0	\$2,000,000	\$1,812,000	\$3,812,000
FY Total:	\$0	\$400,000	\$2,240,000	\$1,812,000	\$4,452,000

Treatment Plant Security Improvements

Project Name	Treatment Plant Security Improvements	Project No.	7354
Program:	Treatment Plant	Phase:	Design
Priority Rank:	Very High	Ranking Score:	60

Purpose:

To improve physical security at the treatment plant and to protect existing critical assets.

Drivers:

In addition to worker safety, there are many critical assets that require physical security improvements to minimize risk.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

In FY 2016-17, a comprehensive security study was completed for major Central San facilities that utilized the principles of American Water Works Association J100 Risk Analysis and Management for Critical Asset Protection methodology (RAMCAP® J100). RAMCAP® J100 is a comprehensive approach that enables the estimation of relative risks across multiple assets while considering both malevolent and natural hazards. The RAMCAP® J100 method is a 7-step process including: 1) Asset Characterization; 2) Threat Characterization; 3) Consequence Analysis; 4) Vulnerability Analysis; 5) Threat Analysis; 6) Risk Analysis; and 7) Risk Management.



Description: Findings from this study related to the treatment plant will be implemented under this project. Some improvements may be implemented in collaboration with the pumping station and general security improvement projects that were also identified under the same study. In general, recommendations include:

- Increased surveillance and intrusion detection
- Access control improvements
- Perimeter fencing repair and increased signage
- Other miscellaneous security improvements

Operating Department Impact and Funding Source:

The impacts to the operating budgets have not yet been determined. Project expenditures are funded from Capital Revenues.

Location(s): Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$87,000	\$50,000	\$200,000	\$0	\$337,000
Construction:	\$0	\$0	\$588,000	\$915,000	\$1,503,000
FY Total:	\$87,000	\$50,000	\$788,000	\$915,000	\$1,840,000

Odor Control Upgrades – Phase 1

Project Name	Odor Control Upgrades – Phase 1	Project No.	7355
Program:	Treatment Plant	Phase:	Planning
Priority Rank:	Very High	Ranking Score:	60

Purpose:

To replace existing odor control systems for the Solids Conditioning Building (SCB), Headworks, Pre-Aeration tanks, and Primary Effluent Channel.

Drivers:

Central San's Odor Control Facilities Plan was last updated in 2006. The update was based on an established odor threshold of 20 dilutions to threshold. To meet this threshold goal at the treatment plant and to address aging equipment, upgrades are recommended to the SCB, Headworks, and Pre-Aeration Odor Control Units. The existing odor control systems use outdated technology with corrosive sodium hypochlorite systems. The odor control towers, piping, panels, ductwork, and fans are experiencing significant wear and require replacement. In addition, nearby surfaces such as concrete pads on building roofs are experiencing significant corrosion. Alternative odor control technologies will be considered that do not use sodium hypochlorite and will minimize visible misting.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The following are major elements included in the project:

- Update the Odor Control Facilities Plan and confirm odor control threshold requirements for design
- Replace the Pre-Aeration Odor Control Unit, ductwork, panels, and piping
- Replace the Headworks Odor Control Unit, ductwork, panels, and piping
- Replace the SCB Odor Control Unit, ductwork, panels, and piping

Operating Department Impact and Funding Source:

The impacts to the operating budgets have not yet been determined. Project expenditures are funded from Capital Revenues.

Location(s): Headworks, Pre-Aeration, Primary Effluent Channel

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$44,000	\$109,000	\$0	\$0	\$153,000
Design:	\$0	\$91,000	\$289,000	\$250,000	\$630,000
Construction:	\$0	\$0	\$535,000	\$2,685,000	\$3,220,000
FY Total:	\$44,000	\$200,000	\$824,000	\$2,935,000	\$4,003,000

Plant-Wide Instrumentation Upgrades

Project Name	Plant-Wide Instrumentation Upgrades	Project No.	7357
Program:	Treatment Plant	Phase:	Planning
Priority Rank:	Very High	Ranking Score:	60

Purpose:

To install new instrumentation for improved monitoring, control, and optimization of Central San facilities.

Drivers:

Collection and data leveraging is becoming increasingly useful for wastewater operations, design, and optimization. As Central San considers future equipment upgrades, potential nutrient removal and solids handling technologies, it is important to collect data that will be useful for the evaluation and design of those facilities. There are also return streams that Central San has limited data for but could be helpful when evaluating future needs. In the meantime, there are opportunities to optimize existing processes and possibly reduce operations and maintenance costs; however, key instruments are required to evaluate these opportunities.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Energy management and efficiency measures are crucial elements when striving towards net zero energy. Power meters installed at the Motor Control Centers and key equipment can be useful for identifying optimization opportunities. The concept of “Big Data” is becoming increasingly popular and is aimed at leveraging data to analyze trends to predict how a given process will perform in the future and proactively make adjustments.



Description:

The following elements are included in the project:

- Develop instrumentation upgrades strategy and phasing plan
- Install flow meters for improved monitoring of return streams
- Install power meters for Motor Control Centers and key equipment
- Install air flow meters for tracking channel aeration demands
- Install other miscellaneous instruments for improved process monitoring, control, and optimization

Operating Department Impact and Funding Source:

The impacts to the operating budgets have not yet been determined. Project expenditures are funded from Capital Revenues.

Location(s): Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$100,000	\$0	\$0	\$0	\$100,000
Design:	\$0	\$190,000	\$0	\$0	\$190,000
Construction:	\$0	\$0	\$515,000	\$1,236,000	\$1,751,000
FY Total:	\$100,000	\$190,000	\$515,000	\$1,236,000	\$2,041,000

Innovative Renewable Energy Project

Project Name	Innovative Renewable Energy Project	Project No.	7358
Program:	Treatment Plant	Phase:	Planning
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To evaluate implementation of renewable energy projects at Central San’s treatment plant.

Drivers:

Assembly Bill (AB) 32, California’s landmark greenhouse gas (GHG) reduction legislation imposed a 25,000-metric ton of carbon dioxide equivalent trigger for participation in the GHG Cap and Trade Program. As a result, Central San has modified its operation to maintain treatment plant anthropogenic (fossil-fuel derived) GHG emissions under that trigger. In some years, this has required shutdown of the Cogeneration Facility (Cogen), resulting in increased purchase of grid power, higher Pacific Gas and Electric demand charges, and loss of resiliency provided by onsite power.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



A renewable energy project, sized to meet Central San’s base electrical demand (~2.8 megawatts), could allow Central San to take Cogen offline, which would reduce purchases and onsite combustion of natural gas, reduce Central San’s emission of regulated GHGs, and enable Central San to achieve its renewable energy goals.

Description:

This project will provide the planning-phase funds to complete an evaluation of how a renewable energy project would interconnect with the existing power supply system in the treatment plant and how the treatment plant’s energy management system would need to be reconfigured. Evaluation and development of a renewable energy procurement (under traditional and alternative delivery methods) may also be included.

Operating Department Impact and Funding Source:

The impacts to the operating budgets have not yet been determined. Project expenditures are funded from Capital Revenues and O&M.

Location(s): Treatment Plant Site

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$300,000	\$0	\$100,000	\$200,000	\$600,000
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$0	\$0	\$0	\$0	\$0
FY Total:	\$300,000	\$0	\$100,000	\$200,000	\$600,000

Solids Conditioning Building Roof Replacement

Project Name	SCB Roof Replacement	Project No.	7359
Program:	Treatment Plant	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	70

Purpose:

To replace the roof of the Solids Conditioning Building.

Drivers:

Over the last 10 years, several repairs have been made to the roof to extend its useful life. Temporary measures have been implemented to protect the electrical equipment from water damage; however, the roof is in poor condition and a roof replacement is recommended as the long-term solution.

In January 2017, Central San experienced significant rainfall. During these wet weather conditions, several roof leaks were identified at the SCB. Some of the leakage is over critical electrical equipment. Failure of this equipment could result in significant disruptions to operations as well as create safety hazards. There are also several other critical assets in this building, including one (1) of the two (2) treatment plant control rooms.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The roof will be replaced for the SCB and engineered fall protection system will be installed.

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Solids Conditioning Building

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$150,000	\$0	\$0	\$0	\$150,000
Construction:	\$350,000	\$800,000	\$0	\$0	\$1,150,000
FY Total:	\$500,000	\$800,000	\$0	\$0	\$1,300,000

Existing Facilities As-Is Drawings

Project Name	Existing Facilities As-Is Drawings	Project No.	7360
Program:	Treatment Plant	Phase:	Construction
Priority Rank:	N/A	Ranking Score:	N/A

Purpose:

To develop as-is drawings in electronic computer-aided design (CAD) format for existing facilities.

Drivers:

Central San has limited as-built drawings for existing facilities, particularly facilities that were constructed over 40 years ago. Additionally, there are some facilities that have hard copy as-built drawings but are not in CAD format.

Most of Central San’s facilities are over 40 years old. As these existing facilities require rehabilitation or replacement, it will be important to have as-is CAD drawings for implementation of capital improvement projects. Additionally, it is important from an operations and resiliency standpoint to have as-is conditions documented and readily available for addressing potential urgent improvements.

Description:

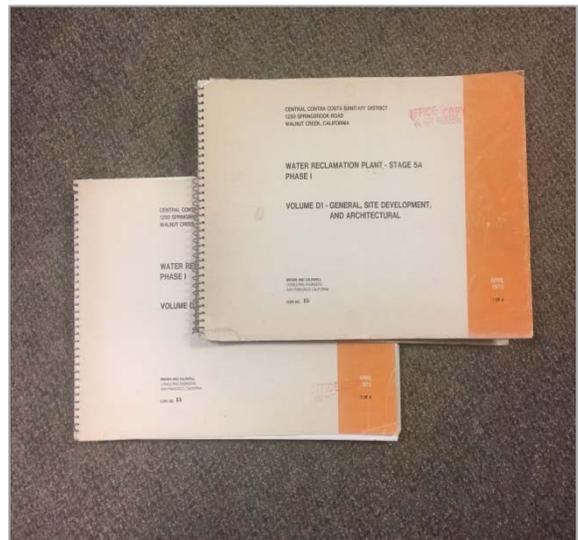
Compile available past project information, perform field investigations as required, and develop as-is CAD drawings for existing facilities. Currently, the focus for as-is drawings will be electrical facilities and treatment plant process areas where improvements are anticipated within the next five years.

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Treatment Plant

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$100,000	\$100,000	\$103,000	\$51,500	\$354,500
FY Total:	\$100,000	\$100,000	\$103,000	\$51,500	\$354,500

Plant Operations Building (POB) Seismic Upgrades

Project Name	POB Seismic Upgrades	Project No.	7362
Program:	Treatment Plant	Phase:	Design
Priority Rank:	Critical	Ranking Score:	75

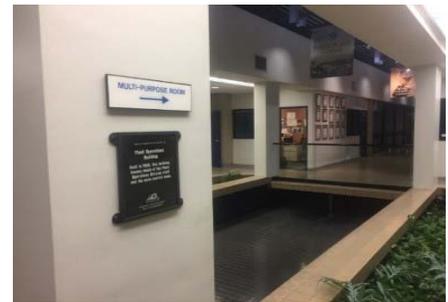
Purpose:

Improve the seismic safety of the Plant Operations Building (POB).

Drivers:

In January 2008, the State of California adopted the 2007 California Building Code (2007 CBC). Among the updates in the 2007 CBC were significant changes to seismic design. In 2009, a seismic evaluation was completed for the treatment plant facilities (Martinez Wastewater Treatment Plant Seismic Vulnerability Assessment of Selected Facilities, December 2009). Included in the evaluation were recommendations to bring the POB up to date with current seismic design standards.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



The POB houses staff for the Plant Operations and Plant Maintenance Divisions, the main Control Room, Control System servers, Board Room, and Multi-Purpose Room (MPR) which also serves as an Emergency Operations Center. The MPR is located within POB and is frequently used by the public. Central San has plans to construct security improvements to the MPR. This would involve reconfiguring the space and modifying the existing restrooms to improve public access and meet Americans with Disabilities Act (ADA) of 1990. Due to the construction, some of the work spaces may require some modifications. Any floorplan modifications will be done in a cost-effective manner.

Description:

POB seismic improvements will be made to meet the Damage Control Performance Level. Work will take place in the basement, main level, and roof which will include:

- Column strengthening by carbon fiber wrapping
- Addition of steel braces
- Installation of new steel collector beams
- MPR enhancements to provide ADA compliant restrooms, and improve treatment plant security and access

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Plant Operations Building

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$400,000	\$0	\$0	\$0	\$400,000
Construction:	\$0	\$1,100,000	\$1,030,000	\$0	\$2,130,000
FY Total:	\$400,000	\$1,100,000	\$1,030,000	\$0	\$2,530,000

Treatment Plant Planning

Project Name	Treatment Plant Planning	Project No.	7363
Program:	Treatment Plant	Phase	Planning
Priority Rank	Critical	Ranking Score	85

Purpose:

To complete technical evaluations to address regulatory drivers, assess aging infrastructure, evaluate capacity requirements, and investigate opportunities to optimize operation of existing facilities.

Drivers:

As wastewater regulations develop and new treatment technologies become available, process modifications may be needed. This project includes technical evaluations to address regulatory initiatives and maintain permit compliance (e.g. Suisun Bay nutrient modeling work and NPDES required studies and reports).

As flows and contaminant loads and concentrations change, capacity evaluations are needed to confirm capacity ratings of existing facilities and to identify any potential capacity improvements required to manage dry weather and wet weather flows and loads. Technical evaluations are completed to support treatment plant operations by evaluating optimization opportunities to improve the reliability and performance of existing treatment plant processes and facilities.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The following are major elements included in the project:

- Investigate and optimize performance of existing secondary treatment facilities
- Support and evaluate Bay Area Clean Water Agencies (BACWA) Nutrient Watershed Permit technical evaluations
- Evaluate renewable energy opportunities for the treatment plant to reduce imported fuels and greenhouse gas emissions

Operating Department Impact and Funding Source:

The impacts to operational budgets have not yet been determined. Project expenditures are funded from Capital Revenues.

Location(s): Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$450,000	\$450,000	\$566,500	\$1,133,000	\$2,599,500
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$0	\$0	\$0	\$0	\$0
FY Total:	\$450,000	\$450,000	\$566,500	\$1,133,000	\$2,599,500

Treatment Plant (TP) Safety Enhancement - Phase 5

Project Name	TP Safety Enhancement - Phase 5	Project No.	7364
Program:	Treatment Plant	Phase:	Construction
Priority Rank:	Very High	Ranking Score:	60

Purpose:

To enhance treatment plant safety through identification of safety concerns, repairs, and capital improvements.

Drivers:

Central San and the treatment plant have proactive safety programs that are administered by separate committees. These committees are responsible for addressing safety concerns at the treatment plant as identified by staff and to respond to regulatory requirements. Often this response will require construction of a capital project.

The first three phases of this project addressed various safety repairs and improvements.

Description:

The project will include treatment plant facility improvements for safety, including a second emergency exit stairway for the control room in the Solids Conditioning Building.

