



FY 2012-13

Capital Improvement **BUDGET** & TEN-YEAR PLAN

EXECUTIVE SUMMARY



Central Contra Costa Sanitary District



Previous and ongoing projects



Executive Summary

Central Contra Costa Sanitary District (the “District”) funds an extensive Capital Improvement Program designed to preserve, maintain, and enhance the District’s assets, meet regulatory requirements, accommodate the community’s needs, and protect public health and the environment. Capital improvements are construction, acquisition or renovation activities which add value to the District’s fixed assets (buildings, pipelines, facilities, equipment) or significantly increase their useful life.

The District’s FY 2012-13 Capital Improvement Budget (CIB) details expenditures of approximately **\$32.3 million** for the planning, design and construction of treatment plant, collection system, general improvements, and recycled water projects. By adopting the CIB, the Board of Directors authorizes staff to pursue this work.

In addition to the CIB for the upcoming year, the Board approves a Ten-Year Capital Improvement Plan (CIP) that forecasts needed expenditures. The CIP focuses on facility renovation, expansion and future regulatory compliance projects. It estimates expenditures for the next ten years at **\$358 million** (in 2012 dollars). The CIB and CIP also include projected revenues and cash flow discussions to demonstrate how planned expenditures could be funded.

Each planned project addresses one or more District goals:

- Protect public health and the environment
- Maintain existing assets
- Respond to regulatory and community concerns
- Accommodate planned growth

The CIB forecasts that in FY 2012-13 expenditures will exceed revenue by about **\$10.6 million**, but it will be possible to maintain an appropriate Sewer Construction Fund balance by drawing down fund reserves. This Executive Summary describes the major projects included in the FY 2012-13 CIB, the major projects included in the Ten-Year CIP, and the revenue streams that will support the planned expenditures.



Capital Improvement Budget

The FY 2012-13 CIB presents estimated expenditures of approximately \$32.3 million for planning, design and construction of capital projects in four programs:

- Treatment Plant
- Collection System
- General Improvements
- Recycled Water

Each of the programs is divided into subprograms to track different types of work.

Most of the money will be spent on renovation or preservation of capital assets, as shown in the following table:

Program/ Subprogram	Planned Expenditure for FY 2012-13
Treatment Plant Program	\$7.4 million (23%)
Regulatory Compliance/Planning	\$0.6 million
One-Time Renovation	\$5.3 million
Recurring Renovation	\$1.5 million
Expansion/Capacity Improvements/Miscellaneous	\$0
Collection System Program	\$13.7 million (42%)
Renovation	\$10.3 million
Regulatory Compliance/Planning	\$0.4 million
Expansion/Capacity Improvements	\$1.7 million
Pumping Stations/Force Mains	\$1.3 million
General Improvements Program	\$7.3 million (23%)
Vehicles and Equipment	\$1 million
Management Information Systems	\$1.6 million
All Other Projects	\$4.7 million
Recycled Water Program	\$3.9 million (12%)
TOTAL	\$32.3 million (100%)

Major Project Emphasis

Although the CIB is made up of funding estimates for many individual projects, each year there are several major projects which together account for a majority of total estimated capital expenditures. In FY 2012-13, the emphasis will be on 11 large projects, which together account for \$21,821,000 or 68 percent of the total estimated expenditures. Estimated FY 2012-13 expenditures for each of these projects are noted below.

Seismic Improvements for the Headquarters Office Building (HOB)

FY 2012-13: \$3,800,000

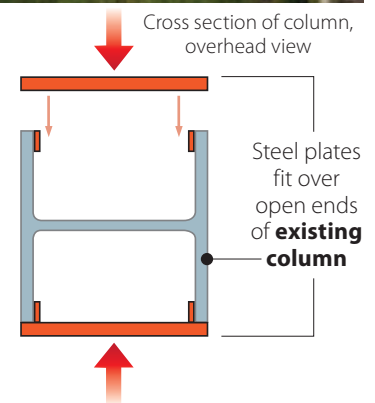
Estimated total project cost: \$6,013,000

Structural steel frames constructed before the most recent Northridge, California earthquake may weaken to the point that they cannot resist the forces generated during a seismic event. These steel framing problems in combination with the building's inherent flexibility are the primary reasons for the HOB's seismic vulnerability. The HOB will be retrofitted to ensure a life-safety level of structural performance. In addition to seismic improvements, the project includes new carpet and interior/exterior painting, ADA improvements, upgrades to the electrical and data communication systems, office space/cubicle improvements, a kitchenette on the third floor, minor upgrades to the HVAC system and plumbing Recycled Water to bathroom fixtures.

