Central Contra Costa Sanitary District

FY 2015-16

Capital Improvement BUDGET & TEN-YEAR PLAN

Adopted June 4, 2015

FY 2015-16 CAPITAL IMPROVEMENT BUDGET

TABLE OF CONTENTS

Acronyms and Abbreviations in the CIB/CIP

AB	Assembly Bill
ADA	Americans with Disabilities Act
ADWF	Average Dry Weather Flow
AFY	Acre-feet per Year
A/N	Aeration and Nitrification
ARB	Air Resources Board
ArcSNAP	Sewer Network Analysis Program
ASB	Auxiliary Steam Boiler
AWWF	Average Wet Weather Flow
B&G	Buildings and Grounds
BAAQMD	Bay Area Air Quality Management District
CAA	Clean Air Act
CAD	Contractual Assessment District
CAFR	Comprehensive Annual Financial Report
CalOSHA	California Occupational Health and Safety Administration
CARB	California Air Resources Board
CBC	California Building Code
CCCERA	Contra Costa County Employees Retirement Association
CCCSD	Central Contra Costa Sanitary District
CCTV	Closed Circuit TV
CCWD	Contra Costa Water District
CEC	California Energy Commission
CECs	Constituents of Emerging Concern
CIB	Capital Improvement Budget
CIP	Capital Improvement Plan – covers ten years
CIPP	Cured in Place Pipe
CNWS	Concord Naval Weapons Station
Co-Gen	Cogeneration
CO2	Carbon Dioxide
COP	Certificates of Participation
CS	Collection System
CSO	Collection System Operations
CSOD	Collection System Operations Division
DAF	Dissolved Air Flotation (tanks)
DI	De-Ionized or Discrete Input
District	Central Contra Costa Sanitary District
DP	District Project
DTSC	Department of Toxic Substances
DWR	Department of Water Resources
EIR	Environmental Impact Report
Elec	Electrical
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
ERP	Enterprise Resource Planning
FCD	Contra Costa County Flood Control and Water Conservation District

Acronyms and Abbreviations in the CIB/CIP

Fund	Sewer Construction Fund
FY	Fiscal Year – July 1 through June 30
GDI	Geographic Data Integration
GHG	Greenhouse Gas
GI	General Improvements Program
GIS	Geographic Information Systems
GPS	Global Positioning System
HOB	Headquarters Office Building
HTE	SunGard Program
HVAC	Heating, Ventilating, and Air Conditioning
IEEE	Institute of Electrical and Electronics Engineers
IFCO	Industrial Furnace Company
I/O	Input and Output
IT	Information Technology
LT	Long Term
M1	Manhole 1
MCC	Motor Control Center
MGD	Million Gallons per Day
MHF	Multiple Hearth Furnace
NACWA	National Association of Clean Water Agencies (formerly AMSA)
NPDES	National Pollutant Discharge Elimination System
NFPA	National Fire Protection Agency
O&M	Operations & Maintenance
PE	Primary Effluent
PLC	Programmable Logic Controller
PG&E	Pacific Gas & Electric Company
Ph	Phase
POB	Plant Operations Building
POD	Plant Operation Division
PPE	Personal Protective Equipment
PS	Pumping Station
PTW	Power Tools for Windows (software program)
RFP	Request for Proposal
RWQCB	Regional Water Quality Control Board
RUE	Residential Unit Equivalent
RW or ReW	Recycled Water
SCADA	Supervisory Control and Data Acquisition
SCB	Solids Conditioning Building
SCF	Sewer Construction Fund
SSC	Sewer Service Charge
SSMP	Sewer System Master Plan
SSO	Sanitary Sewer Overflow
TP	Treatment Plant
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
v	volt

SUMMARY

The District's Capital Improvement Budget shows planned expenditures of $30,790,000 for Fiscal Year 2015-16 from the Sewer Construction Fund for planning, design, and construction of capital projects in four CIB programs. The total proposed funding authorization required for projects in the CIB for FY 2015-16 is $51,872,000, including new budgets and estimated carry-over from FY 2014-15.

The capital program is designed to meet the following goals:

- Protect public health and the environment,
- Maintain and replace existing assets,
- Embracing a policy of sustainability for the responsible use of existing resources
- Respond to regulatory and community concerns,
- Accommodate planned future growth.

By adopting the CIB, the Board of Directors authorizes staff to pursue work on specifically identified projects in the Treatment Plant, Collection System, General Improvements, and Recycled Water Programs.