In addition, the project will be coordinated with safety improvements identified in the General Improvements Program and the costs will be assigned to their respective program.

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Treatment Plant

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$0	\$100,000	\$100,000	\$0	\$200,000
FY Total:	\$0	\$100,000	\$100,000	\$0	\$200,000

CIB – General Improvements Program

The General Improvements Program is primarily concerned with property, administrative buildings, management information systems including information technologies, asset management, and new equipment and vehicle needs as described in more detail below:

- **Vehicle Replacement Program** - The CIB includes a yearly allowance for the vehicle replacement budget. Specific vehicles are replaced each year as approved through the annual budget process.
- **Equipment Acquisition** - The Equipment Acquisition project comprises the items budgeted and purchased similar to the Vehicle Replacement Program, which is included in this document. The CIB includes an allowance for the equipment budget. Specific equipment items are approved through the annual budget process.
- **Management Information Systems** - The Management Information Systems subprogram reflects the importance of IT in the daily operation of Central San. Central San has developed an IT Master Plan that envisions implementing specific improvements and extends several years into the future. An allowance to meet anticipated future information technology needs has been included in the Ten-Year Capital Improvement Plan. Funding for upgrades of Central San’s Geographic Data Integration systems and Enterprise Resource Planning software platform are included in the CIB.
- **General Projects** - This includes improvements to the Headquarters Office Building (HOB), Collection System Operations Building and other properties, CIB legal expenses, easement and right-of-way acquisition, and projects related to District property improvements.
- **Asset Management** - Central San has invested significant resources in its assets, and the purpose of the Asset Management Program, which includes Treatment Plant, Collection System, General Improvements, and Recycled Water assets, is to optimize the lifecycle of these assets to deliver high quality and reliable services in a sustainable manner for customers with an acceptable level of risk.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Example of project driver(s)

Each project is described on the following pages. Each project summary includes project name, description, prioritization, purpose, operating department impact and funding source, location, budgetary information and drivers (i.e.; what is the main impetus for a project). The main driver(s) for each project is (are) identified by highlighting in orange background color and **bold** text. Driver(s) that is (are) not as significant or not relevant is (are) displayed in gray.

All projects in the General Improvements Program are summarized; including all past, current, and planned budgets required to complete each project as shown on the following Table 4:

CIB Table 4 – FY 2018-19 General Improvements Program Budget/Project Summary

Project Number	Project	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total Project Cost
8207	General Security and Access	\$194,616	\$500,000	\$103,000	\$103,000	\$900,616
8227	Geographic Data Integration (GDI) Treatment Plant	\$425,000	\$0	\$0	\$0	\$425,000
8230	Capital Legal Services	\$158,665	\$20,000	\$20,600	\$41,200	\$240,465
8236	District Easement Acquisition	\$208,047	\$50,000	\$51,500	\$103,000	\$412,547
8238	Asset Management Program Development	\$2,969,185	\$400,000	\$0	\$0	\$3,369,185
8240	Information Technology (IT) Development	\$2,148,794	\$1,750,000	\$2,420,500	\$1,005,500	\$7,324,794
8243	Server Room Relocation	\$955,430	\$880,000	\$0	\$0	\$1,835,430
8247	Property and Building Improvements	\$400,000	\$300,000	\$257,500	\$1,030,000	\$1,987,500
8248	Cyber Security	\$75,000	\$0	\$103,000	\$309,000	\$487,000
8516	Equipment Acquisition	\$676,000	\$200,000	\$206,000	\$1,030,000	\$2,112,000
8517	Vehicle Replacement Program	\$1,199,000	\$650,000	\$772,500	\$3,862,500	\$6,484,000
	Total Program	\$9,409,737	\$4,750,000	\$3,934,600	\$7,484,200	\$25,578,537

General Security and Access

Project Name	General Security and Access	Project No.	8207
Program:	General Improvements	Phase:	Planning/Design
Priority Rank:	Very High	Ranking Score:	60

Purpose:

To improve safety for employees and the public, meet safety standards, reduce exposure to liability, reduce property loss, and reduce operations and maintenance expenses.

Drivers:

Security system improvements are routinely identified and refined. Additional security measures for essential public service facilities are required. In 2016, a comprehensive security study was completed for major facilities that utilized the principles of AWWA J100 Risk Analysis and Management for Critical Asset Protection methodology. RAMPCAP J100 is a comprehensive approach that enables the estimation of relative risks across multiple assets while considering malevolent and natural hazards.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Description:

Findings from this study that are applicable to non-treatment plant facilities and properties will be implemented under this project. Improvements include:

- Installing security upgrades to the Headquarters Office Building’s Lobby to secure the area and clearly identify the public use of the building. The restrooms previously used by the public will no longer be accessible after the security work is complete. Modifications to the lobby are needed to provide a public restroom and provide for business accommodations. Cameras for surveillance, alarm system upgrades for intrusion, and associated systems will be provided.
- Access control improvements and additional card readers, perimeter fencing repair and gates
- Increased signage, improved lighting, and other miscellaneous security system improvements



Operating Department Impact and Funding Source:

Impacts to the operating budgets have not yet been determined. Project expenditures are funded from Capital Revenues.

Location(s): Central San-wide

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$194,616	\$500,000	\$103,000	\$103,000	\$900,616
FY Total:	\$194,616	\$500,000	\$103,000	\$103,000	\$900,616

Geographic Data Integration Treatment Plant

Project Name	GDI Treatment Plant	Project No.	8227
Program:	General Improvements	Phase:	Planning
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To support the Asset Management Program by providing an effective means of accessing treatment plant asset data through an interactive map linked to multiple datasets.

Drivers:

After successful implementation of the collection system Geographic Data Integration, it was determined that a similar web interface for the treatment plant would provide efficient access to asset drawings and data.

A pilot treatment plant GDI was developed and is currently used by staff.

Description:

The following major tasks are included in the project:

- Implement a geographically based asset management tool for the treatment plant
- Work with staff to optimize interface and functionality for accessing asset data
- Organize and gather asset data and link to treatment plant GDI



Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$425,000	\$0	\$0	\$0	\$425,000
FY Total:	\$425,000	\$0	\$0	\$0	\$425,000

Capital Legal Services

Project Name	Capital Legal Services	Project No.	8230
Program:	General Improvements	Phase:	Planning
Priority Rank:	N/A	Ranking Score:	N/A

Purpose:

To streamline the processing of legal bills.

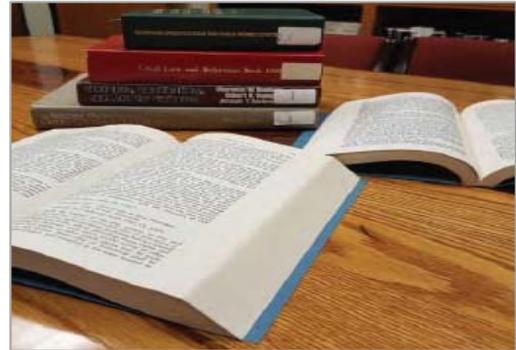
Drivers:

In the past, legal expenses were charged to individual capital projects. This process required extra staff time each month to review legal bills and get approvals from several different project managers.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Description:

Capital legal service expenses are no longer charged to individual capital projects. The processing of legal bills has been streamlined by charging legal expenses to one capital account with four charge numbers for the four programs. This reduces the amount of time all parties must spend processing the legal bill.



Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Central San-wide

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$158,665	\$20,000	\$20,600	\$41,200	\$240,465
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$0	\$0	\$0	\$0	\$0
FY Total:	\$158,665	\$20,000	\$20,600	\$41,200	\$240,465

District Easement Acquisition

Project Name	District Easement Acquisition	Project No.	8236
Program:	General Improvements	Phase:	Planning
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To improve or acquire new property land rights for existing or new sanitary sewers that are located on private properties and are not associated with a current capital project for sewer renovation work.

Drivers:

As capital projects are designed, sanitary sewer easements may have to be acquired for those specific projects. This project provides funds for the acquisition of easements for projects where specific funds are not identified within the sewer renovation capital improvement projects in the CIB. Central San is currently evaluating and updating the status of the existing capitalized easement, perfecting easements, and right-of-ways.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Description:

Examples of easements that may be acquired through this project include:

- Easements for existing sewers where no easements currently exist
- Easements for sewers relocated through other public agency projects
- Upgraded easements or access rights for existing sewers
- Upgraded easements for Central San’s Outfall pipeline
- Easements for recycled water distribution pipelines



Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Central San-wide

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$208,047	\$50,000	\$51,500	\$103,000	\$412,547
FY Total:	\$208,047	\$50,000	\$51,500	\$103,000	\$412,547

Asset Management Program Development

Project Name	Asset Management Program Development	Project No.	8238
Program:	General Improvements	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	70

Purpose:

To develop a comprehensive Asset Management Program that optimizes the lifecycle of Central San assets and delivers high quality and reliable services in a sustainable manner for customers with an acceptable level of risk.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Drivers:

In FY 2014-15, an implementation plan and Board Policy No. 15 were adopted regarding asset management.

The Asset Management Implementation Plan Summary Report was published in March 2015. The elements identified were assigned by staff to existing projects where applicable, included in maintenance efforts as continuous improvement tasks, and the remaining elements completed under this project.



Description:

Implementation will require the following:

- Complete implementation of new CityWorks computerized maintenance management system (CMMS) and improve functionality during roll-out
- Continued coordination and update of standard operating procedures, Operation & Maintenance (O&M) manuals, shop, drawings, and other reports
- Drafting to consolidate treatment plant as-built drawings and information
- Consolidate CCTV databases and update Asset Management Plan
- Utility locating and condition assessments of critical treatment plant piping
- Develop and implement the Program Management Information System (PMIS) based on eBuilder

Operating Department Impact and Funding Source:

This project will have an insignificant impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Central San-wide

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$1,189,185	\$0	\$0	\$0	\$1,189,185
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$1,780,000	\$400,000	\$0	\$0	\$2,180,000
FY Total:	\$2,969,185	\$400,000	\$0	\$0	\$3,369,185

Information Technology (IT) Development

Project Name	IT Development	Project No.	8240
Program:	General Improvements	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	70

Purpose:

To replace and upgrade Information Technology infrastructure and software as needed.

Drivers:

An Information Technology Development Plan was developed to centralize efforts and funding in the development of computer and telecommunication technology within Central San. Central San budgets IT on an annual basis.

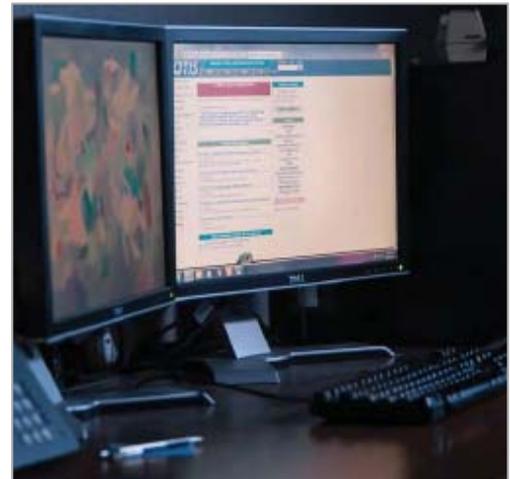
The IT Master Plan was approved in 2015 and its implementation is within the Capital Improvement Budget and the Ten-Year Capital Improvement Plan.

Description:

This project is the implementation of the IT Master Plan which includes the following major elements:

- New Enterprise Resource Planning System
- Network infrastructure upgrades
- Disaster recovery/business continuity
- Cloud based technology improvements
- Business application suite improvements
- Increasing mobile presence
- Desktop technology refreshment
- Web redesign and enhancement

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Operating Department Impact and Funding Source:

The impacts to the operating budgets have not yet been determined. Project expenditures are funded from Capital Revenues.

Location(s): Central San-wide

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$2,148,794	\$1,750,000	\$2,420,500	\$1,005,500	\$7,324,794
FY Total:	\$2,148,794	\$1,750,000	\$2,420,500	\$1,005,500	\$7,324,794

Server Room Relocation

Project Name	Server Room Relocation	Project No.	8243
Program:	General Improvements	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To relocate all servers, network, and other related computer equipment from its current location in the Plant Operations Building (POB) basement to the first level.

Drivers:

The server and equipment in the POB basement is critical for day-to-day Central San operations, customer service, communication, and data management.

This project was initiated after a major IT server failure at the main network facility in the POB basement. The existing server room is a decommissioned laboratory room which is vulnerable to failures of nearby water and wastewater process pipelines. Several alternatives for relocation of the server room to a more reliable and resilient location were evaluated, and a new server room attached to the existing POB has been designed.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The following are major elements included in the project:

- Relocation of server, network, and related computer equipment to a new Central San server room that will be integrated with the POB facility
- Re-routing of communication cabling and conduits to the new facility
- Professional migration of existing equipment

Operating Department Impact and Funding Source:

This project will have an insignificant impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Treatment Plant

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$85,000	\$0	\$0	\$0	\$85,000
Design:	\$250,000	\$0	\$0	\$0	\$250,000
Construction:	\$620,430	\$880,000	\$0	\$0	\$1,500,430
FY Total:	\$955,430	\$880,000	\$0	\$0	\$1,835,430

Property and Building Improvements

Project Name	Property and Building Improvements	Project No.	8247
Program:	General Improvements	Phase:	Design/Construction
Priority Rank:	Critical	Ranking Score:	65

Purpose:

Protect and enhance Central San's property through needed building improvements and replacement work.

Drivers:

Central San owns various properties surrounding the treatment plant that require occasional additions, improvements, and replacements, including the Imhoff Triangle, the Kiewit parcel, 4849 Imhoff Place, 4737 Imhoff Place, and others. The Kiewit parcel has served as a buffer zone for the treatment plant. The Imhoff properties also serve as a buffer between the treatment plant and nearby neighborhoods. The Imhoff properties are also used as rental property and to house Central San work groups and equipment. Central San also owns several buildings on its treatment plant site in addition to the Collection System Operations Building and Vehicle Maintenance Shop that house additional staff and equipment.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

This project will fund needed improvements to Central San's buildings, buffer properties, rental properties, and the surrounding parking lots and grounds. The project may be combined with other security and similar work in other capital projects. A near-term improvement project includes 4737 Imhoff Place which is a commercial building partially used by Central San with the remaining space rented to businesses. The building requires a comprehensive evaluation to determine the best alternatives to meet Central San's operational needs and Contra Costa County's ADA requirements.

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Central San-wide

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$50,000	\$0	\$0	\$0	\$50,000
Design:	\$150,000	\$0	\$0	\$0	\$150,000
Construction:	\$200,000	\$300,000	\$257,500	\$1,030,000	\$1,787,500
FY Total:	\$400,000	\$300,000	\$257,500	\$1,030,000	\$1,987,500

Cyber Security

Project Name	Cyber Security	Project No.	8248
Program:	General Improvements	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To assess cyber security threats and make annual improvements to cyber security controls.

Drivers:

Cyber security is the top threat facing business and critical infrastructure in the United States, according to reports and testimony from the Director of National Intelligence, the Federal Bureau of Investigation, and the Department of Homeland Security (Source: American Water Works Association). Within the last two decades, cyber security threats, including cyber terrorism, have grown to a problem of concern. It is important that Central San maintains a robust cyber security system to prevent against cyber terrorism.