HOB Support Column Retrofit



The nine steel columns which run vertically from the Garden Level to the roof have flanges on two sides and are open on two sides. The retrofit work will involve welding steel plates on the open sides, completely boxing in the columns and significantly reinforcing them.



Concord Recycled Water Landscape Irrigation Project

FY 2012-13: \$3,900,000

Estimated total project cost: \$4,100,000

The project will construct about 2.5 miles of new recycled water distribution piping. The District received grants of approximately \$1,100,000 from the California Department of Water Resources (State Prop 84) and from the United States Bureau of Reclamation (Title 16) for construction of the project.

Pump & Blower Building Seismic Upgrade

FY 2011-13: \$3,000,000

Estimated total project cost: \$4,455,000

In 2009, a seismic evaluation of treatment plant facilities was completed. The evaluation included a recommendation that the Pump and Blower Building be improved to comply with current seismic design standards. Project construction will include installation of shear walls and buttresses.

Major Project Emphasis

2012 Cured In-Place Pipe Lining Project

FY 2012-13: \$2,000,000

Estimated total project cost: \$2,160,000

This project will renovate approximately 2,600 feet of deteriorated large diameter corrugated metal and reinforced concrete pipelines (RCP) located in South Main Street between Hill Road and Lilac Drive in Walnut Creek utilizing cured in place pipe (CIPP), a trenchless rehabilitation technology. In addition, approximately 1,450 feet of deteriorated large diameter corrugated metal pipe will be renovated using CIPP in Lancaster Road between Westwood Court and Orchard Lane, also in Walnut Creek. An additional 3,800 feet of large diameter reinforced concrete pipe on the Shell Refinery Property and east along Marina Vista to Highway I-680 in Martinez will be renovated using the same CIPP technology. 3,200 feet of 42-inch RCP will also be lined on the District's plant site.



North Orinda Sewer Renovations – Phase 4

FY 2011-12: \$1,806,000

Estimated total project cost: \$2,830,000

This project will replace or renovate approximately 13,000 feet of sewer pipelines predominately in the El Toyonal and Claremont Avenue areas of North Orinda.

Lafayette Sewer Renovations – Phase 8

FY 2011-12: \$1,800,000

Estimated total project cost: \$1,991,000

The project will replace or renovate approximately 12,000 feet of sewer pipelines predominately in the Upper Happy Valley Road area from Cowan Road to Los Arabis in Lafayette.

Major Project Emphasis

Walnut Creek Sewer Renovations – Phase 9

FY 2011-12: \$1,800,000

Estimated total project cost: \$3,078,000

This project will replace or renovate approximately 12,000 feet of sewer pipelines predominately in the Rudgear Road, Hawthorne Drive and Mountain View Boulevard areas of Walnut Creek.

Primary Treatment Renovation

FY 2011-12: \$1,000,000

Estimated total project cost: \$10,051,000

This project will replace water and air supply pipelines at the primary sedimentation tanks. The grit handling facility and the scum collection system will be renovated. The scum thickening unit in the Solids Conditioning Building will also be replaced. Other primary tank improvements include installation of new baffles, replacing chain drives, sludge flight drive shafts and bearings, concrete repairs, upgrading hand railings, constructing a new level control structure, and the odor control system will be evaluated and modified as necessary.

TV Inspection Program, Phase 2

FY 2012-13: \$1,000,000

Estimated total project cost: \$9,000,000

This program is a multi-year effort to inspect the entire District collection system using closed-circuit television systems. Phase 2 of the program will inspect all sewers in the service area over the next five years where initial (Phase 1) inspections or maintenance records indicate follow-up inspection would be useful. Sewers on routine maintenance schedules are inspected once every 10 years. The inspection data will be used to organize and prioritize sewer renovation projects and modify sewer maintenance schedules. The early emphasis of the program will be inspection of sewers in the Lafayette, Orinda and Walnut Creek areas.

Outfall Improvements – Phase 6

FY 2012-13: \$815,000

Estimated total project cost: \$2,000,000

This project will inspect both the underground and submarine portions of the treatment plant's outfall sewer as allowed by the current NPDES Permit. Repairs will be made as needed. In addition, a new final effluent meter and meter vault will be constructed.

Treatment Plant Piping Renovations – Phase 7

FY 2012-13: \$700,000

Estimated Total project cost: \$725,000

This phase of the Piping Renovation Program will replace centrate piping at the centrifuges in the Solids Handling Building, discharge piping and valves at the south Return Activated Sludge (RAS) pump station, hypochlorite piping in the RAS pump stations and the ash hopper dust collector, and also includes ventilation and odor control system improvements at the sludge truck loading facility, sluice gates at the filter plant forebay and flow and pH meters on the scrubber water pipelines.