PROJECT PRIORITIZATION

The projects included in the FY 2015-16 CIB have been prioritized to ensure the best use of available, approved funds. Each project was scored using a District-specific prioritization scoring sheet by each program manager and supported by input from project managers as well as staff from Engineering and Plant Operation and Maintenance Departments. Each project was then assigned a priority ranking of **Critical**, **Very High**, **High**, or **Medium** depending on the project score.

The prioritization scoring and ranking system for all CIB projects in each of the four programs use existing prioritization strategies, including guidelines from the Water Environment Research Foundation (WERF), and prioritization procedure examples from other agencies.

The prioritization scoring sheet includes the following criteria separated into three categories (Essential Commitments, Project Benefits, and Operational Reliability):

Criteria	Max Points
Essential Commitments	
Complies with Regulatory Requirements and Mandates	20
Meets Commitment with Outside Agency or Existing Contract	20
Reduces Potential Health or Safety Hazards	20
Implements Board of Director's Policy/Priority	10
Increases Capacity to Meet Projected Build-out	10

Project Benefits	
Impacts Project Phasing or Implementation Schedule for Other Projects	5
Optimizes Capital Expenditures	5
Reduces Operations and Maintenance Costs	5
Reduces Social Impacts	5
Increases Sustainable Use of Natural or Existing Resources	5
Reduces Environmental Impacts	5
Supports Timely Adoption of Technology Improvements	5
Operational Reliability	
Consistent with Asset Management Policies	10
Improves Reliability and System Performance	10
Improves Facility-Wide Resiliency	5
TOTAL POINTS POSSIBLE	140

The prioritization scoring sheet includes sub-criteria and scoring guidelines for assisting with the assigning of points for each criterion. For each sub-criterion, the prioritization scoring sheet includes the applicability to triple-bottom-line considerations (social, environmental, financial) and applicability to the District's Mission and Strategic goals.

To account for the variety of criteria used and that not all criteria are applicable to every CIB program, each project is assigned one of the following ranking categories depending on the project's score:

- **Critical:** Priority rank if score is 65 points or higher.
- **Very High:** Priority rank if score is 50 points or higher and less than 65 points.
- **High:** Priority rank if score is 25 points or higher and less than 50 points.
- **Medium:** Priority rank if score is less than 25 points.

CAPITAL IMPROVEMENT BUDGET SYSTEM

The CIB includes detailed information for projects in the first year of the ten-year Capital Improvement Plan (CIP). Board authorizations are made to add funds to the four programs prior to the start of the fiscal year.

Under the CIB system, budgets are authorized for project work within the four budget programs. Budgets are established by program since precise costs for individual projects are difficult to estimate when CIB preparation often precedes project initiation by a year or more. Projections of costs for broader categories of project work can more reliably be made during budget preparation since positive and negative variations in project estimates are expected to balance in a program summation.

Program authorizations are expected to exceed annual expenditures during any particular budget year since larger planning studies, engineering designs, and construction contracts typically span more than one fiscal year and the budgets are authorized in full at the beginning of each phase of the projects.

As shown in Table 1, by adopting the FY 2015-16 Capital Improvement Budget (CIB), the Board authorizes allocations from the Sewer Construction Fund for planning, design, and construction of capital projects in the four programs. As shown in Table 1, Column ”A”, there is approximately $9.8 million to be carried over from previous Board-authorized-but-unspent project budgets from FY 2014-15. The total required new Board authorization for projects beginning in FY 2015-16 as indicated in Table 1, Column “B” is $42.1 million.

The total Board authorization for projects that are active in the CIB in FY 2015-16 is the sum of these two numbers, or $51.9 million as shown in Table 1, Column “C”. The estimated FY 2015-16 expenditure total is $30.8 million (shown in Table 1 Column “D”), leaving an estimated $21.1 million in authorizations for projects that carry into future years. These figures will be adjusted when actual FY 2014-15 expenditures are known and actual FY 2015-16 carry over can be determined. At that time, the Board will be informed of the corrected figures for the four programs in the CIB.

Table 2 presents the FY 2015-16 Capital Improvements Program Budget/ Project list for the treatment plant program. Table 3 presents the FY 2015-16 Capital Improvements Program Budget/ Project list for the collection system program. Table 4 presents the FY 2015-16 Capital Improvements Program Budget/ Project list for the general improvements program. Table 5 presents the FY 2015-16 Capital Improvements Program Budget/ Project list for the recycled water program.