Cyber security improvements will be required to enhance the security and resiliency of critical information technology infrastructure, protect Central San data and critical systems by deploying and maintaining appropriate security controls, and to promote security awareness among Central San employees.

Description:

This is an annual program that will assess cyber security threats and implement improvements to cyber security as necessary.

Operating Department Impact and Funding Source:

The impacts to the operating budgets have not yet been determined. Project expenditures are funded from Capital Revenues.

Location(s): Central San-wide

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$75,000	\$0	\$103,000	\$309,000	\$487,000
FY Total:	\$75,000	\$0	\$103,000	\$309,000	\$487,000

Equipment Acquisition

Project Name	Equipment Acquisition	Project No.	8516
Program:	General Improvements	Phase:	Construction
Priority Rank:	Very High	Ranking Score:	55

Purpose:

To provide new, safe, and cost-effective equipment for operations and maintenance of Central San facilities.

Drivers:

This project is developed as a multi-year program to procure new equipment required for operations and maintenance of assets throughout Central San.

Description:

This project is a multi-year program to procure new equipment such as:

- Power Quality and Energy Analyzer
- Circuit Breaker and Overload Test Set
- Electric Cart and Shuttle
- Color Scope Meter Portable Oscilloscope
- Self-Priming Pump with Highway Trailer
- Self-Priming Pump
- Portable Generator Set
- Pump Trailer Mounted Package

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Operating Department Impact and Funding Source:

This project will have an insignificant impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Central San-wide

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$676,000	\$200,000	\$206,000	\$1,030,000	\$2,112,000
FY Total:	\$676,000	\$200,000	\$206,000	\$1,030,000	\$2,112,000

Vehicle Replacement Program

Project Name	Vehicle Replacement Program	Project No.	8517
Program:	General Improvements	Phase:	Construction
Priority Rank:	Very High	Ranking Score:	55

Purpose:

Provide safe and cost-effective vehicle replacement.

Drivers:

Central San will budget and acquire vehicles under this project and use asset management principles and historic

replacement costs to provide an effective vehicle replacement strategy. Staff, comprised of Engineering and Operations, has forecasted approximately \$7.4 million in vehicle replacement from FY 2016-2026. A yearly budget (average costs in FY 2016-2026 plan) will be used to fund the project. Underspending in a year will result in a carryforward to future years. This approach will also recognize that due to long lead times, especially on specialized vehicles, the budget for this program can carry forward to the next fiscal year when delivery takes place.

Description:

The following vehicles are scheduled in FY 2018-19:

- Tractor with Drag Box, Loader with Rotary Cuter
- Truck Mounted Sewer Rodder
- Three Quarter-Ton 4x2 Van
- Half-Ton 4x4 Truck (3 Quantity)
- Dump Truck
- 4-Door Hybrid Passenger Car
- Midsize 4x4 Truck

Operating Department Impact and Funding Source:

This project will not have an impact on operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Central San-wide

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$1,199,000	\$650,000	\$772,500	\$3,862,500	\$6,484,000
FY Total:	\$1,199,000	\$650,000	\$772,500	\$3,862,500	\$6,484,000

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CIB – Recycled Water Program

Central San provides landscape irrigation water that meets all the requirements of the State Water Resources Control Board's Division of Drinking Water and the San Francisco Regional Water Quality Control Board for unrestricted landscape irrigation. Approved uses include irrigation at schools, parks, playgrounds, median strips and playing fields, as well as dust control and industrial process uses. Recycling water means less water is diverted from the Delta environment. Recycled water is a valuable resource, especially during drought years when water for landscape irrigation is less available because of water rationing.

In 1996 Central San and the Contra Costa Water District (CCWD) reached an agreement allowing Central San to supply recycled water to specific areas of Concord and Pleasant Hill. That area is referred to as Zone 1. About 200 million gallons of recycled water are used annually by irrigation customers, including two golf courses, a community college, an elementary school, three middle schools, a high school, and the City of Pleasant Hill. This project will ultimately deliver 1.5 million gallons per day for irrigation use in the Pleasant Hill area. Central San will continue to collaborate with local water purveyors to identify cost-effective landscape irrigation and industrial recycled water projects.

Central San currently produces over 600 million gallons per year of recycled water for use at the treatment plant site, for irrigation customers, and for a range of commercial uses. Over 200 million gallons per year of recycled water is provided to a variety of customers in Pleasant Hill, Concord, and businesses near Central San’s treatment plant in Martinez. Recycled water is used for landscape irrigation at schools, parks, private businesses, golf courses, street medians, and for commercial applications such as truck washing, concrete manufacturing, dust control, and toilet and urinal flushing. Central San uses over 300 million gallons per year at the treatment plant for process water and landscape irrigation for Central San properties. Central San continues to pursue several projects as described in the following pages.

The major emphasis of the Recycled Water Program for the next fiscal year will be to begin planning and preliminary design for improvements to Central San’s existing recycled water treatment facilities and related support facilities, to address aging infrastructure needs, and maintain reliable recycled water service to customers and for use at Central San’s treatment plant. Central San will also continue efforts to add new cost-effective customers in Central San’s Zone 1 service area, pursue outside funding assistance (such as federal and state grants for all Central San recycled water projects), and work with water supply agencies to develop recycled water supply alternatives, such as the Water Exchange Project with CCWD and Santa Clara Valley Water District (SCVWD).

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Example of Project Driver(s)

Each project is described on the following pages. Each project summary includes project name, description, purpose, operating department impact and funding source, location, budgetary information and drivers (i.e., what is the main impetus for a project). The main driver(s) for each project is (are) identified by highlighting in orange background color and **bold** text. Driver(s) that is (are) not as significant or not relevant is (are) displayed in gray.

CIB Table 5 – FY 2018-19 Recycled Water Program Budget/Project Summary

Project Number	Project	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total Project Cost
7306	Zone 1 Recycled Water	\$497,894	\$35,000	\$51,500	\$103,000	\$687,394
7346	Recycled Water Distribution System Surge Analysis	\$155,000	\$50,000	\$0	\$0	\$205,000
7361	Filter Plant & Clearwell Improvements	\$330,000	\$2,457,000	\$8,180,000	\$11,393,000	\$22,360,000
7365	ReW Clearwell Repairs	\$1,400,000	\$300,000	\$0	\$0	\$1,700,000
TBD*	ReW Distribution System Renovations Program	\$0	\$15,000	\$60,000	\$600,000	\$675,000
Total Program		\$2,382,894	\$2,857,000	\$8,291,500	\$12,096,000	\$25,627,394

*A new project starting in FY 2018-19.

Zone 1 Recycled Water

Project Name	Zone 1 Recycled Water	Project No.	7306
Program:	Recycled Water	Phase:	Construction
Priority Rank:	Very High	Ranking Score:	50

Purpose:

To provide recycled water for landscape irrigation and other identified users within the Zone 1 Project area, which includes Pleasant Hill and portions of Concord and Martinez.

Drivers:

In 2001, Central San completed the Zone 1 Implementation Plan that provided estimated connection costs and revenues for customers identified in the Zone 1 Project Agreement with Contra Costa Water District. Depending on the extent of use, demand for recycled water in Zone 1 for landscape irrigation and commercial uses could be up to 400 million gallons per year.

Central San staff evaluates potential new recycled water landscape irrigation sites near the existing recycled water distribution pipelines. New customers will continue to be added to the recycled water distribution system where technically and economically feasible.

Description:

This project provides funds for the planning, design, and construction of recycled water facilities for landscape irrigation customers and other identified uses in the Zone 1 Project area.

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Zone 1 Recycled Water Distribution System - Pleasant Hill, Concord, Martinez

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$117,000	\$0	\$0	\$0	\$117,000
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$380,894	\$35,000	\$51,500	\$103,000	\$570,394
FY Total:	\$497,894	\$35,000	\$51,500	\$103,000	\$687,394

Recycled Water (ReW) Distribution System Surge Analysis

Project Name	ReW Distribution System Surge Analysis	Project No.	7346
Program:	Recycled Water	Phase:	Planning/ Design
Priority Rank:	Critical	Ranking Score:	65

Purpose:

To conduct a pressure transient and surge analysis of the Recycled Water Distribution System.

Drivers:

The Recycled Water Distribution System has experienced several pipeline breaks over the last few years. An analysis of pressures within the Recycled Water Distribution System during different operating conditions is recommended to confirm whether the existing recycled water surge tank is adequately sized, given current recycled water demands and operations, and to optimize pumping operations and controls if required.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability

Description:

Several elements are included in the project:

- Monitor and evaluate pressure in the Recycled Water Distribution System
- Evaluate the size and optimization of recycled water surge tank and pumps
- Evaluate opportunities to manage pressure transients
- Hydraulic modeling of the distribution system



Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Recycled Water Pumping, Zone 1 Recycled Water Distribution System

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$155,000	\$50,000	\$0	\$0	\$205,000
Design:	\$0	\$0	\$0	\$0	\$0
Construction:	\$0	\$0	\$0	\$0	\$0
FY Total:	\$155,000	\$50,000	\$0	\$0	\$205,000

Filter Plant & Clearwell Improvements

Project Name	Filter Plant & Clearwell Improvements	Project No.	7361
Program:	Recycled Water	Phase:	Planning/ Design
Priority Rank:	Critical	Ranking Score:	70

Purpose:

To rehabilitate and replace components of the existing Filter Plant recycled water facilities.

Drivers:

The recycled water facilities produce disinfected tertiary effluent that meets Title 22 recycled water requirements and is used on-site for utility water and is pumped offsite for various residential and commercial recycled water uses. The Filter Plant, Clearwell structure, and related facilities were constructed in the mid-1970s. The existing Filter Plant media has been partially replaced on a routine basis over the years. The last partial media replacement effort was 15 years ago. The electrical and instrumentation infrastructure is mostly original, showing signs of significant wear, and requires replacement to ensure operational reliability. Opportunities to minimize energy demands and reduce chemical dosing requirements will be included in the rehabilitation project in addition to replacing chemical piping, valves, and pumps that are in poor condition.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The project includes the following major elements:

- Replacement of the Clearwell liner and east cell cover
- Rehabilitate and replace various electrical equipment (MCCs, switchgear, substation), and PLC's
- Replace filter media, backwash system, inspect and repair or replace filter underdrain system
- Replace or rehabilitate coagulant flash mixing, backwash gates, applied water valves, applied water pumps, and other miscellaneous equipment and valves
- Replace sodium hypochlorite piping and pumps used for Title 22 disinfection compliance
- Replace Filter Plant alum coagulant feed pumps, piping, and storage tank

Operating Department Impact and Funding Source:

The impacts to the operating budgets have not yet been determined. Project expenditures are funded from Capital Revenues.

Location(s): Filter Plant and Clearwell Structure

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$330,000	\$800,000	\$0	\$0	\$1,130,000
Design:	\$0	\$1,657,000	\$800,000	\$0	\$2,457,000
Construction:	\$0	\$0	\$7,380,000	\$11,393,000	\$18,773,000
FY Total:	\$330,000	\$2,457,000	\$8,180,000	\$11,393,000	\$22,360,000

Recycled Water Clearwell Repairs

Project Name	Recycled Water Clearwell Repairs	Project No.	7365
Program:	Recycled Water	Phase:	Construction
Priority Rank:	Critical	Ranking Score:	80

Purpose:

Commission the west cell of the Clearwell structure and perform repairs to the east cell as needed.

Drivers:

The Clearwell structure was installed in 1975. A cover was installed on the east cell to reduce chlorine usage, prevent algae growth, and maintain recycled water quality. The east cell cover has deteriorated rapidly in recent years. However, it is not feasible to repair the east cell cover due to lack of redundancy. This project will dewater, clean and dispose of solids from the west cell and install a new modular cover on the west cell to obtain redundancy and ensure reliability of the recycled water supply system.

Project Drivers	
Aging Infrastructure	Capacity
Regulatory	Sustainability



Description:

The project includes the following major elements:

- Dewater, clean, and dispose of solids from the west cell
- Installation of a new modular cover on the west cell
- Repair east cell cover as needed
- Minor mechanical modifications to operate the west cell

Operating Department Impact and Funding Source:

This project will not have an impact on the operating budgets. Project expenditures are funded from Capital Revenues.

Location(s): Clearwell Structure

Project Budget					
Phase:	Budget-to-Date	FY 2018-19	FY 2019-20	Future FYs	Total
Planning:	\$0	\$0	\$0	\$0	\$0
Design:	\$60,000	\$0	\$0	\$0	\$60,000
Construction:	\$1,340,000	\$300,000	\$0	\$0	\$1,640,000
FY Total:	\$1,400,000	\$300,000	\$0	\$0	\$1,700,000

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Ten-Year Capital Improvement Plan (FY 2018 – FY 2027)

Overview

Central San has developed a Ten-Year Capital Improvement Plan (CIP) for capital facilities and financing needs. It incorporates the recommendations from the June 2017 Comprehensive Wastewater Master Plan (CWMP). The Ten-Year CIP is updated every year. Specifically, the plan identifies and prioritizes capital projects needed to accomplish Central San's Vision, Mission, Values and Goals. It also includes planning-level cost estimates for proposed projects and projections for the various sources of revenue needed to meet the cash flow requirements. The principal purpose of the Ten-Year CIP is to provide the Board with the information needed to formulate long-range policy regarding:

- **Priority and Schedule** – Identify, prioritize, and schedule the projects necessary to accomplish Central San's Vision, Mission, Values and Goals.
- **Financing** – Plan for sufficient financial resources to complete the proposed projects.

The CWMP was a critical tool used by Central San to implement the following strategies from Central San's Strategic Plan (FY2018-2020):

- **Strive to Meet Regulatory Requirements** by striving to achieve 100 percent permit compliance in air, water, land and other regulations and by striving to minimize the number of sanitary sewer overflows by continuing Best Management Practices.
- **Embracing Technology, Innovation and Environmental Sustainability** by reducing reliance on non-renewable energy using sustainable practices that minimize waste, maximize resources, improve the community, as well as encouraging the review and testing of technology to optimize and modernize business operations.
- **Maintain Reliable Infrastructure** by managing assets optimally through their life cycle, by facilitating long-term capital renewal and replacement, and by protecting Central San personnel and assets from threats and emergencies.

The following Ten-Year CIP section provides a general description of the plan and a discussion of potential, unbudgeted future capital projects. As projects develop and are prioritized, they are grouped into the four programs (Treatment Plant, Collection System, General Improvements, and Recycled Water Program) as shown in the CIB.

A brief description of each program and a list of major projects for the Ten-Year CIP are provided in the Capital Improvement Plan sections for each of the four programs. In total, the estimated costs for all the projects listed in the CIP is \$805.7 Million.

Ten-Year CIP Budget Process

The Ten-Year CIP assumes that funds will be available to support the plan. These funds come from all revenue sources as discussed in the *Financial Overview* section. The only two discretionary sources of revenue are the sale of bonds or adjustment of the capital component of the SSC. The Board has not yet determined whether to issue bonds to fund this planned program. The Ten-Year CIP is currently funded on a year-by-year basis when the CIB for the upcoming fiscal year is formally authorized and adopted by the Board. Changes in capital revenue forecasts or changes in recommended expenditures may result in changes to this Ten-Year CIP.