Ten-Year Capital Improvement Plan

The District updates its Ten-Year Capital Improvement Plan each year to guide long-range policy and to:

- Identify, prioritize, and schedule capital projects for the ten-year period.
- Establish a plan for generating the financial resources needed to complete these capital projects.

The plan covers FY 2012-13 through FY 2021-22 and predicts total expenditures of approximately **\$358 million** (in 2012 dollars), or an average of \$35.8 million per year, as described in the following table:

Expenditure Category	Dollars	Percent
Renovation (one-time and recurring)	\$ 198 million	56 %
Expansion (capacity increases for new customers)	\$ 33 million	9 %
Regulation-Driven	\$ 101 million	28 %
Miscellaneous	\$ 26 million	7 %
Total 10-Year Capital Program Expenditures	\$358 million	100%

The plan is divided into the same four programs as the budget. While a large portion of the plan is devoted to ongoing renovation, several projects address capacity and regulatory issues. The following table lists projected ten-year expenditures by program and subprogram. A brief description of the major projects/ programs not described in the FY 2012-13 Capital Improvement Budget section follows the table.

Program/Subprogram	Planned 10 Year Expenditure
Treatment Plant Program	\$159.2 million (44%)
Regulatory Compliance/Planning	\$101 million
One-Time Renovation	\$35.5 million
Recurring Renovation	\$22.6 million
Expansion/Capacity Improvements/Miscellaneous	\$0.1 million
Collection System Program	\$168.6 million (47%)
Renovation	\$124.5 million
Regulatory Compliance/Planning	\$2.6 million
Expansion/Capacity Improvements	\$31.8 million
Pumping Stations/Force Mains	\$9.7 million
General Improvements Program	\$21.3 million (6%)
Vehicles and Equipment	\$5.0 million
Management Information Systems	\$6.3 million
All Other	\$10 million
Recycled Water Program	\$8.9 million (3%)
Capital Improvement Plan Total	\$358 million (100%)

Major Ten-Year Projects and Programs

District Seismic Improvements: Substantial changes have been made to seismic design standards. Recent evaluation of District buildings identified a number of necessary improvements to address the new standards. These improvements will provide increased safety for personnel and protection of plant processes. (CIP total project cost estimate: approximately \$20 million).

Building	Construction in Year	Cost
Pump & Blower Building	2012-13	\$4,455,000
Headquarters Office Building (in GIP)	2012-13	\$6,013,000
Rental Properties (in GIP)	2012-13	\$640,000
Plant Operations Building	2015-16	\$1,259,000
Laboratory	2015-16	\$192,000
Warehouse	2016-17	\$895,000
Solids Conditioning Building	2022-23	\$6,200,000



The Bay Area is seismically active. District facilities have been evaluated and \$19.7 million is currently budgeted for retrofitting various buildings over the next several years.



Major Ten-Year Projects and Programs

Sewer Renovation Program: In 2002, the District initiated a long-term program to televise all 1,447 miles of its gravity sewers. Last year the first round of TV inspection work was completed: nearly 83 miles of sewer in need of renovation were identified. Taking into account the 37 miles of sewer renovated to date, approximately 46 miles of main sewers (6-, 8-, and 10-inch pipe) remain to be renovated. The CIP targets completing renovation of the remaining 46 miles of identified main sewers within the ten-year plan (i.e., by FY 2021-22). (Ten-year plan total estimated project cost: \$125 million. Includes TV programs, large diameter pipe renovation, and cathodic protection.)



TV inspection of the collection system helps to guide sewer renovation plans.

Regulatory Projects: The next ten years hold the potential for significant regulatory changes. These include possible discharge limits for nutrients (nitrogen, ammonia and phosphorus) and requirements for reducing air pollutant emissions including greenhouse gases. Funding for an ammonia removal project has been included in the ten-year plan for contingency planning purposes. Funding for other, less-defined potential projects is not included in the CIP. For example, the effects of greenhouse gas reduction requirements are still being studied and could require significant investment; and changes to air emission and solid waste regulations may affect the furnaces and the impacts of these regulatory changes range from additional emissions equipment to total replacement of the furnaces. (Ten-year plan total estimated project cost: \$101 million)