Capital Project Contingency Spending

Two types of contingency funding of capital projects are provided for: project contingency and program contingency. Table 6 identifies staff authority to approve funds for project budget overruns.

The program contingency fund is 10% above the total Estimated Expenditures (new FY 2015-16 projects or phases) amount approved by the Board when the Capital Budget is adopted, except for the Collection System Program which is a fixed $900,000. These amounts are set aside in a separate account and used for new projects that are not in the CIB, or to fund project budget overruns, and pay for urgent work or emergency work as needed. A maximum of $100,000 can be allocated by the General Manager to a project not in the CIB.

The following table identifies revenue sources for the four programs of capital improvement projects. Capital Program revenue is discussed further in the Finance and Revenue section of this document.

Capital Improvement Program Revenue Sources

Program	Subfund	Revenue Source
Treatment Plant	**Expansion -** Additional capacity to serve new customers	Capacity Fees City of Concord
	Upgrading/Replacement - Improvement of existing facilities to serve current customers	Property Taxes[(c)] City of Concord Sewer Service Charge[(d)] Debt Financing
Collection System[(a)]	**Expansion -** Additional capacity to serve new customers	Capacity Fees Pumped Zone Fees Developer Fees
	Upgrading/Replacement - Improvement of existing facilities to serve current customers	Property Taxes[(c)] Sewer Service Charge[(d)] Debt Financing
General Improvements [(b)]	----------	Property Taxes[(c)] Sewer Service Charge[(d)]
Recycled Water	----------	Property Taxes[(c)] City of Concord Sewer Service Charge[(d)] Customer Revenue Loans[(e)] Debt Financing Grant funds [(f)]

(a) Includes pumping station facilities.

(b) Includes improvements to administrative facilities (Headquarters Office Building and CSO yard), land purchases, vehicles, equipment, and furniture.

(c) Property taxes may be used for any District purpose at the discretion of the Board of Directors within Proposition 4 limits and Clean Water Grant regulations; however, the uses indicated are recommended as the most equitable.

(d) A capital improvements increment was added to the annual sewer service charge in 1992 to supplement ad valorem taxes for upgrading/replacement of District capital facilities.

(e) State Water Reclamation Loan Program

(f) DWR Prop 84 Funds, Bureau of Reclamation Title 16

Table 1: Capital Improvement Budget Summary for Fiscal Year 2015-16

	A	B	C	D
Program	Estimated Carry-Over from Previous FY	Estimated Allocation this FY (All Projects including Contingency)	Total Proposed Authorization	Estimated FY 2015-16 Expenditures
Treatment Plant	$ 2,185,000	$ 13,828,000	$16,013,000	$ 10,410,000
Collection System	$ 5,788,000	$ 24,650,000	$30,438,000	$ 15,950,000
General Improvements	$ 1,540,000	$ 3,113,000	$ 4,653,000	$ 3,980,000
Recycled Water	$ 288,000	$ 480,000	$ 768,000	$ 450,000
Total this Fiscal Year	**$9,801,000**	**$42,071,000**	**$51,872,000**	**$ 30,790,000**

TABLE 2: FY 15-16 CIB Treatment Plant Program Budget/ Project List

Date: 05/19/15

List of Active TP Projects (Budget allocated and tracked in Sunguard)