2017 Comprehensive Wastewater Master Plan

The CWMP was completed in June 2017. A key deliverable of the CWMP was an updated Capital Improvement Plan for the next 20-year planning horizon. The CWMP included descriptions, rationales, and estimated costs for collection system and wastewater treatment plant capital improvement projects and on-going programs to address aging infrastructure, meet existing and anticipated regulatory requirements, accommodate planned growth, optimize energy use, and implement Central San's vision for the treatment plant that is consistent with Central San's Strategic Plan.

The CWMP was also a *critical* tool for maintaining a high level of service, establishing long-term fiscally responsible policies for our customers, and providing a clear direction for Central San. To accomplish this, the CWMP:

- Confirmed CIP projects, costs, and site layouts for future facilities
- Identified linkages among the major capital improvement projects and repair and replacement strategies such that the projects can be re-sorted and re-scheduled as changes in planning assumptions and needs occur
- Identified triggers for implementing applied research (if applicable), preliminary design, design, and construction of the recommended capital improvement projects to determine efficient “just-in-time” project implementation
- Identified new or updated policies, programs, and guidelines for the Board considerations to address overall program implementation including project prioritizations, implementation costs, project delivery methods, potential funding sources, and an estimated schedule for implementing plan elements
- Confirmed and incorporate operations, maintenance, and energy management strategies
- Accelerated and coordinated condition assessments with implementation of the asset management plan and confirm long-term repair and replacement strategies

Some of these potential future projects identified in the CWMP are not currently included in the CIP. Central San's CIP will be updated annually as projects are clarified. These future projects are not included in the CIP and amount to about \$920 million, of which approximately \$510 million may be within the next 20 years.

These projects include the following:

- Nutrient Removal BACWA Levels 2/3: Possibly beyond 20 years **
- Recycled Water Exchange (Refinery Recycled Water) Project - 20 MGD *
- Advanced Treatment/Contaminants of Emerging Concern Removal **
- Renewable Energy Projects (triggered by increased power demands from nutrient removal) **
- Concord Community Reuse Project (CCRP) Recycled Water Facilities Improvements *
- CCRP Collection System Improvements *
- CCRP Recycled Water Distribution System (Central San current plan is to wholesale recycled water, so distribution system was not evaluated or included in CIP) *

* Projects expected to be cost neutral to Central San.

** Projects identified but not currently required by regulations.

Ten-Year CIP Drivers

Projects included in the CIP address one or more of the four major drivers for implementing capital improvement projects: 1) Aging Infrastructure; 2) Regulatory; 3) Capacity; and 4) Sustainability. Most project scopes include several project elements that address a range of drivers. Below is a description for each of the four major drivers:

- ***Aging Infrastructure:*** This project driver describes projects required to maintain the performance and reliability of existing assets to ensure reliable conveyance and treatment of wastewater. Central San operates and maintains several billion dollars of assets, and several projects in each program have been initiated or are in progress to meet the replacement or rehabilitation needs for our infrastructure. Most of existing treatment plant facilities were constructed in the late 1970s and early 1980s following the passing of the Clean Water Act, and some of the collection system facilities and piping were constructed as early as the 1940s and 1950s. Central San recognizes the need to address aging infrastructure and has developed an Asset Management system.
- ***Regulatory:*** This project driver describes projects required to reliably comply with regulatory requirements that are designed to protect human health and the environment, and includes planning needed to anticipate potential future regulatory requirements. Regulatory drivers that may trigger capital improvement projects include potential changes in future state and/or federal water, air, and solids regulations. Potential regulatory drivers include: changes to existing final effluent limits to address nutrients, selenium, contaminants of emerging concern, and others; changes to California/National Toxics Rules, 303 (d) listed pollutants and micropollutants, and new virus-based disinfection criterion; reductions in greenhouse gas emission Cap and Trade Program thresholds; compliance with Federal 129 sewage sludge incineration rules, changes to air emission limits, and solids handling/management and disposal regulations; recycled water, including potential coordinated projects with water agencies on Title 22, indirect, and even indirect or direct potable reuse opportunities; and collection system regulatory requirements such as the reduction of sewer system overflows (SSOs). Occasionally, improvements are also required to improve the reliability of existing facilities to ensure 100 percent compliance with regulatory permits and to ensure protection of human health and the environment.
- ***Capacity:*** This project driver describes projects required to increase capacity of existing facilities. Capacity drivers that may trigger capital improvement projects include potential upgrades required to mitigate hydraulic bottlenecks and increase capacity of existing facilities to accommodate wastewater flows and loads. Projects that would be required to accommodate planned growth are not included in the CIP.
- ***Sustainability/Energy/Optimization:*** This project driver describes projects to minimize life-cycle costs, maximize benefits, and achieve economic stability through optimization, resiliency, resource recovery, and energy projects. Sustainability drivers that may trigger capital improvement projects include upgrades to strive towards net zero energy, recycled water projects to ensure the reliable supply of recycled water for use at Central San and for use by Central San’s customers, and upgrades to improve the resiliency of Central San facilities. Improvements to strive towards net zero energy or energy self-sufficiency include energy efficiency measures such as installing more energy efficient equipment or treatment processes, and renewable energy projects such as solar or wind.

Ten-Year CIP – Treatment Plant Program

The Treatment Plant Program includes projects that will address aging infrastructure needs, meet regulatory requirements, address any hydraulic or process capacity deficiencies, and improve sustainability or help meet sustainability related goals. The emphasis of the Ten-Year CIP – Treatment Plant Program will be on the repair and replacement of aging treatment plant infrastructure, improving existing facilities to ensure reliable compliance with increasingly stringent regulatory requirements, improving the resiliency of existing facilities against security threats and natural hazards such as seismic and flooding events, and improving overall energy efficiency.

Central San staff will continue to evaluate treatment alternatives and applied research projects and pilots to address potential nutrient removal regulations; to confirm the optimal long-term solids handling strategy; and to strive closer to net zero energy in support of Board Policy 027 – Energy.

The following tables identify major projects in the Ten-Year CIP – Treatment Plant Program. The projects have been grouped into one of three project categories: 1) Liquid Treatment Process; 2) Solids Handling Process; or 3) General Treatment Plant and Safety Improvements.

Ten-Year CIP – Treatment Plant Program Projects: Liquid Treatment Process

Project Title	Year(s)	Location	Description
Wet Weather Flow Management	2020 to 2023	Headworks, Wet Weather Holding Basins	Implement improvements for wet weather flow management and holding basin operation such as raw wastewater diversion pipeline, drain back pumping, sixth influent pump, and improved basin grading and drainage.
Primary Expansion	2023 to 2028	Pre-Aeration, Primaries	Construct up to two additional primary sedimentation tanks and corresponding new pre-aeration (grit removal) tank, improve wet weather grit handling, and replace primary sludge pumps.
Nutrient Removal Optimizations (BACWA Level 1)	2024 to 2028	Primary Sedimentation Tanks, A/N Tanks	If required by regulations, construct chemically enhanced primary treatment and modify Aeration and Nitrification tanks and secondary treatment process to operate in a seasonal nitrification/denitrification treatment mode during dry weather months.
Secondary Treatment Hydraulic Improvements	2024 to 2028	Secondary Clarifiers, UV Channel, Final Effluent Channel	Increase secondary treatment wet weather capacity to accommodate 20-year wet weather storage event. This includes a mixed liquor flow split structure for the secondary clarifiers, up to two additional secondary clarifiers, and mixed liquor channel improvements such as new gates.

Project Title	Year(s)	Location	Description
UV Hydraulic Improvements	2019 to 2021	UV Channel, Final Effluent Channel	Increase wet weather hydraulic capacity through UV Disinfection and Final Effluent Channel to accommodate 20-year wet weather storage event. This includes low lift pumps to alleviate UV channel hydraulic bottlenecks and installing a new parallel final effluent pipe.
UV Disinfection Replacement	2019 to 2024	UV Channel	Replace the aging existing UV Disinfection process with a new, more energy efficient UV Disinfection process.
Condition Assessment of Buried Pipelines	2019 to 2021	Treatment Plant	Inspect the condition of several large diameter, critical pipelines on the treatment plant site such as primary effluent, mixed liquor, secondary effluent, final effluent pipelines, and wet weather bypass pipelines. These inspections will require complicated shutdowns and temporary bypass pumping and piping.
Outfall Improvements – Phase 8	2026-2028	Treatment Plant	Inspect Outfall Pipe and make necessary repairs. This project will require complicated shutdowns and temporary bypass pumping and piping.
Energy Recovery and Blower Replacement and Energy Upgrades Project	Present to 2025	Treatment Plant	To replace and improve the existing steam system, waste heat recovery, steam turbines, and improve the secondary treatment systems related to aeration energy requirements.

**Ten-Year CIP – Treatment Plant Program Projects:
Solids Handling Process**

Project Title	Year(s)	Location	Description
Energy Production Facility Improvements	2022 to 2026	Solids Conditioning Building	Rehabilitation of aging critical electrical infrastructure, replacement of the cogeneration turbine will be required, and other miscellaneous heat recovery equipment will require upgrades.

**Ten-Year CIP – Treatment Plant Program Projects:
General Treatment Plant and Safety Improvements**

Project Title	Year(s)	Location	Description
Programmable Logic Controllers (PLC) Systems Upgrades	Present through 2028	Treatment Plant	Continued hardware and software replacement and upgrades to maintain PLCs.
Treatment Plant Planning	Present through 2028	Treatment Plant	Continued planning to identify potential capital improvement projects required to address aging infrastructure needs, regulatory drivers, capacity deficiencies, and sustainability and optimization opportunities.
Applied Research and Innovations	Present through 2028	Treatment Plant	Implement applied research projects that evaluate promising and innovative technologies and processes.
Surcharge Soil Pile Relocation	2020 to 2023	Surcharge Pile, Basin A South	Excavate and re-locate Surcharge Pile soils to Basin A South and replace soil cap.
Treatment Plant SCADA Improvements	2019 to 2023	Treatment Plant	Complete an evaluation and implementation plan for upgrade and replacement of the SCADA, PLCs, and communications networks, and determine workforce planning needs.
Treatment Plant Network Resiliency Evaluation	2023 to 2028	Treatment Plant	Complete resiliency evaluation of network system and evaluate needs for redundancy in communications, information systems, and process control systems.
Fire Protection System – Phases 3 through 6	2019 to 2022	Treatment Plant	Continue phased upgrades and replacement of the fire alarm systems throughout the treatment plant.
Warehouse Seismic Upgrades	2022 to 2025	Warehouse	Implement upgrades to the Warehouse Building to meet current seismic design standards and improve overall seismic safety.
Laboratory Seismic Upgrades	2022 to 2025	Laboratory Building	Implement upgrades to the Laboratory Building to meet current seismic design standards and improve overall seismic safety.
Miscellaneous Seismic Upgrades	2022 to 2025	Filter Plant, UV, Headworks, Fuel Oil, Hypo Tanks, Substations	Implement seismic upgrades to miscellaneous structures and process equipment around the treatment plant.
Treatment Plant Safety Enhancements – Phases 5 through 11	2019 to 2028	Treatment Plant	Continue to implement safety-related enhancements around the treatment plant to proactively address safety concerns.

Project Title	Year(s)	Location	Description
Aging Infrastructure Replacement Program	2019 to 2028	Treatment Plant	This program will fund aging infrastructure projects around the treatment plant. Aging infrastructure needs will continue to be packaged together and implemented as spinoff capital projects from this program (for example, piping replacement projects, equipment replacement, and electrical/instrumentation/control systems rehabilitation).
Plant Operations and Laboratory Data Improvements	2019 to 2021	Treatment Plant	Install user-friendly human machine interface (HMI) that integrates control system data and laboratory data for improved process analysis, trending, and optimizations.

Ten-Year CIP – Collection System Program

The Collection System Program includes projects that will address aging and deteriorating infrastructure needs, meet regulatory requirements, address any capacity deficiencies, and improve sustainability or help meet sustainability related goals. The emphasis of the Ten-Year CIP – Collection System Program will be on rehabilitating and replacing deteriorating sewers, new development and sewer expansion by developers within Central San’s service area, upgrading aging pump stations, and implementing large diameter and force main inspection programs. The inspection programs will help to update the condition of existing infrastructure and to confirm the timing and cost of rehabilitation or replacement of large diameter sewers and force mains. Overall, these projects are targeted at reducing the risk of SSO’s in Central San’s collection system.

Central San staff will continue to update the new collection system hydrodynamic model (*InfoWorks®*) to confirm the need and timing for future projects required to alleviate capacity deficiencies and to determine sewer replacement needs.

The *InfoMaster®* program uses CCTV inspection scoring results, sewer cleaning frequency data, pipe age, and other information to assign a likelihood of failure score to each pipe segment in the collection system. The consequence of failure for each pipe segment was determined using factors such as pipeline size, flow conditions, proximity to waterways, hospitals, schools, and roads. The overall risk of each segment based on the likelihood of failure and consequence of failure scores, and a decision matrix developed through workshops with staff were used to prioritize the replacement of each pipe segment. The *InfoMaster®* then helps to develop a long-term sewer replacement strategy or program based on the timing/prioritization, and cost for sewer replacement needs. Staff will then work to group sewers of concern geographically and bid as capital projects.

The following tables identify major projects in the Ten-Year CIP – Collection System Program. The projects have been grouped into one of five project categories: 1) Collection System Rehabilitation and Replacement (R&R); 2) Pump Stations; 3) Regulatory Compliance; 4) Collection System Expansion; and 5) Contractual Assessment Districts (CADS) and Development Sewerage.

**Ten-Year CIP – Collection System Program Projects:
Collection System R&R**

Project Title	Year(s)	Location	Description
Manhole Modification Project	Present through 2028	Collection System	This program will fund manhole modifications and replacement throughout the collection system.
Pipe Bursting Contract	Present through 2028	Collection System	Implement pipe bursting repair projects to address pipelines that require immediate action.
CIPP Contract	Present through 2028	Collection System	Implement cured-in-place (CIPP) repair projects to address pipelines that require immediate action.
Collection System Sewer Renovation – Phase 2	2023 to 2028	Collection System	This program will fund rehabilitation and replacement of aging sewers throughout the collection system. Aging infrastructure needs will continue to be identified, prioritized by risk, and packaged into capital projects by geographical areas throughout the collection system.

**Ten-Year CIP – Collection System Program Projects:
Pump Stations**

Project Title	Year(s)	Location	Description
Pump Station Upgrades – Phase 2	Present through 2026	Martinez, Fairview and Maltby Pump Stations	Rehabilitation and replacement of miscellaneous pumps, piping, valves, and other equipment identified in the field. Acquire necessary pump station emergency response equipment and critical spare parts.
Pump Station PLC Upgrades	2021 to 2023	Miscellaneous Pump Stations	Upgrade outdated PLC software language for all pump stations.
Pump Station Improvements	2020 to 2023	Buchanan North and South, Concord Industrial, and Other Pump Stations	Implement major pump station upgrades to address structural, mechanical, electrical, instrumentation, and other improvements.