Major Ten-Year Projects and Programs

Sewer Capacity Program: The Collection System Master Plan (CSMP) was updated in 2010 to reflect recently approved land use and new flow-monitoring data. The CIP include projects to address the CSMP recommendations. Sewer capacity projects will include trunk sewers on Lancaster Road in Walnut Creek, near Grayson Creek in Pleasant Hill, Moraga Way in Orinda, and the San Ramon Schedule C Interceptor. (Ten-year plan total estimated project cost: \$32 million)

Piping Renovation and Replacement Program: The replacement value of treatment plant facilities is conservatively estimated at \$600 million. Piping systems are an important and critical component of the treatment plant infrastructure. These systems will continue to be evaluated and prioritized for repair or replacement. (Ten-year plan total estimated project cost: \$23 million)



Potential Future Projects

Not Included in 2012 Capital Plan

The projects listed in this CIP are those that are reasonably certain to be undertaken by the District. However, when evaluating project priority and cash flow impacts, consideration must be given to potential projects that are uncertain and not currently included in the plan. If some or all of these potential projects listed below are required to be undertaken, there could be a significant impact on the financial forecasts contained in the plan. **\$358 million** (in 2012 dollars), or an average of \$35.8 million per year, as described in the following table:

Potential Future Projects Description	Time frame	Estimated total project cost	Estimated probability
Treatment Plant			
<p>Greenhouse Gas Reduction – Regulations are under development that will require significant reductions in greenhouse gas emissions. The appropriate reduction plan may include diversifying our energy portfolio by adding a renewable energy source, such as solar or wind. <i>Alternatively, the requirements may be satisfied by buying carbon dioxide allowances on the open market or shutting down the cogeneration facility.</i></p>	2-5 yrs	\$15 - \$30 million	Medium
<p>Nutrient Removal – Construct facilities for nitrogen and phosphorus removal to address more stringent receiving water standards.</p>	10-20 yrs	\$70 million	Low
Recycled Water Projects			
<p>Martinez Refinery Recycled Water Project - Construct new treatment and distribution facilities to supply up to 20 MGD to the Shell and Tesoro refineries for cooling tower makeup and boiler feed water. Money for planning activities only is budgeted.</p>	3-10 yrs	\$100 million	Medium

Capital Revenue/Cash Flow/ Sewer Construction Fund Balance

CAPITAL REVENUE

The Capital Program is funded by a number of different sources as described below.

■ **Sewer Capacity Program: Capacity Fees:**

A capacity fee is paid by each new connector to the District's collection system. This fee is recalculated each year and represents the cost of buying into the existing assets of the District. The revenue from these fees is dependent on the housing market and rate of new connections.

■ **Pumped Zone Fees:** For connections in an area where pumping is necessary, an additional capacity fee is charged to buy into the existing pumping station assets of the District. The revenue from the pumped zone fees is highly dependent on the housing market and the rate of new connections in the pumped zones.

■ **Property Taxes:** Historically, the District has received significant revenues from property taxes. In 1978, when Proposition 13 reduced the taxation rate on property, the State Legislature urged enterprise special districts to shift to user fee financing. In FY 1992-93, the State of California began diverting portions of the property tax revenue. The District still receives a significant amount of property taxes which are allocated entirely to debt service and the Capital Program. If those taxes were to be permanently diverted, a significant increase in other forms of revenue, particularly the Sewer Service Charge, would be necessary.

■ **Interest:** Interest is earned on the Sewer Construction Fund, and the interest earned is returned to the fund.

■ **Sewer Service Charges:** The Sewer Service Charge is an annual charge placed on the property tax roll which funds operation and maintenance costs as well as a portion of the Capital Program. Each year the capital revenue from all other sources is estimated, and the additional revenue needed to fund the planned expenditures, after consideration of any increase or decrease to the Sewer Construction Fund Balance, is generated by adjusting the capital component of the Sewer Service Charge.

■ **Reimbursements from Others:** The District receives reimbursements from others for capital expenditures which benefit others. For example, the City of Concord is served under a contract which requires it to pay a flow-proportional share of capital projects which benefit Concord (such as projects to improve wastewater treatment facilities and large interceptors.) Also, the District has formed Assessment Districts to promote the installation of sewers in unsewered areas and loaned money from the Sewer Construction Fund for construction of the sewers. This money is then repaid with interest to the Fund.