Priority	Project Number	Current Phase	Project	Allocated to date	Prior FY(s) Spent	Remaining Budget	Estimated Expenditures FY14/15	FY15/16	FY16/17	Future FY	Page
Critical	7265	C	TP Equipment Replacement	$1,412,100	$1,107,400	$304,700	$300,000	$0	$0	$0	TP-27
Critical	7285	C	Primary Treatment Renovation	$14,947,000	$8,219,628	$6,727,372	$6,100,000	$566,000	$0	$0	TP-11
Critical	7292	D	Switchgear Refurbishment - ph 2	$420,000	$119,280	$300,720	$50,000	$250,000	$0	$0	TP-12
Critical	7297	P	Wet and Dry Scrubber Replacement	$125,000	$964	$124,036	$25,000	$100,000	$0	$0	TP-13
Critical	7301	P	Treatment Plant Planning	$2,448,000	$1,994,863	$453,137	$350,000	$100,000	$0	$0	TP-2
Critical	7309	C	DAF Tank Renovation	$1,050,000	$130,292	$919,708	$918,500	$0	$0	$0	TP-14
Critical	7310	D	Piping Renovations - phase 8	$250,000	$86,917	$163,083	$163,000	$0	$0	$0	TP-28
Critical	7311	D	TP Safety Enhancement Ph4	$100,000	$39,907	$60,093	$150,000	$0	$0	$0	TP-3
Critical	7311	C	TP Safety Enhancement Ph4*	$500,000	$0	$500,000	$0	$500,000	$0	$0	TP-3
Critical	7312	P	Ash Facility Improvements	$40,000	$0	$40,000	$0	$40,000	$0	$0	TP-4
Critical	7316	C	SBT Emergency Repairs	$714,450	$27,006	$687,444	$662,444	$25,000	$0	$0	TP-15
Critical	7319	C	Laboratory Upgrades & Repair	$148,000	$0	$148,000	$144,000	$4,000	$0	$0	TP-29
Critical	7322	P	Fire Protection System Ph2	$40,000	$0	$40,000	$20,000	$20,000	$0	$0	TP-5
Critical	7314	C	Urgent Repairs	$50,000	$0	$50,000	$20,000	$20,000	$0	$0	TP-30
Very H	7286	P	Centrifuge & Cake Pumps	$200,000	$0	$200,000	$30,000	$170,000	$0	$0	TP-16
Very H	7291	D	Pump & Blower Bldg Seismic Upgrade	$505,000	$357,409	$147,591	$75,000	$70,000	$0	$0	TP-17
Very H	7304	C	Instr & Controls PLC Upgrade	$235,000	$96,669	$138,331	$80,000	$57,000	$0	$0	TP-18
Very H	7315	P	Zeolite Annamox Pilot Project	$250,000	$1,671	$248,329	$100,000	$140,000	$0	$0	TP-6
Very H	7317	C	Plant Control System Network Upgrades	$80,000	$0	$80,000	$15,000	$65,000	$0	$0	TP-19
Very H	7320	P	Plant Energy Optimization	$90,000	$0	$90,000	$35,000	$55,000	$0	$0	TP-31
			Subtotal:	**$23,604,550**	**$12,182,006**	**$11,422,544**	**$9,237,944**	**$2,182,000**	**$0**	**$0**	

List of projects in FY 2015-16 (Unallocated)

A. Carryover = $2,185,000

Critical	7292	C	Switchgear Refurbishment - ph 3	$100,000	$0	$0	$0	$100,000	$250,000	$650,000	TP-12
Critical	7297	D	Wet and Dry Scrubber Replacement	$500,000	$0	$0	$0	$500,000	$0	$0	TP-13
Critical	7301	P	Treatment Plant Planning Ph2	$250,000	$0	$0	$0	$250,000	$350,000	$300,000	TP-2
Critical	7310	C	Piping Renovations - phase 8	$1,500,000	$0	$0	$0	$1,500,000	$0	$0	TP-28
Critical	7324	D	Critical Switchgear	$600,000	$0	$0	$0	$350,000	$250,000	$0	TP-20
Critical	7319	C	Laboratory Upgrades & Repair	$200,000	$0	$0	$0	$200,000	$150,000	$150,000	TP-29
Critical	7322	D	Fire Protection System Ph2	$200,000	$0	$0	$0	$200,000	$0	$0	TP-5
Critical	7326	C	Equipment Replacement FY15-FY24	$250,000	$0	$0	$0	$250,000	$250,000	$1,900,000	TP-32
Critical	7343	P	TP Master Plan	$2,200,000	$0	$0	$0	$1,400,000	$800,000	$0	TP-7
Critical	7327	P	Headworks Screening	$250,000	$0	$0	$0	$250,000	$0	$0	TP-21
Critical	7327	D	Headworks Screening	$650,000	$0	$0	$0	$150,000	$500,000	$0	TP-21
Very H	7330	P	Piping Renovation Phase 9	$100,000	$0	$0	$0	$100,000	$0	$0	TP-33
Very H	7330	D	Piping Renovation Phase 9	$300,000	$0	$0	$0	$300,000	$0	$0	TP-33
Very H	7335	C	TP Security	$100,000	$0	$0	$0	$80,000	$25,000	$300,000	TP-34
Very H	7286	D	Centrifuge & Cake Pumps	$200,000	$0	$0	$0	$200,000	$400,000	$0	TP-16
Very H	7291	C	Pump & Blower Bldg Seismic Upgrade	$5,000,000	$0	$0	$0	$1,000,000	$4,000,000	$0	TP-17
Very H	7304	C	Instr & Controls PLC Upgrade	$100,000	$0	$0	$0	$100,000	$100,000	$400,000	TP-18