**Ten-Year CIP – Collection System Program Projects:
Regulatory Compliance**

Project Title	Year(s)	Location	Description
Collection System Planning	Present through 2028	Collection System	Continued planning to identify potential capital improvement projects required to address aging infrastructure needs, regulatory drivers, capacity deficiencies, and sustainability and optimization opportunities.

Project Title	Year(s)	Location	Description
Collection System Modeling Support	Present through 2028	Collection System	Continued build-out of the collection system modeled network to include areas of planned development, and other major upgrades and updates to the hydraulic model.
Large Diameter Pipeline Inspection Program	Present through 2028	Collection System	Phased inspection program for large-diameter trunks and interceptors to update condition and prioritize rehabilitation and replacement needs.
Force Main Inspection Program	Present through 2028	Collection System	Phased inspection program for force mains to update condition and prioritize rehabilitation and replacement needs.
Wet Weather Capacity Improvements	2020 to 2028	Collection System	Implement miscellaneous relief projects for sewers identified by the collection system hydraulic model as having wet weather hydraulic capacity deficiencies.

Ten-Year CIP – Collection System Program Projects: CADS and Development Sewerage

Project Title	Year(s)	Location	Description
Development Sewerage Support	Present through 2028	Central San-wide	Capitalized staff labor and expenses for the survey, right-of-way for construction of developer installed sewer facilities.

Ten-Year CIP – General Improvements Program

The General Improvement Program includes projects that will address aging infrastructure needs, meet regulatory requirements, and improve sustainability or help meet sustainability related goals. This includes implementing property and building improvements, addressing equipment needs, acquiring new properties if required, completing development of the Asset Management Program, information management system and data management system upgrades, general security improvements enhancement, and cyber security. Many of Central San’s building are over 25 years of age and are starting to require general building upgrades to both the interior and exterior of the buildings such as painting, replacing ceiling tiles, upgrading fixtures, replacing roofs, replacing worn furniture and other equipment, and upgrading buildings to meet current seismic standards. The emphasis of the General Improvement Program for the Ten-Year CIP will be on upgrading many of those aging buildings. In addition, Central San will continue to require routine acquisition of new equipment, vehicle replacement, security improvements, and information technology improvements, and improved cyber security enhancements.

The following tables identify major projects in the Ten-Year CIP – General Improvements Program. The projects have been grouped into one of three (3) project categories: 1) Vehicles and Equipment Acquisition; 2) Buildings and District Property; and 3) Information Technology Development.

**Ten-Year CIP – General Improvements Program Projects:
Vehicles and Equipment Acquisition**

Project Title	Year(s)	Location	Description
Equipment Acquisition	Present through 2028	Central San-wide	Acquisition of new equipment for operation and maintenance of Central San assets.
Vehicle Replacement Program	Present through 2028	Central San-wide	Continued replacement and acquisition of new Central San vehicles.

**Ten-Year CIP – General Improvements Program Projects:
Buildings and District Property**

Project Title	Year(s)	Location	Description
Property and Building Improvements	Present through 2028	Central San-wide	Improvements to Central San’s buildings, buffer properties, rental properties, and the surrounding parking lots and grounds.
District Easement Acquisition	Present through 2028	Central San-wide	Improve or acquire new property land rights for existing or new sanitary sewers that are located on private properties.
General Security and Access	Present through 2028	Central San-wide	Continued implementation of general security improvements for Central San buildings and properties.

**Ten-Year CIP – General Improvements Program Projects:
Information Technology Development**

Project Title	Year(s)	Location	Description
Information Technology Development	Present through 2028	Central San-wide	Continued implementation of Central San-wide IT improvements.
Cyber Security	Present through 2028	Central San-Wide	Improvements to enhance cyber security and resilience of critical information technology infrastructure.

Ten-Year CIP – Recycled Water Program

The Recycled Water Program includes projects that will address aging infrastructure needs, meet regulatory requirements, address any capacity deficiencies, and improve sustainability or help meet sustainability related goals. The emphasis of the Ten-Year CIP – Recycled Water Program will be on continued expansion of the Zone 1 Recycled Water Program in support of Board Policy 019 - Recycled Water, implementing improvements to the existing recycled water filter plant and related support facilities to address aging infrastructure to ensure reliable supply of recycled water, replacing and installing new clear well liner and covers, and initiating ongoing rehabilitation and replacement of recycled water distribution system assets.

Central San staff will continue to explore and plan for other potential recycled water projects and related improvements and expansions that may be required. These other projects will likely involve the wholesale of recycled water to a water purveyor. The following table identifies major projects in the Ten-Year CIP – Recycled Water Program.

Ten-Year CIP – Recycled Water Program Projects:

Project Title	Year(s)	Location	Description
Zone 1 Recycled Water	Present to 2028	Zone 1 Area within Concord, Martinez, and Pleasant Hill	Continue to expand Zone 1 Recycled Water Program, where cost-effective, for landscape irrigation at schools, parks, private businesses, golf courses, street medians, and for commercial applications such as truck washing, concrete manufacturing, dust control, and toilet and urinal flushing.
Recycled Water Distribution System Renovations	2019 to 2028	Zone 1 Area within Concord, Martinez, and Pleasant Hill	Implement a recurring rehabilitation and replacement program for recycled water distribution system assets such as the recycled water surge tank, distribution piping, valves, and flow meters.

Ten-Year CIP Expenditures

The Ten-Year CIP provides a basis for policy decisions concerning Central San’s long-range Capital Improvement Program and management of the Sewer Construction Fund. The Ten-Year CIP also serves as the capital improvement expenditure basis for performing the fee analysis.

This plan includes projected expenditures totaling \$805.7 million (in 2018 Dollars) over the w period from FY 2018-19 through FY 2027-28. A summary of the planned expenditures by program, without inflation, for the Ten-Year CIP is included in the Table 1 on the next page.

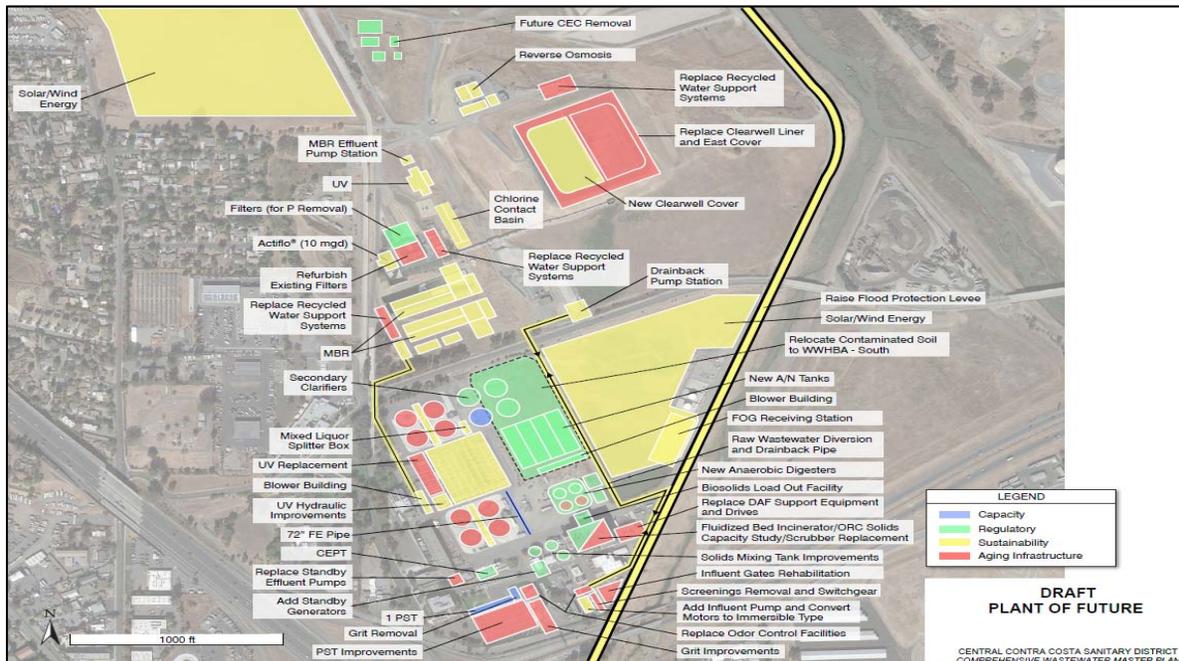


Illustration of a Potential Central San Treatment Plant of the Future

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Table 1 - Ten Year Program Estimated Expenditure (2018-2028) - Summary by Program (in 2018 Dollars)											
Programs	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	Total
	1	2	3	4	5	6	7	8	9	10	Unescalated
Liquid Treatment Process	\$2,686,000	\$7,223,570	\$9,147,430	\$19,940,800	\$26,205,260	\$22,713,560	\$19,679,180	\$22,336,580	\$35,350,630	\$19,486,570	\$184,769,580
Solids Handling Process Treatment	\$5,765,000	\$11,975,630	\$26,983,940	\$24,823,000	\$8,820,920	\$3,965,500	\$10,336,050	\$4,120,000	\$0	\$0	\$96,790,040
General Treatment Plant Improvements and Safety	\$8,414,000	\$19,314,045	\$16,378,545	\$24,692,448	\$22,029,898	\$10,208,845	\$7,605,520	\$8,301,800	\$12,301,290	\$17,400,820	\$146,647,211
Total Ten -Year CIP for Treatment Plant Program	\$16,865,000	\$38,513,245	\$52,509,915	\$69,456,248	\$57,056,078	\$36,887,905	\$37,620,750	\$34,758,380	\$47,651,920	\$36,887,390	\$428,206,831
Collection System Replacement and Rehabilitation (R&R)	\$16,000,000	\$18,241,300	\$18,591,500	\$17,973,500	\$22,299,500	\$22,917,500	\$22,299,500	\$22,299,500	\$22,917,500	\$26,419,500	\$209,959,300
Pump Stations	\$2,797,000	\$6,376,478	\$14,784,986	\$10,017,033	\$17,385,076	\$7,456,041	\$487,844	\$154,500	\$154,500	\$154,500	\$59,767,958
Regulatory Compliance	\$300,000	\$1,176,260	\$1,651,090	\$4,807,010	\$1,486,290	\$2,330,890	\$5,623,800	\$13,069,670	\$3,702,850	\$2,051,760	\$36,199,620
Contractual Assessment Districts (CADs) - Development Sewerage	\$250,000	\$309,000	\$309,000	\$309,000	\$309,000	\$309,000	\$309,000	\$309,000	\$309,000	\$309,000	\$3,031,000
Total Ten -Year CIP for Collection System Program	\$19,347,000	\$26,103,038	\$35,336,576	\$33,106,543	\$41,479,866	\$33,013,431	\$28,720,144	\$35,832,670	\$27,083,850	\$28,934,760	\$308,957,878
Future Recycled Water Development Planning	\$15,000	\$77,250	\$79,568	\$81,955	\$84,413	\$86,946	\$89,554	\$92,241	\$95,008	\$97,858	\$799,791
Existing Zone -1	\$35,000	\$51,500	\$51,500	\$51,500	\$51,500	\$51,500	\$51,500	\$51,500	\$51,500	\$51,500	\$498,500
Existing Recycled Water Treatment Facilities R&R	\$2,807,000	\$8,240,000	\$8,240,000	\$3,090,000	\$0	\$0	\$0	\$0	\$0	\$0	\$22,377,000
Total Ten -Year CIP for Recycled Water Program	\$2,857,000	\$8,368,750	\$8,371,068	\$3,223,455	\$135,913	\$138,446	\$141,054	\$143,741	\$146,508	\$149,358	\$23,675,291
Vehicles Replacement	\$650,000	\$772,500	\$772,500	\$772,500	\$772,500	\$772,500	\$772,500	\$772,500	\$772,500	\$772,500	\$7,602,500
Equipment Replacement	\$200,000	\$206,000	\$206,000	\$206,000	\$206,000	\$206,000	\$206,000	\$206,000	\$206,000	\$206,000	\$2,054,000
Buildings and District Property	\$850,000	\$412,000	\$412,000	\$412,000	\$412,000	\$412,000	\$412,000	\$412,000	\$412,000	\$412,000	\$4,558,000
Capital Legal Services	\$20,000	\$20,600	\$20,600	\$20,600	\$20,600	\$20,600	\$20,600	\$20,600	\$20,600	\$20,600	\$205,400
Asset Management Program Development	\$400,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$400,000
Information Technology Development	\$2,630,000	\$2,523,500	\$1,184,500	\$978,500	\$978,500	\$463,500	\$463,500	\$463,500	\$463,500	\$463,500	\$10,612,500
Total Ten -Year CIP for General Improvements Program	\$4,750,000	\$3,934,600	\$2,595,600	\$2,389,600	\$2,389,600	\$1,874,600	\$1,874,600	\$1,874,600	\$1,874,600	\$1,874,600	\$25,432,400
Program Contingency	\$1,500,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$19,500,000
Total Ten -Year CIP Program	\$45,319,000	\$78,919,633	\$100,813,158	\$110,175,846	\$103,061,458	\$73,914,382	\$70,356,548	\$74,609,391	\$78,756,878	\$69,846,108	\$805,772,400

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Debt Program

Since 2009, Central San has utilized a pay-as-you-go philosophy for capital expenditures. In 2009, and in some earlier years, Central San utilized long-term financing through obligations issued by the Central Contra Costa Sanitary District Facilities Financing Authority. The 2009 obligations (certificates of participation) were issued for the purpose of providing funding for new capital expenditures and to refinance existing debt. Such financial obligations are referred in this document to as bonds or debt.

Central San's Debt Service is presently funded by ad valorem tax and interest income. Debt service is projected at \$3.6 million, a reduction from \$3.8 million in Fiscal Year 2017-18 due to the repayment of the outstanding Reclamation Loan in FY 2017-18. Table 1 summarizes the Debt Service sub-fund Budget.

Central San anticipates utilizing long-term financing in FY 2019-20 to finance projects outlined in the Ten -year CIP, including those specified in the Comprehensive Wastewater Master Plan. A new Debt Management and Continuing Disclosure Policy was adopted during FY 2017-18, which specifies the conditions under which debt and other forms of external financing can be used.