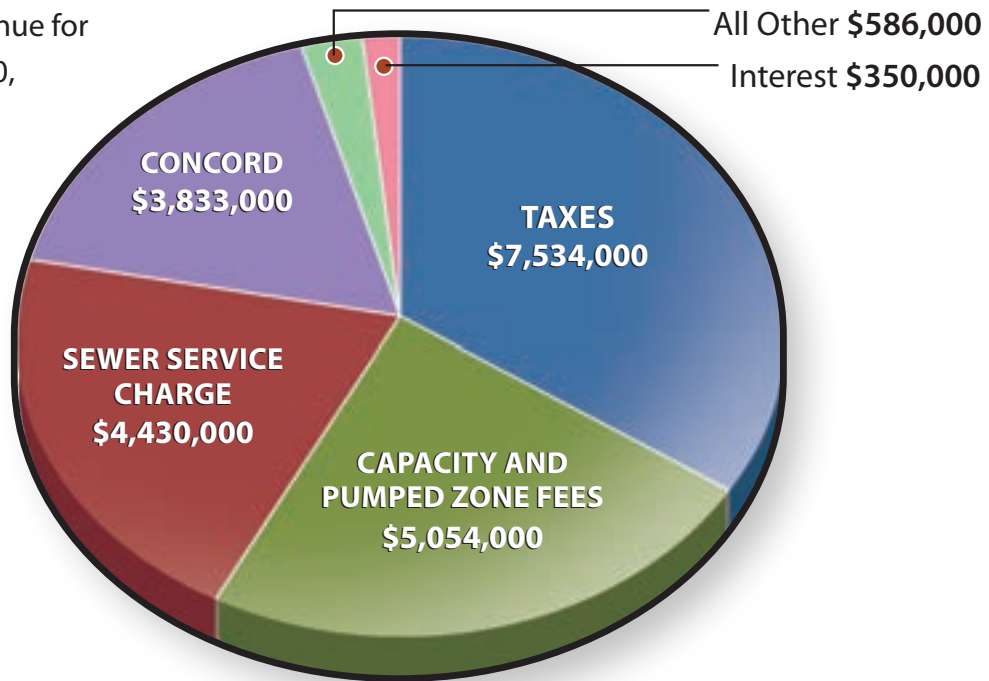
■ **Bond Proceeds:** While the District generally follows a pay-as-you-go philosophy, Sewer Service Charge rate increases can be mitigated by utilizing bond funding to spread the cost of projects over time.

Capital Revenue/Cash Flow/ Sewer Construction Fund Balance

CAPITAL REVENUE

FY 2012-13 CAPITAL BUDGET REVENUE

The total budgeted revenue for FY2012-13 is \$21,787,000, assuming a \$30 Sewer Service Charge rate increase, which was adopted by the Board last year.



One of the District's goals is to maintain responsible rates while investing in the capital programs needed to protect public health and the environment, maintain existing assets, respond to regulatory and community concerns, and accommodate planned growth. The District has always prided itself on providing a high level of service at reasonable rates. When the severity of the economic downturn became apparent, the District Board of Directors, after thoughtful debate, elected not to raise rates for two years in order to provide some financial relief to customers. Staff responded to the Board's actions by implementing cost-saving measures which resulted in a savings in operating and maintenance costs of over \$2 million in 2009-10 and \$2.5 million in 2010-11. Because the economic downturn resulted in significant bid savings on capital projects, staff recommended, and

the Board agreed, that the Capital Program should continue and needed projects should be built. In order to fund these projects without raising rates for two years, \$30 million in bonds were sold. This increased the District's bonded indebtedness to over \$50 million and the annual debt service obligation to \$5.6 million.

FY 2010-11 was also challenging for the District. Increased expenditures for regulatory mandates and reduced revenues due to the economic downturn resulted in the need for a significant sewer service charge (SSC) rate increase to allow the District is to continue providing the same level of service and investing in infrastructure. In response, District staff recommended and the Board of Directors adopted a SSC increase of \$30 per year for both FY 2011-12 and FY 2012-13.

Capital Revenue/Cash Flow/ Sewer Construction Fund Balance

CAPITAL REVENUE

Sewer Service Charge Rates for Bay Area Agencies

Revised May, 2012

AGENCY	2012-12 Residential Sewer Service Charge ⁽¹⁾
Petaluma	\$1,099
Santa Rosa	\$953
Rodeo Sanitary District	\$685
Crockett Sanitary District	\$632
Ironhouse Sanitary District	\$592
Oakland (EBMUD for treatment)	\$572
Richmond	\$547
Brentwood	\$547
Berkeley (EBMUD for treatment)	\$496
Benicia	\$496
Vallejo	\$495
2012-13 Mean Rate of other agencies	\$492
Mountain View Sanitary District	\$491
Livermore	\$489
Novato	\$464
Napa Sanitation District	\$435
Pittsburg (DDSD)	\$431
Pleasanton	\$412
Stege SD (EBMUD for treatment)	\$395
Bay Point (DDSD)	\$389
CCCSD 2012-13 Board-Adopted Rate	\$371
Antioch (DDSD)	\$353
Dublin San Ramon Services District	\$345
Fairfield (FSSD)	\$343
CCCSD Current 2011-12 Rate	\$341
Concord (CCCSD for treatment)	\$324
Union Sanitary District	\$304
West County Wastewater District	\$304
Oro Loma Sanitary District	\$188

⁽¹⁾ Annual SSC per Residential Unit Equivalent, or RUE.