Priority	Project Number	Current Phase	Project	Allocated to date	Prior FY(s) Spent	Remaining Budget	FY14/15	FY15/16	FY16/17	Future FY	Page
Very H	7315	P	Zeolite Annamox - Pilot Program	$100,000	$0	$0	$0	$100,000	$200,000	$1,000,000	TP-6
Very H	7320	D	Plant Energy Optimization	$300,000	$0	$0	$0	$300,000	$0	$0	TP-31
Very H	7317	C	Plant Control System Network Upgrades	$80,000	$0	$0	$0	$50,000	$100,000	$300,000	TP-19
Very H	7339	P	Plant Control System I/O Replacement	$100,000	$0	$0	$0	$100,000	$100,000	$0	TP-22
High	7341	P	WC / Grayson Creek Levee Rehab	$0	$0	$0	$0	$0	$0	$0	TP-8
Critical	7327	C	Headworks Sceening	$6,000,000	$0	$0	$0	$0	$0	$6,000,000	TP-21
Critical	7322	C	Fire Alarm	$600,000	$0	$0	$0	$0	$600,000	$0	TP-5
Critical	7312	D	Ash Facility Improvements	$280,000	$0	$0	$0	$0	$280,000	$0	TP-4
Critical	7312	C	Ash Facility Improvements	$1,000,000	$0	$0	$0	$0	$0	$1,000,000	TP-4
Critical	7297	C	Wet and Dry Scrubber Replacement	$8,400,000	$0	$0	$0	$0	$0	$8,400,000	TP-13
Very H	7330	C	Piping Renovation Phase 9	$1,000,000	$0	$0	$0	$0	$1,200,000	$0	TP-33
Very H	7286	C	Centrifuge & Cake Pumps Furnace 1	$1,200,000	$0	$0	$0	$0	$200,000	$1,000,000	TP-16
Very H	7286	C	Centrifuge & Cake Pumps Furnace 2	$1,200,000	$0	$0	$0	$0	$200,000	$1,000,000	TP-16
Very H	7320	C	Plant Energy Optimization	$1,000,000	$0	$0	$0	$0	$200,000	$800,000	TP-31
Very H	7339	D	Plant Control System I/O Replacement	$600,000	$0	$0	$0	$0	$100,000	$500,000	TP-22
Very H	7339	C	Plant Control System I/O Replacement	$3,500,000	$0	$0	$0	$0	$0	$3,500,000	TP-22
Very H	7333	P	TP Safety Improv 2011-12 thru 2019-20	$500,000	$0	$0	$0	$0	$50,000	$50,000	TP-9
Very H	7340	P	TP Electrical Cable Repl - LT	$100,000	$0	$0	$0	$0	$100,000	$0	TP-35
High	7332	P	Electrical and Instr Repl	$100,000	$0	$0	$0	$0	$0	$100,000	TP-36
High	7328	D	Influent Pump 6 for third wetwell	$500,000	$0	$0	$0	$0	$500,000	$0	N/A
High	7331	P	Plant Cyber Security	$50,000	$0	$0	$0	$0	$50,000	$0	TP-23
High	7338	P	Treatment Plant Soil Remediation	$50,000	$0	$0	$0	$0	$50,000	$150,000	TP-10
High	7341	C	WC / Grayson Creek Levee Rehab	$600,000	$0	$0	$0	$0	$200,000	$400,000	TP-8
Medium	7334	P	Coating Renovation	$150,000	$0	$0	$0	$0	$100,000	$50,000	TP-37
Medium	7336	P	Pavement Renovation	$150,000	$0	$0	$0	$0	$0	$150,000	TP-38
Medium	7337	P	Concrete Renovation	$150,000	$0	$0	$0	$0	$0	$150,000	TP-39
Un ranked	7323	P	Aeration system improvements	$0	$0	$0	$0	$0	$100,000	$0	TP-24
Un ranked	7325	P	Disinfection System upgrades	$1,585,000	$0	$0	$0	$0	$150,000	$1,585,000	TP-25
Un ranked	7329	P	MHF Burner upgrade	$900,000	$0	$0	$0	$0	$100,000	$750,000	TP-26