Table 1 - Debt Service Fund Budget Summary

Debt Service Sub-Fund	FY 2016-17 Actual	FY 2017-18 Budget	FY 2018-19 Budget
Debt Service Revenue:			
Reserve Account Bond Interest Income	\$49,436	\$45,700	\$82,447
Ad Valorem Tax (portion allocated to Debt Service)	\$3,741,719	\$3,773,399	\$3,528,591
Total Revenue	\$3,791,155	\$3,819,099	\$3,611,038
Debt Service Expense:			
2009 Bond Interest Payment and Amortized Costs, Less Subsidy on BABs	\$1,275,346	\$1,198,221	\$1,103,530
Reduction of tax subsidy due to congressional sequestration	\$28,690	\$28,759	\$27,508
Recycled Water Loan Interest Payment	\$9,363	\$4,742	\$0
Total Interest Payment and Amortization Costs	\$1,313,399	\$1,231,722	\$1,131,038
2009 Bond Principal Payment	\$2,300,000	\$2,405,000	\$2,480,000
Recycled Water Principal Payment	\$177,756	\$182,377	\$0
Total Principal Payments	\$2,477,756	\$2,587,377	\$2,480,000
Total Debt Service Interest, Amortized Cost and Principal Payments	\$3,791,155	\$3,819,099	\$3,611,038

2009 Bonds/Certificates of Participation

The 2009 Wastewater Revenue Certificates of Participation, Series A and Series B (Bonds) were issued for \$19.6 million and \$34.5 million, respectively, on November 12, 2009 and on December 3, 2009. The proceeds were used in part to finance new capital expenditures (\$17,254,775 of Series A and \$12,745,225 of Series B), to refund previous debt (\$20,225,275 of Series B), and to pay costs of issuance. The Series A Bonds are federally taxable Build America Bonds (BABs), which have a rate subsidy from the federal government. Coupons on this series range from 5.20% to 5.70%, while yields range from 3.45% to 3.78% net of the subsidy. The Series B Bonds are tax-exempt bonds that were used to refund the 1998 and 2002 bond issuances and raise an additional \$30.0 million in new

proceeds, with coupons ranging from 4.00% to 5.00% and yields ranging from 0.40% to 3.79%.

The two bonds total \$54.1 million and are secured by a pledge of tax and net revenues of the wastewater system. Both bonds will be fully amortized on September 1, 2029.

Reclamation Loan

In FY 2017-18, Central San paid the final installment on a \$2.9 million loan from FY 1998-99 with the California State Water Resources Control Board (SWRCB). The loan advanced Central San funds for the design and construction costs for projects related to recycled water treatment programs. Central San repaid advances from the SWRCB over a 20-year period ending in FY 2017- 18.

Figure 1 and Table 2 summarize Central San’s debt service obligations. Figure 1 shows debt service on currently outstanding debt. Central San is projecting a bond issuance during FY 2019-20.

Figure 1 - Debt Service by Type

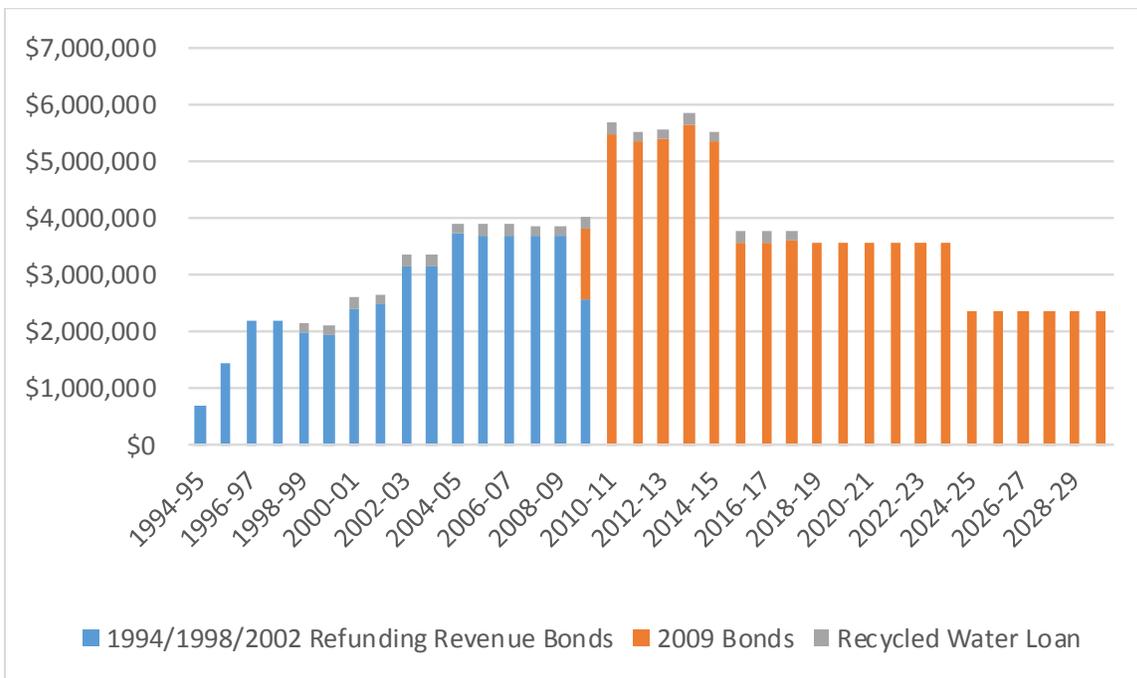


Table 2 - Debt Summary

Fiscal Year	1994/1998/2002 Refunding Revenue Bonds			2009 Bonds			Recycled Water Loan		
	Principal	Amortization & Interest	Total Debt Service	Principal	Amortization & Interest	Total Debt Service	Principal	Interest	Total Debt Service
1994-95		\$688,127	\$688,127						
1995-96		\$1,458,830	\$1,458,830						
1996-97	\$755,000	\$1,459,741	\$2,214,741						
1997-98	\$790,000	\$1,421,245	\$2,211,245						
1998-99	\$835,000	\$1,150,177	\$1,985,177				\$139,194	\$47,925	\$187,119
1999-00	\$725,000	\$1,221,898	\$1,946,898				\$114,900	\$72,219	\$187,119
2000-01	\$1,245,000	\$1,181,356	\$2,426,356				\$117,887	\$69,232	\$187,119
2001-02	\$1,285,000	\$1,195,057	\$2,480,057				\$120,952	\$66,167	\$187,119
2002-03	\$1,330,000	\$1,832,680	\$3,162,680				\$124,097	\$63,022	\$187,119
2003-04	\$1,375,000	\$1,790,547	\$3,165,547				\$127,323	\$59,796	\$187,119
2004-05	\$1,995,000	\$1,719,372	\$3,714,372				\$130,634	\$56,486	\$187,119
2005-06	\$2,060,000	\$1,641,214	\$3,701,214				\$134,030	\$53,089	\$187,119
2006-07	\$2,135,000	\$1,559,500	\$3,694,500				\$137,515	\$49,604	\$187,119
2007-08	\$2,210,000	\$1,472,113	\$3,682,113				\$141,090	\$46,029	\$187,119
2008-09	\$2,300,000	\$1,379,326	\$3,679,326				\$144,759	\$42,360	\$187,119
2009-10	\$2,390,000	\$190,068	\$2,580,068		\$1,255,607	\$1,255,607	\$148,522	\$38,597	\$187,119
2010-11				\$3,460,000	\$2,027,168	\$5,487,168	\$152,384	\$34,735	\$187,119
2011-12				\$3,465,000	\$1,888,601	\$5,353,601	\$156,346	\$30,773	\$187,119
2012-13				\$3,605,000	\$1,775,376	\$5,380,376	\$160,411	\$26,708	\$187,119
2013-14				\$3,720,000	\$1,941,016	\$5,661,016	\$164,582	\$22,538	\$187,119
2014-15				\$3,865,000	\$1,474,513	\$5,339,513	\$168,861	\$18,258	\$187,119
2015-16				\$2,210,000	\$1,375,080	\$3,585,080	\$173,251	\$13,868	\$187,119
2016-17				\$2,300,000	\$1,275,346	\$3,575,346	\$177,756	\$9,363	\$187,119
2017-18				\$2,405,000	\$1,198,221	\$3,603,221	\$182,377	\$4,742	\$187,119
2018-19				\$2,480,000	\$1,103,530	\$3,583,530			
2019-20				\$2,580,000	\$1,000,996	\$3,580,996			
2020-21				\$2,685,000	\$902,873	\$3,587,873			
2021-22				\$2,785,000	\$792,406	\$3,577,406			
2022-23				\$2,900,000	\$673,794	\$3,573,794			
2023-24				\$3,015,000	\$549,015	\$3,564,015			
2024-25				\$1,905,000	\$469,232	\$2,374,232			
2025-26				\$1,975,000	\$387,397	\$2,362,397			
2026-27				\$2,060,000	\$300,296	\$2,360,296			
2027-28				\$2,145,000	\$209,576	\$2,354,576			
2028-29				\$2,235,000	\$115,059	\$2,350,059			
2029-30 *				\$2,330,000	\$16,533	\$2,346,533			

* Final Payment made from Reserve Fund

Note: 2009 Bond debt service reflects the original repayment schedule amounts. Changes to GASB rules and sequestration of Build America Bond refunds have changed actual total debt service in some years. Actual debt service amounts are in the CAFR and audited financial statements.

Externally Imposed Debt Limits

Central San, as a Sanitary District, is subject to certain limits on the direct issuance of bonds payable from proceeds of taxes levied on taxable property in the district. Total bonds issued by the District cannot exceed 15-20% (depending on some factors) of the assessed value of real and personal property in the district (Health and Safety Code Section 6651). Bond issuances of this nature would require an election with 2/3 voter approval (H&S Code 6644). Central San has no bonds subject to this limitation outstanding. Refunding bonds are not subject to the limitation and election requirement.

Central San has most recently in 2009 (and previously in 1994 and 2002) financed a portion of its capital improvements through the use of a financing authority (a “joint powers authority (JPA)”), using a form of an Installment Sale Agreement with a similar payment structure as a bond. In such an arrangement, the financing authority issues bonds or certificates of participation, with the Installment Sale Agreement supporting the JPA bonds (payments on the Installment Agreement received by the JPA pay the JPA’s bonds). This structure is typical for California special districts and is not subject to the bond election and debt limits described in the preceding paragraph.

While external financing of the capital program is not anticipated for FY 2018-19, in future years Central San anticipates financing a portion of its capital improvement program through the financing authority structure used in 2009.

Agency Debt Limits

A Debt Management and Continuing Disclosure Policy adopted during FY 2017-18 specified the conditions under which debt and other forms of external financing can be used. This policy is intended to cover both Central San and the Central Contra Costa Sanitary District Facilities Financing Authority, for “debt” in a broad sense, as well as other external financial obligations as an Installment Sale Agreement, which is not a bond and technically is not considered a debt. This policy (Board Policy 029) provided certain guidance on the use of debt and financial obligations, as follows:

Debt Management and Continuing Disclosure Policy Standards for Use of Debt Financing

The District shall integrate its debt issuances with the goals of its Capital Improvement Program by timing the issuance of debt to ensure that projects are available when needed in furtherance of the District’s public purposes (as articulated in, inter alia, the District’s mission, vision and goals) and are consistent with the rate and financial planning parameters specified in the District’s long-term financial plans. The Board shall be presented with a long-term financial plan in each instance Sewer Service Charge rates are to be adjusted.

1. The long-term financial plans will specify an expected debt issuance amount over a decade or more long-term planning horizon.
 - a. The District shall target rate or tax revenue funding of, at a minimum, the value of the collection system replacement program (specifically, pipeline replacement) component of the CIP.
 - b. Not more than 60% of the overall CIP shall be financed with debt.

2. All projects in the CIP are eligible to use debt financing, so long as the minimum rate or tax revenues are generated as described in this section. This policy does not contemplate the use of debt financing to fund ongoing operating & maintenance expenditures; exceptions beyond a de minimis amount would require approval of the Board. With respect to debt repayment and amortization, the debt repayment period should be structured so that the weighted average maturity of the debt does not exceed 100% of the expected average useful life of the project being financed.

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Supplemental Data and Glossary

District Profile¹

Central San is proud to serve its customers in the San Francisco Bay Area, specifically, in the Central Contra Costa (Central County) region, at the heart of Contra Costa County about 30 miles northeast of San Francisco. Our service area is located at the foot of Mount Diablo (3,849 feet), which hosts a 90,000-acre State Park and foothills whose numerous hiking trails and open space preserves are frequently used by our residents.

The desired residential communities are also some of the most historic. Martinez, where our headquarters is located, was a key crossing point over the Carquinez Strait for the Pony Express, and its downtown is notable for a large number of preserved historic buildings, including the John Muir National Historic Site. A short distance away, Walnut Creek boasts a revitalized shopping district with retailers and restaurants, one of many newer urban centers in our community. One of our largest customers, the City of Concord, is working on converting a former Naval weapons station into a Community Reuse Project, including the construction of parks, housing, office, and retail and the restoration of Mt. Diablo Creek. Central San is proud to be part of the effort to make the project as sustainable as possible by supplying recycled water for irrigation in this development.

In recent years, the population of our service area in the Central County has boomed, partially due to our accessibility to San Francisco and Silicon Valley via public transit. Most of the population of Central Contra Costa lies along the busy I-680 corridor that connects the North Bay to Silicon Valley. Below is a table that shows the steady increase in population over the last ten years.

Service Area Demographic and Economic Data

As of January 1	Inside District Boundaries	Concord / Clayton	Total Served	% Change
2008	317,340	134,560	451,900	0.7%
2009	322,200	134,000	456,200	1.0%
2010	326,600	135,400	462,000	1.3%
2011	321,800	133,600	455,400	-1.4%
2012	326,900	134,200	461,100	1.3%
2013	332,600	134,900	467,500	1.4%
2014	335,009	135,856	470,865	0.7%
2015	339,029	137,357	476,386	1.2%
2016	340,667	140,916	481,583	1.1%
2017	344,591	139,654	484,245	0.6%

¹ Adapted from <http://www.eastbayeda.org/our-region/central-contra-costa.page>

Population by Community

As of January 1	2010 Census	2016 Estimated Population *
Alamo	14,570	16,078
Clayton	10,897	11,655
Concord	122,067	126,938
Danville	42,039	43,758
Lafayette	23,893	25,381
Martinez	35,824	37,544
Moraga	16,016	16,977
Orinda	17,643	18,936
Pleasant Hill	33,152	34,395
San Ramon	72,148	74,366
Walnut Creek	64,173	67,568
Total Service Area (named cities above; actual service area population differs)	452,422	473,596
Contra Costa County Total	1,049,025	1,135,127

* Source:

<https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

Our largest customers are the City of Concord and various businesses, shopping centers, residential communities, schools, and hospitals. The tables below provide a window into our customer base.

Fiscal Year 2016-17 Ten Largest Customers

Customer	Operating Revenue	Rank	% of Operating Revenue
City of Concord ¹	\$13,851,253	1	15.63%
Contra Costa County General Service ²	547,943	2	0.62%
First Walnut Creek Mutual	462,650	3	0.52%
Park Regency Apartments	434,404	4	0.49%
Second Walnut Creek Mutual Apartments	365,250	5	0.41%

John Muir Health ²	322,601	6	0.36%
Sun Valley Mall	298,005	7	0.34%
San Ramon Unified School District	225,339	8	0.25%
Branch Creek Vista Apartments	194,800	9	0.22%
Kaiser Foundation Hospital ²	186,281	10	0.21%
Total	\$16,888,526		19.06%

¹ Contract with the City of Concord to treat and dispose of wastewater for Concord and Clayton.

² Contra Costa County General Services, John Muir Health, and Kaiser are permitted industries.