Some agencies also receive property tax revenue ranging from \$11 to \$227 per RUE. CCCSD receives \$73 per RUE from property taxes. CCCSD receives \$73 per RUE from property taxes.

Rates in effect on July 1, 2012 if known. Previous year rates shown in many cases.

Capital Revenue/Cash Flow/ Sewer Construction Fund Balance

CASH FLOW / SEWER CONSTRUCTION FUND BALANCE

As part of the Ten-Year Capital Improvement Plan, estimates of expenditures and revenues are made and a cash flow projection is developed to show the interrelationship of revenues and the Sewer Construction Fund (SCF) balance.

Each year, a policy decision is made by the Board of Directors, based on staff analysis and recommendations, on the capital component of the Sewer Service Charge needed to fund the planned Capital Program while maintaining an adequate SCF balance. The SCF balance is needed for future capital projects. It also acts as the “bank” used to meet the District’s cash flow needs. To provide sufficient funds for cash flow needs, a minimum balance of approximately \$30 million is recommended for the SCF.

This year, a drawdown of the SCF of approximately \$10.6 million is budgeted.

2012-13 Sewer Construction Fund Revenues And Expenditures

REVENUES

Facilities Capacity Fees	\$4,417,000
Pumped Zone Fees	\$637,000
Interest	\$350,000
Property Taxes	\$7,534,000
Sewer Service Charges*	4,430,000
Reimbursements from Others:	
City of Concord	\$3,833,000
Recycled Water Sales **	\$61,000
Developer Fees, Charges, Other	\$525,000

TOTAL REVENUES **\$21,787,000**

EXPENDITURES

Treatment Plant Program	\$7,436,000
Collection System Program	\$13,723,000
General Improvements Program	\$7,254,000
Recycled Water Program	\$3,930,000

TOTAL EXPENDITURES **\$32,343,000**

A summary of Sewer Construction Funds Available impact is presented below:

PROJECTED REVENUES **\$21,787,000**

PROJECTED EXPENDITURES **\$32,343,000**

DRAW FROM FUNDS AVAILABLE **\$10,556,000**

More specific information regarding expenditure categories is included in the CIP.

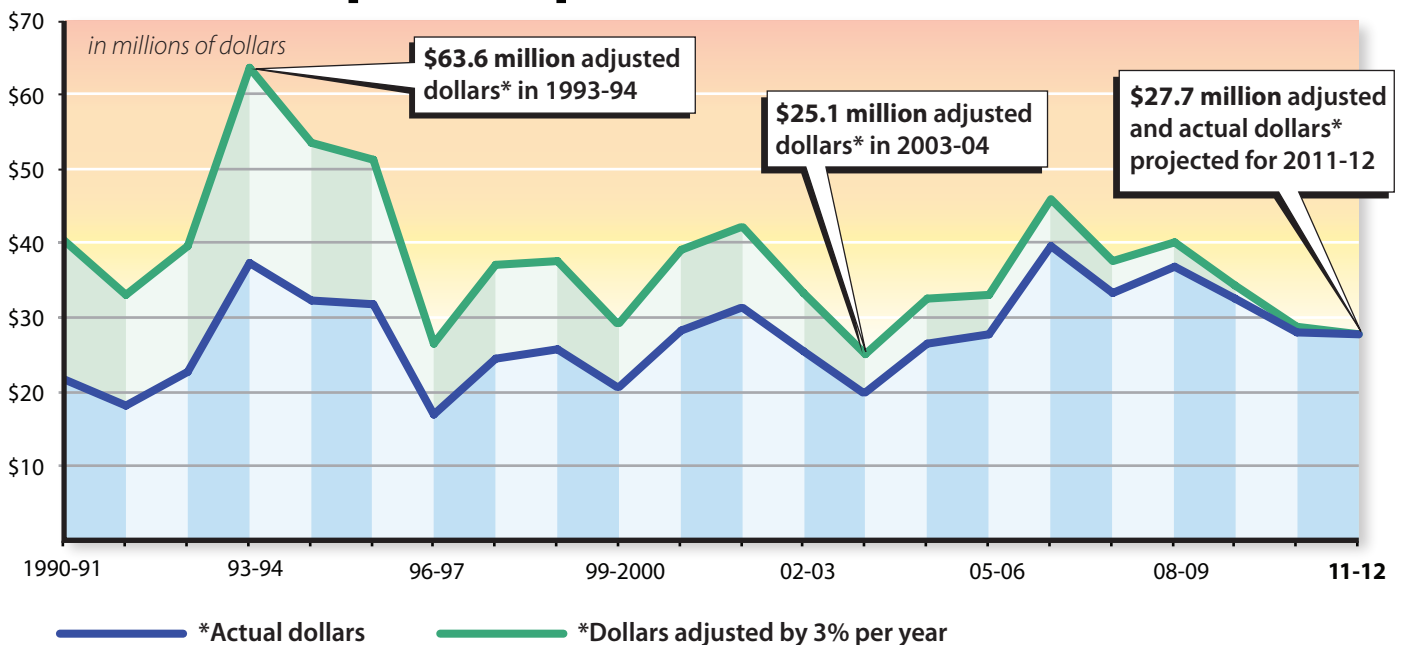
* Rate increase approved by the Board has been included.