Active Service Accounts

User Group	Number of Accounts	2016-2017 Sewer Service Charge Billings	Residential Unit Equivalents	% of Total
Residential	113,045	\$68,963,633	137,105	81%
Mixed Use	213	2,669,727	5,308	3%
Office	772	2,330,477	4,633	3%
Food Service	234	2,120,572	4,216	2%
Hotel/Motel	22	1,180,440	2,347	1%
Government	174	87,0631	1,731	1%
Market/Supermarket	48	851,179	1,692	1%
Schools	251	841,767	1,673	1%
Businesses	429	726,188	1,444	1%
Automotive/Car Wash	241	630,563	1,254	1%
Recreation/Entertainment	103	562,221	1,118	1%
All Other User Groups	872	3,541,980	7,042	4%
Total	116,404	\$85,289,379	169,561	100%

In Contra Costa County, the majority of which we serve, the largest employers are as follows:

2017 Ten Largest Employers in Contra Costa County

Employers	Estimated Employees	Rank	% of Total County Employment
Chevron Corporation	10,000+	1	1.88%
Bay Alarm Company	1,000-4,999	T-2	0.56%
St. Mary's College	1,000-4,999	T-2	0.56%
Bio-Rad Laboratories	1,000-4,999	T-2	0.56%
Job Connections	1,000-4,999	T-2	0.56%
John Muir Medical Center	1,000-4,999	T-2	0.56%
Kaiser Permanente	1,000-4,999	T-2	0.56%
La Raza Market	1,000-4,999	T-2	0.56%
Martinez Medical Offices	1,000-4,999	T-2	0.56%
USS-POSCO Industries	1,000-4,999	T-2	0.56%
AAA Northern California, Nevada and Utah	5,000-9,999	T-2	0.56%
Bay Area Rapid Transit	1,000-4,999	T-2	0.56%
All Others	495,400		91.96%
Total	532,400		100.00%

Mirroring our service area growth, Contra Costa County's population has seen a steady increase, as shown in the table below.

Demographic and Economic Statistics in Contra Costa County

Fiscal Year Ended June 30	Population ¹	Personal Income ¹	Per Capita Personal Income ¹	Average Annual Unemployment Rate ²
2007	1,009,152	\$59,823,135,000	\$59,281	4.7%
2008	1,023,344	61,470,268,000	60,068	6.3%
2009	1,037,890	56,442,667,000	54,382	10.8%
2010	1,052,875	56,594,058,000	53,752	11.3%
2011	1,066,126	61,156,431,000	57,363	10.4%
2012	1,078,242	66,344,299,000	61,530	9.0%
2013	1,094,030	66,607,757,000	60,883	7.4%
2014	1,108,996	69,818,812,000	62,957	6.2%
2015	1,123,231	76,517,699,000	68,123	5.0%
2016	1,135,127	80,412,324,000	70,840	4.4%

1. Source: U.S. Department of Commerce, Bureau of Economic Analysis, estimates for 2010-2016 reflect county population estimates available as of April 2018.
2. Source: State of California, Employment Development Department (EDD), annual calendar figure.

As shown in the above tables, the area in which we operate is a growing community which we are honored to provide our core services, as well as educational messaging to instill the environmental values which are foundational to us as an organization.

Changes in Net Position and Fund Equity

	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Forecast
Total Operating Revenue	\$88,625,441	\$92,496,435	\$84,542,732
Total Non-Operating Revenues	20,647,844	23,625,084	20,907,038
Total Revenues	\$109,273,285	\$116,121,519	\$105,449,770
Total Operating Expenses	\$101,464,785	\$102,403,082	\$108,220,456
Non-Operating Expense - Interest Expense	1,313,398	1,230,680	1,103,530
Total Expenses	\$102,778,183	\$103,633,762	\$109,323,986
Income Before Capital Contributions	\$6,495,102	\$12,487,757	(\$3,874,216)
Total Capital Contributions	26,571,487	31,760,538	40,976,268
Change in Net Position	\$33,066,589	\$44,248,295	\$37,102,052
Beginning Net Position	593,570,427	626,637,016	670,885,311
Ending Net Position	\$626,637,016	\$670,885,311	\$707,987,363
Net Investment in Capital Assets	\$600,770,254	\$622,500,000	\$656,500,000
Restricted for Debt Service	4,449,437	4,350,000	4,200,000 ²
Unrestricted	21,417,325	44,035,311	47,287,363
Total Net Position	\$626,637,016	\$670,885,311	\$707,987,363

Net Position is classified into 3 categories: Net Investment in Capital Assets, Restricted for Debt Service, and Unrestricted. The classification is based on availability or accessibility of the resource, rather than its origin. Net position is a measure of the overall financial condition of the District.

Over time, trends in net position provide indications of the District's financial strength. The District's financial condition is affected by numerous factors including financial policies, rate and spending decisions, and external factors such as overall economic trends affecting the service territory, new regulatory requirements, and accounting pronouncements.

As of year-end FY 2017-18, by far the largest portion of the District's net position (92.7%) is the investment in capital assets (e.g. land buildings, machinery, equipment, intangible assets, and sewer line infrastructure), less any related debt used to acquire those assets that are still outstanding. The \$4.4 million restricted for debt service reflects the balance in the debt service reserve fund². The remaining balance of \$44 million in unrestricted net position increased by \$22.6 million from FY 2016-17 due to increased operating and non-operating revenues and capital contributions.

² Due to a refinancing of 2009 bonds subsequent to year-end FY 2017-18, this debt service reserve will be eliminated during FY2018-19.

Glossary of Terms

Accrual Basis of Accounting	The basis of accounting under which transactions are recognized when they occur, regardless of the timing of related cash flows. An example of accrual basis is occurs when an invoice is sent out for services: a receivable is booked and revenue is recorded even though no cash has been received at the time the invoice is mailed to the customer. (See <i>Cash Basis of Accounting</i> and <i>Modified Accrual Basis of Accounting</i> .)
Administration of Capital	District-wide and department operations costs incurred by administration support functions which are not directly charged to each capital project but allocated using a rate applied to direct labor dollars.
Ad Valorem Tax	Also referred to as Property Tax. A tax based on the assessed value of taxable property. Central San receives a portion of the ad valorem taxes levied by Contra Costa County on properties in the service area.
Adopted Budget	A balanced financial plan for a specific period authorized by the Board for expenditure or obligation.
Amended Budget	An adopted balanced financial plan reflecting budgetary transfers that occurred since adoption of the budget. The total budget amount must stay within the Board-approved appropriation limit.
Appointment Type	Indicates the character of a position. The following are examples of appointment types for Central San: Regular, District Temporary, and Consultant.
Arbitrage	Borrowing in one market (such as bonds) at one interest rate and investing in another market (such as certificates of deposit) at a higher interest rate. Such activities are highly restricted by the federal government, and any excess interest earned in this manner is not tax-exempt and is subject to rebate to the Federal Government.
Asset	An economic resource owned by the entity that is expected to benefit future operations. Examples of assets are: cash, investments, receivables, and capital or fixed assets.
Authorized Position	A position created and established by the Board.
Balance Sheet	See <i>Statement of Net Assets</i> , the current term.
Board of Directors	The five public officials elected represent the District service area. Also known as the Board.
Bonds	A written promise to pay a sum of money (principal or face value) at a future date (maturity date) along with a periodic interest amount paid at a specified percentage of the principal (interest rate). Bonds are typically used to finance long-term capital improvements. Debt service payments are made to repay the bond holders. Central San's goal is to limit debt-funded capital to no more than 60% of the total Capital Program over a ten-year period.
Budget	A plan of financial operation, embodying an estimate of proposed expenditures for a given period (typically a fiscal year) and the proposed means of financing them (revenue estimates).
Build America Bonds (BABs)	A type of municipal bond created under the American Recovery and Reinvestment Act of 2009. These bonds are sold at a taxable rate rather than a lower tax-exempt rate, and Central San receives cash rebates from the U.S. Treasury to offset the higher interest cost.
Capacity Fee	Also called Facility Capacity Fee, this is a charge paid at the time of connection to compensate Central San for capital facilities that provide wastewater treatment (i.e., interceptors, primary and secondary treatment facilities, and wet weather treatment plants) to new connections. See <i>Connection Fees</i> and <i>Pumping Capacity Fees</i> .
Capital	Referring to the Sewer Construction Fund.
Capital Appropriation	Board-approved funding for capital reference projects for which relatively accurate time estimates can be made. Unspent appropriations carry forward to the next fiscal year.

Capital Assets	Land, improvements to land, easements, buildings, building improvements, vehicles, machinery, equipment, works of art and historical treasures, infrastructure, and all other tangible or intangible assets that are used in operations and that have initial useful lives extending beyond a single reporting period.
Capital Budget	A financial plan for providing the purchase, construction, or rehabilitation of fixed assets such as equipment, facilities, and systems. The capital budget is usually enacted as a part of the complete annual budget, which includes both operating and capital outlays. The capital budget should be based on a longer-term capital improvement program (CIP).
Capital Cash Flow	Projected cash disbursements for capital projects for a given time period. The estimated capital cash flow is used to determine the amount of revenue required and the rate impacts, or the amount and timing of borrowings to meet the projected expenditure needs for a given time period.
Capital Expenditures	Expenditures related to the purchase or construction of equipment, building structures, aqueducts, and water/sewer pipelines that have a useful life greater than one year and a cost greater than \$5,000.
Capital Improvement Plan (CIP)	A plan for capital expenditures to be incurred each year over a fixed period of several future years setting forth each capital project, identifying the expected beginning and ending date for each project, the amount to be expended in each year, and the method of financing those expenditures.
Capital Labor	The portion of labor costs supporting the capital improvement program.
Cash Basis of Accounting	A basis of accounting under which transactions are recognized only when cash changes hands.
Cash Reserves	Easily liquidated cash and investments available to meet operating, capital, self-insurance, and debt service obligations. Reserves may be restricted or unrestricted. The O&M and Capital Funds Available are unrestricted cash reserves, made up of cash and investments (see <i>Funds Available</i> and <i>Funds Required</i>).
Central Contra Costa Sanitary District Facilities Financing Authority (CCCSD FFA)	A joint powers authority utilized by Central San as a long-term financing vehicle for its capital program.
Certificates of Participation	A form of financing used by municipal or government entities which allows an individual to buy a share of the lease revenue of an agreement made by these entities.
Comprehensive Annual Financial Report (CAFR)	The CAFR is prepared at the close of each fiscal year to show the actual audited condition of Central San's funds and serves as the official public record of Central San's financial status and activities.
Contra Costa County Employees' Retirement Association (CCCERA)	The retirement association for 16 local agencies in Contra Costa County, including the County itself. CCCERA's retirement benefit structure is based upon the County Employees Retirement Law (CERL) of 1937, commonly referred to as the "37 Act."
CCF	One hundred cubic feet, which equals 748 gallons or one unit.
Civil Service System	The system used for the selection, examination, employment, classification, advancement, suspension, and discharge of employees. Applies only to Regular and Intermittent employees or employees who have attained civil service status but are working in a position excluded from the civil service.
Collection System	Pipelines and pumping stations that convey wastewater from customers to the treatment plant.

Commercial Paper	Short-term financing for capital projects.
Connection Fees (Capacity Fees. Facility Capacity Fees)	A fee charged when new or additional Residential Unit Equivalents (RUE) connect to the sewer to contribute their fair share of service and facility costs. (See <i>Capacity Fees</i> and <i>Pumping Capacity Fees</i>).
Consent Decree	An agreement or settlement to resolve a dispute between two parties.
Cost of Service Study	Equitably assigns cost responsibility to customers through rates and charges developed as part of the study.
Credit Rating	A rating assigned by a nationally recognized statistical rating agency, providing an indication to creditors of the ability of Central San to meet its financial obligations when due. Central San currently has credit ratings from two firms: Standard & Poor's and Moody's. A better credit rating allows Central San to borrow at a lower cost than a less favorable credit rating.
Debt-Funded Capital	Expenditures for capital projects which are funded by bonds, state loans, or other debt.
Debt Policy	A policy adopted by the Board that discusses when and how bonds and other forms of indebtedness may be used by Central San.
Debt Service	Expenditures for interest and principal repayment on bonds or other debt.
Debt Service Coverage	The ratio of net revenues to debt service requirements, calculated in accordance with bond documents. Central San's debt policy specifies that Central San will target a debt service coverage ratio of at least 2.0x. Central San's bond covenants require at least 1.25x coverage on a "gross revenue" basis and 1.00x on a net revenue basis.
Debt Service Fund	One of four sub-funds of the enterprise fund used to account for Central San's operations. This sub-fund accounts for activity associated with the payment of Central San's long-term bonds and loans.
Defeasement	Relieving the agency of a particular liability (such as a specific bond series) by refunding the liability through an escrow or trust fund. Legally defeased liabilities do not need to be appropriated each year as the trust fund is removed from the control of the agency. (Central San defeased its 1994 debt using 1998 Revenue Refunding Bonds.)
Deficit	The excess of expenditures or expenses over revenues during a single accounting period.
Department	A major organizational unit with overall managerial responsibility for functional programs.
Distribution System	Wastewater treatment plants, storage reservoirs, pumping plants, pipelines, and appurtenances that treat and transmit water to customers.
District Code	A system of rules, which are compiled and arranged by a municipal corporation, and are adopted and used to regulate the conduct of its inhabitants and government.
District Temporary	Temporary staffing positions who are restricted to working no more than 12 months, do not receive customary benefits, and do not have civil service status.
Division	A major organizational unit of a department. Most departments have several divisions, each providing different services.
Effective Utility Management	A framework developed in 2007 by the Environmental Protection Agency and water industry leaders that indicates where effectively managed water/wastewater utilities should focus.
Encumbrance	The obligated and unspent portion of a contingent liability established through a purchase order that is chargeable to an account. It ceases to be an encumbrance when it is paid by the recording of an invoice or a reduction of the purchase order's outstanding balance occurs.

Enterprise Funds	<p>In governmental accounting, these are used to account for self-sustaining activities that derive the major portion of their revenue from user fees. Enterprise Fund Accounting is used operations financed and operated in a manner similar to business enterprises, and for which preparation of an income statement is desirable. Central San uses one enterprise fund with four "sub-funds" to better manage internal finances. The sub-funds are as follows:</p> <ul style="list-style-type: none"> • Running Expense - (also referred to as Operations and Maintenance, O&M, or R/E) accounts for the general operations of Central San. Substantially accounts for all operating revenues and expenses. • Sewer Construction - (also referred to as Capital or S/C) accounts for non-operating revenues that are to be used for acquisition or construction of plant, property, and equipment. • Self-Insurance - (also referred to as S/I) accounts for interest earnings on cash balances and cash allocations from other funds, temporary investments, and costs of insurance premiums and claims not covered by Central San's insurance policies. • Debt Service A sub-fund that accounts for activity associated with the payment of Central San's long-term bonds and loans.
Expenditure	The payment of an obligation from Central San's cash amounts.
Facility Capacity Fees	See <i>Connection Fees</i> above.
Fiduciary Fund	A fund in which assets are held by a governmental unit in a trustee capacity or as an agent for individuals, private organizations, and/or other governmental units. There are four types of fiduciary funds: Pension (and other employee benefit), Investment, Private-Purpose and Agency.
Fiscal Year	The 12-month period that begins on July 1 and ends on June 30 of the following year.
Full Time Equivalent (FTE)	An employee who works full time counts as 1 FTE.
Fund	An independent fiscal and accounting entity with a self-balancing set of accounts, recording cash and/or resources together with all related liabilities, obligations, reserves, and equities which are segregated for the purpose of carrying on specific activities or attaining certain objectives. One type of government fund is an enterprise fund and is the only type of government fund used by Central San.
Fund Balance (Net Assets)	Assets minus liabilities (also called net assets).
Funded Position	Authorized position for which the Board has appropriated funding in a fiscal year.
Funds Available (Central San term and definition)	The amount of cash and investments available in the O&M and S/C funds on June 30 of any fiscal year using the Funds Required definition below.
Funds Required (Central San term and definition)	Used in the 10-year planning process, this is the amount of money held in cash and investments (liquid assets) that is needed on June 30 of any fiscal year to meet cash flow needs through mid-December, when the first sewer service charge and property tax payments are received from Contra Costa County. This includes Operations and Maintenance (O&M) and Sewer Construction Fund (S/C) cash and temporary investments; it does not include OPEB payments/accruals, Debt Service cash, reserve investments, or and Self-Insurance (S/I) Fund Cash and investments.