** Revenue is first recorded in the O&M budget until O&M costs are offset. Any additional revenue will be recorded in the Sewer Construction Fund.

Historic Capital Improvement Program

To place this year's proposed CIB and CIP in perspective, it is helpful to review historical expenditures and revenues. As shown in the "Annual Capital Expenditures" figure below, annual capital expenditures in inflation-adjusted dollars have decreased over the years to approximately \$30 million per year from a high of \$60 million in 1993-94. This rate of spending represents a replacement of all assets about once every hundred years, based on an estimated replacement value of approximately \$3 billion for the treatment plant, collection system, and pumping station facilities.

Annual Capital Expenditures

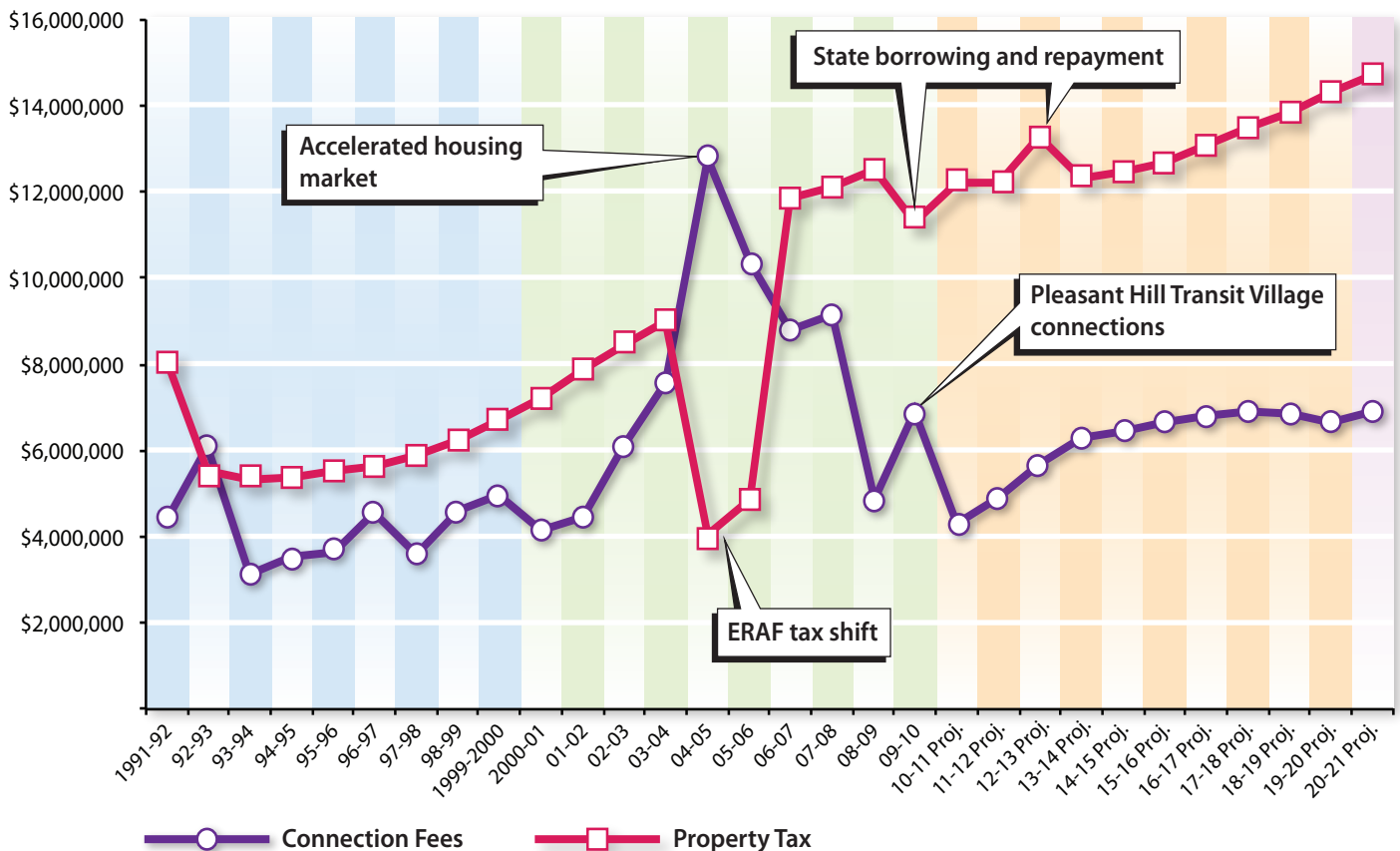


Historically, the District has attempted to match annual expenditures with revenues to avoid reducing the Sewer Construction Fund balance below \$30 - \$35 million. This allows the fund to act as the bank to meet the District's cash flow needs between its biannual receipt of Sewer Service Charge and property tax revenue collected for the District by Contra Costa County. As noted in the "Property Tax and Capacity Fee Trends" figure on the next page, capital revenues can be highly variable.

Historic Capital Improvement Program

The District has two discretionary sources of capital, the Sewer Service Charge capital component and bond sales. In 2009-10, the District chose to augment the Sewer Construction Fund with \$30 million in bond proceeds in order to ease the pressure on Sewer Service Charge rates and allow the capital program to move forward with needed projects. This decision was deemed