Generally Accepted Accounting Principles (GAAP)	Generally Accepted Accounting Principles are the accounting rules that are required to be followed by organizations in the U.S. These Principles are established by two organizations: the Financial Accounting Standards Board for commercial and not-for-profit entities, and the Governmental Accounting Standards Board for governmental entities in the United States.
Governmental Accounting Standards Board (GASB)	Governmental Accounting Standards Board is the body that specifies the accounting rules for governmental agencies in the U.S. The Board issues GASB statements that can require significant changes to an agency's financial reporting.
GASB 45	An accounting requirement published in 2004 by the Governmental Accounting Standards Board (GASB) that addresses how the accounting and financial reporting for post-employment benefits other than pensions (OPEB) should be performed. This Statement establishes standards for the measurement, recognition, and display of OPEB expense/expenditures and related liabilities (assets), note disclosures, and, if applicable, required supplementary information (RSI) in the financial reports of state and local governmental employers.
GASB 68	An accounting requirement of the Governmental Accounting Standards Board effective in 2014 that addresses Accounting and Financial Reporting for Pensions, which revises and establishes new financial reporting requirements for most state and local governments that provide their employees with pension benefits.
General Fund Reserves	An account used to record funds that are not legally restricted for specified purposes, such as those committed to repay obligations. General Fund Reserves provide for self-insurance claims, unplanned revenue changes, working capital, workers' compensation, and unanticipated contingencies.
General Manager	The Chief Executive Officer of Central San, hired by the Board.
General Obligations (GO) Bonds	When a government pledges its full faith and credit to the repayment of the bonds it issues, those bonds are general obligation (GO) bonds. Sometimes, the term is also used to refer to bonds which are to be repaid from taxes and other general revenues.
Government Finance Officers Association (GFOA)	Government Finance Officers Association represents public finance officials throughout the U.S. and Canada which provides best practice guidance, consulting, networking opportunities, publications, training programs, and recognition programs to its members.
Goal	The long-term continuing mission of a department, division, or program. Goals define the strategic results to be achieved and therefore indicate the relevance, permanence, scope, and effectiveness of that outcome.
Household Hazardous Waste Collection Facility	The service and facility operated by Central San providing for the safe disposal of items that in the absence of this service could be inappropriately disposed of through the sewer system, risking pollution of the Bay.
Infrastructure	The tangible physical components that ensure delivery of reliable, high-quality wastewater service now and in the future. Typical components are reservoirs, pumping plants, pipelines, and anaerobic digesters.
Internal Control	The plan of organization and all other coordinated methods and procedures adopted to safeguard assets; check the operations data; promote operational efficiency, economy, and effectiveness; and encourage adherence to prescribed managerial policies that will accomplish the objectives of the organization.
Key Performance Indicators (KPI)	Indicators with specific targets that measure how well Central San is progressing in achieving its goals under the Key Metrics of the Strategic Plan.

Liability	A debt of the business; an amount owed to creditors, employees, government bodies, others; a claim against assets.
Modified Accrual Basis of Accounting	The accrual basis of accounting adapted to the government fund type under which revenues are recognized when they become both "measurable" and "available to finance expenditures of the current period." Expenditures are generally recognized when the related fund liability is incurred.
Modified Cash Flow Basis	Income and expense accounting method that records revenue when cash is received and records expenses when cash is paid.
Net Assets	See <i>Fund Balance</i> .
One-Time Revenue	A revenue that cannot reasonably be expected to continue, such as a single-purpose federal grant, an interfund transfer, or use of a reserve. Continual use of one-time revenues to balance the annual budget can indicate that the revenue base is not strong enough to support current service levels.
Operating Appropriation	Board-approved funding for operating expenses. Unspent appropriations do not rollover to the next fiscal year.
Operating Budget	A financial plan to fund ongoing operations costs incurred to operate Central San, excluding the building of capital assets, which are included in the capital budget.
Operating Deficit	When current expenditures exceed current revenues.
Operating Departments	The three units of Central San that carry out the mission of the agency: Administration, Engineering & Technical Services, and Operations.
Operating Labor	The portion of Central San's labor costs supporting day-to-day operations.
Operating & Maintenance (O&M) Fund	One of four sub-funds of the enterprise fund uses to account for Central San's operations. This fund provides for the general operations, maintenance, and administration of Central San. Also referred to as the "Running Expense" fund.
Organization	A group of staff organized into one unit or section working under a division or department. This is the lowest level at which operating budgets are developed.
Other Post-Employment Benefits (OPEB)	In addition to pensions, many state and local governmental employers provide other post-employment benefits (OPEB) as part of the total compensation offered to attract and retain the services of qualified employees. OPEB includes post-employment healthcare, as well as other forms of post-employment benefits (e.g., life insurance) when provided separately from a pension plan.
Overhead (Administrative Overhead and Non-Work Hours)	Administrative Overhead and Non-Work Hours include indirect costs and the value of time off (holidays, sick leave, vacation, etc.). These costs are expressed as a percent of salary. For Central San accounting, salaries and benefits are separate from overhead (whereas consulting firms typically view employee benefits in "overhead"). Indirect costs are costs that are incurred for a common or joint purpose benefiting more than one cost objective or task and are not readily assignable.
Pay As You Go (or PAYGO)	A term used to describe paying expenses as they are incurred, as opposed to pre-paying, pre-funding, or setting money aside for future expenses. Used primarily to refer to the strategy of paying for capital projects.
Public Employees' Pension Reform Act (PEPRA)	California's Public Employees' Pension Reform Act, established a new less costly retirement tier for employees newly hired or which did not have prior service with a reciprocal retirement system prior to January 1, 2013.
Performance Measures	Specific quantitative measures of work performed within an activity or program (e.g., total miles of pipes cleaned). Also, a specific quantitative measure of results obtained through a program or activity (e.g., reduced incidence of vandalism due to a new street lighting program).

Program	Broadly defined group of related reference projects combined to facilitate planning and decision making.
Project or Reference Project	Project level identified in the CIP comprised of a discrete set of tasks that can be carried out independently but require coordination with other projects to ensure overall program success. Appropriation requests and projected cash flows are authorized at this level.
Proposed Budget	The recommended balanced financial plan for a specific period of time submitted for consideration to the Board prior to the start of the Proposition 218 notification process.
Proprietary Fund	Proprietary funds are used to account for a government's ongoing organizations and activities that are similar to businesses found in the private sector. These funds are considered self-supporting in that the services rendered by them are generally financed through user charges or on a cost reimbursement basis. There are two types of proprietary funds: Enterprise and Internal Service.
Pumping Capacity Fees	A component of connection fees for units that are located in areas tributary to one or more of Central San's pumping stations. (See <i>Capacity Fees</i> and <i>Connection Fees</i> .)
Rate (or Cash) Funded Expenditures	Annual operations and maintenance expenses as well as the portion of the capital program that are funded from current revenues.
Rates	Charges for services to customers that cover the costs of such services while allowing Central San to remain reserve neutral.
Regular Position	Full-time, civil service positions.
Reserve Policy	A document outlining minimum reserve thresholds, identifying current and potential reserves, and explaining what reserves are, or will be used for.
Reserves	See <i>Cash Reserves</i> .
Residential Unit Equivalent (RUE)	A measure of sewage volume and strength equivalent to a typical residential household.
Restricted Reserves	Monies that, by action of the Board, State Law, or Bond Covenants, are required to be spent on specific programs or held for specified purposes.
Restricted Revenue	Monies that are legally earmarked for a specific use, as may be required by state law, bond covenants, or grant requirements. For instance, capacity fees must be used within the Sewer Construction Fund; the revenue cannot be transferred to O&M.
Revenue	Monies received from rates, charges, and other sources. Revenues are used to pay for expenditures.
Revenue Bonds	Bonds (instruments and indebtedness) issued by the public sector to finance a facility or equipment purchase, which, unlike general obligation bonds, are not backed by the full faith and credit of the government. Instead, their revenues are generated from the facility or equipment that they finance. Because they are state or local government bonds, their interest earnings are typically tax-exempt under the Internal Revenue Code.
Revenue-Funded Capital	Expenditures on capital projects which are funded by revenues of Central San rather than by debt, grants, or other funds.

Service Area	The cities and areas served by Central San, including Lafayette, Orinda, Moraga, Danville, Alamo, Walnut Creek, Pacheco, and portions of San Ramon and Martinez. Concord's residents' and businesses' wastewater is collected by that City and treated by Central San through a contractual arrangement; therefore, Concord is considered to be in Central San's service area. (Also called Service Territory).
Self-Insurance Fund	One of four sub-funds of the enterprise fund used to account for Central San's operations. This fund covers the cost of claims not covered by Central San's insurance coverage, the cost of insurance premiums, interest earnings on the fund, and other associated costs.
Sewer Construction (Capital) Fund (S/C)	One of four sub-funds of the enterprise fund used to account for Central San's operations. This sub-fund provides for the treatment plant and collection system renewal and replacement expenditures, as well as office facilities renewal, vehicle and equipment replacement, information systems replacement, and miscellaneous capital expansion needs.
Strategies, Initiatives, Metrics (SIM)	The key components of the Strategic Plan that specify the overall goals in the coming years, consisting of the Strategies (highest level objectives), Initiatives (how the strategies will be achieved), and Metrics (measurements of progress).
Sinking Fund	A method by which a government may set aside money over time to pay for a project or obligation.
Staffing Plan	The classes and positions that have been authorized by the Board and have been determined necessary to carry out Central San functions. Central San's current staffing level is based on a 2015 Organization and Staffing Plan, which resulted from a study conducted by Raftelis Financial Consultants, recommending 290 FTE positions.
Strategic Plan	The document that provides a blueprint for how Central San will respond to future challenges and changing priorities over a two-year period. It outlines specific goals, strategies, and objectives to guide Central San and establishes criteria to measure progress.
Strategy	Highest level of capital improvement activities, generally a grouping of related programs. Represents key capital objectives as defined in the Mission Statement, Strategic Plan, and Board policies and directives.
Statement of Net Assets (Balance Sheet prior to GASB 34)	A statement reporting the present financial position of an entity by disclosing the value of its assets, liabilities, and equities as of a specified date. Assets minus liabilities equal fund balance (also called Net Assets).
Subsidy Payment	Relating to Build America Bonds (BABs), the subsidy payment represents funds from the federal government to offset part of the interest cost paid by Central San as the issuer of bonds. The BABs were issued in 2009 in lieu of traditional tax-exempt debt. Central San pays a taxable rate of interest to investors, investors pay the Federal Government Income Tax on that interest, and the federal government remits a specified percentage of the interest payment to Central San.
Unfunded Actuarial Accrued Liability (UAAL)	The difference between the actuarial accrued liability and the actuarial value of assets accumulated to finance that obligation. This is a term used in connection with pension plans or commitments to provide other post-employment benefits (OPEB) to employees.
Unfunded Liability	Liability that has been incurred during the current or a prior year, that does not have to be paid until a future year, and for which reserves have not been set aside. This is similar to a long-term debt, in that it represents a legal commitment to pay at some time in the future.
Vacancy Factor	Recognizing that not all Funded Positions will be occupied throughout a fiscal year, this allowance reduces budgeted funding to reflect such vacancies. While positions are vacant, some costs are incurred on occasion for temporary staff or consulting resources, reducing the vacancy factor.

Acronyms and Abbreviations in the CIB/CIP

Acronyms and Abbreviations in the CIB/CIP	
AB	Assembly Bill
ADA	Americans with Disabilities Act
A/N	Aeration and Nitrification
ATS	Automatic Transfer Switch
BAAQMD	Bay Area Air Quality Management District
BACWA	Bay Area Clean Water Agencies
Board	Board of Directors
CAD	Contractual Assessment District or Computer Aided Design
CBC	California Building Code
CCRP	Concord Community Reuse Project
CCTV	Closed-Circuit TV
CCWD	Contra Costa Water District
CEPT	Chemically Enhanced Primary Treatment
CEQA	California Environmental Quality Act
CIB	Capital Improvement Budget
CIP	Capital Improvement Plan - covers 10 years
CIPP	Cured-in-Place Pipe
CMMS	Computerized Maintenance Management Systems
CO	Carbon Monoxide
Cogen	Cogeneration
CSO	Collection System Operations
CWMP	Comprehensive Wastewater Master Plan
DP	District Project
EIR	Environmental Impact Report
ERP	Enterprise Resource Planning
FCD	Contra Costa County Flood Control and Water Conservation District
FY	Fiscal Year - July 1 through June 30
GDI	Geographic Data Integration
GHG	Greenhouse Gas
GIS	Geographic Information Systems
HMI	Human Machine Interface
HOB	Headquarters Office Building
ICM	Integrated Catchment Modeling

Acronyms and Abbreviations in the CIB/CIP	
I/O	Input and Output
InfoMaster	GIS-based Asset Integrity Management and Capital Planning Tool
InfoWorks	New Sewer System Hydrodynamic Model
IT	Information Technology
MCC	Motor Control Center
MGD	Million Gallons per Day
MPR	Multi-Purpose Room
NACWA	National Association of Clean Water Agencies (formerly AMSA)
NPDES	National Pollutant Discharge Elimination System
O&M	Operations & Maintenance
PG&E	Pacific Gas & Electric Company
PLC	Programmable Logic Controller
PMIS	Program Management Information System
POB	Plant Operations Building
POD	Plant Operation Division
PS	Pumping Station
PVC	Polyvinyl Chloride
RAMPCAP J100	Risk Analysis and Management for Critical Asset Protection
R&R	Rehabilitation & Replacement
RW or ReW	Recycled Water
RWQCB	Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition
SCB	Solids Conditioning Building
SCVWD	Santa Clara Valley Water District
SSC	Sewer Service Charge
SSO	Sanitary Sewer Overflow
SWRF	Satellite Water Recycling Facility
TP	Treatment Plant
UPS	Uninterruptible Power System
UV	Ultraviolet
V	Volt
VFD	Variable Frequency Drives
WE&RF	Water Environment & Reuse Foundation