prudent because the competitive construction bidding climate occasioned by the economic downturn resulted in construction costs being reduced by 20-30%, providing significant savings for the program. The District will continue to balance capital expenditures and revenues to ensure that appropriate investments are made in capital facilities while maintaining an adequate Sewer Construction Fund balance to meet cash flow needs.

Property Tax and Capacity Fee Trends

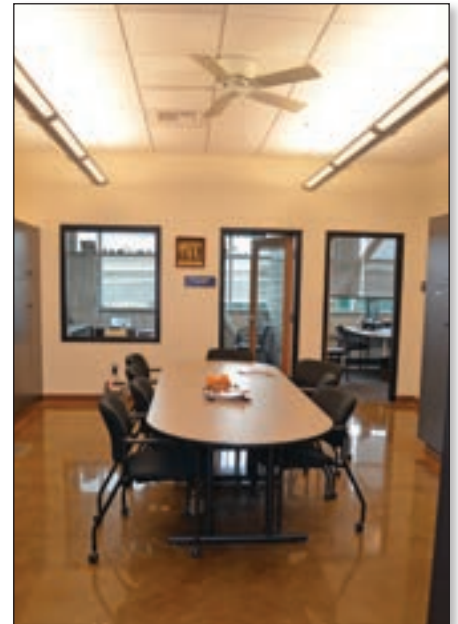


Board of Directors



CCCSD's regular board meetings are scheduled and conducted on the first and third Thursday of each month. Special and continued meetings are held as needed. Meetings begin at 2 pm in the Board Room at Central Contra Costa Sanitary District, 5019 Imhoff Place, Martinez, CA.





New CSO Headquarters Completed

The new facility enables us to serve our communities better. It meets stringent seismic criteria, can be used as an emergency operations center, and also incorporates energy efficiency and resource conservation practices to make it "green."

To become LEED (Leadership in Energy and Environmental Design) gold certified, the building was constructed using strategies to conserve energy, water and other resources, and to reduce carbon dioxide emissions. It is the first building in Walnut Creek to have a green roof which uses drought-tolerant plants to help it stay cool during the summer and absorb rainwater to reduce runoff during the winter.

Questions?

For additional information about the District's Capital Improvement Budget and Ten-Year Plan, please contact Environmental Services Manager Jarred Miyamoto-Mills at (925) 229-7335 or Capital Projects Division Manager Andrew Antkowiak at (925) 229-7396.