B. Estimated Allocations for FY 2015-16 TP Program:	**$13,080,000**	**$0**	**$0**	**$0**	**$7,480,000**	**$11,655,000**
				Program Contigency 10%:	**$748,000**	**$1,165,500**
				Estimated Expenditures by FY:	**$10,410,000**	**$12,820,500**
Total Proposed Authorization **A+B+Contigency= C**	**$16,013,000**				Estimated FY 2015-16 Expenditures **D**	

*Pending Award

TABLE 3: FY 15-16 CIB Collection System Program Budget/ Project List

Date: 05/19/15

List of Active CS Projects (Budget allocated and tracked in Sunguard)

Priority	Project Number	Current Phase	Project	Allocated to date	Prior FY(s) Spent	Remaining Budget	Estimated Expenditures FY14/15	FY15/16	FY16/17	Future FY	Page
Critical	5941	C	PS Equipment Piping Replacement	$640,000	$568,793	$71,207	$50,000	$0	$0	$0	CS-32
Critical	5982	C	Pipeburst Blanket Contract	$828,000	$652,285	$175,715	$150,000	$22,200	$0	$0	CS-4
Critical	5999	C	CIPP Blanket Contract	$472,000	$113,619	$358,381	$100,000	$125,000	$125,000	$0	CS-55
Critical	8404	C	Laf Sewer Reno Ph8	$2,735,000	$2,426,698	$308,302	$300,000	$8,000	$0	$0	CS-6
Critical	8406	C	Pump Station Safety Improvs	$611,000	$166,769	$444,231	$442,000	$2,000	$0	$0	CS-33
Critical	8411	C	N. Orinda Sewer Reno Ph5	$3,020,000	$626,590	$2,393,410	$1,550,000	$0	$0	$843,000	CS-7
Critical	8412	D	PH Grayson Creek*	$1,250,000	$579,074	$670,926	$600,000	$70,000	$0	$0	CS-29
Critical	8413	C	WC Sewer Reno Ph 10	$3,884,000	$805,818	$3,078,182	$3,073,180	$0	$0	$0	CS-8
Critical	8415	D	Martinez Ph 4 Sewer Reno	$823,000	$216,739	$606,261	$606,000	$0	$0	$0	CS-*
Critical	8417	C	Survey Monument Install	$150,000	$98,259	$51,741	$50,000	$1,000	$0	$0	CS-10
Critical	8418	C	Col System Modeling	$350,000	$148,398	$201,602	$100,000	$1,600	$0	$0	CS-24
Critical	8419	P	Collection System Planning	$320,000	$100,315	$219,685	$200,000	$19,000	$0	$0	CS-25
Critical	8421	D	Laf Sewer Reno Ph9*	$650,000	$283,081	$366,919	$366,000	$0	$0	$0	CS-11
Critical	8421	C	Laf Sewer Reno Ph9*	$2,504,200	$0	$2,504,200	$500,000	$2,004,200	$0	$0	CS-11
Critical	8422	P	WC Sewer Reno Ph 11*	$100,000	$88,342	$11,658	$61,658	$0	$0	$0	CS-12
Critical	8423	P	N. Orinda Sewer Reno Ph6*	$150,000	$92,333	$57,667	$57,000	$0	$0	$0	CS-13
Critical	8424	D	M1 Rehab	$250,000	$0	$250,000	$250,000	$0	$0	$0	CS-14
Critical	8424	C	M1 Rehab	$2,526,000	$0	$2,526,000	$250,000	$2,276,000	$0	$0	CS-14
Critical	8425	C	Cathodic Protection Ph 1	$559,000	$0	$559,000	$550,000	$9,000	$0	$0	CS-15
Critical	8426	P	Laf Reno Ph 10*	$205,000	$0	$205,000	$210,000	$45,000	$0	$0	CS-18
Critical	8427	P	Arc Flash Study	$100,000	$0	$100,000	$70,000	$30,000	$0	$0	CS-34
Very H	5991	P	PH Sewer Renovation Ph2	$200,000	$133,017	$66,983	$1,000	$66,000	$0	$0	CS-18
Very H	5993	P	Forcemain assessment	$127,000	$96,535	$30,465	$1,000	$0	$0	$0	CS-26
High	5962	P	Mahole Remot Monitor	$325,500	$131,963	$193,537	$5,357	$1,000	$1,000	$138,000	CS-27
NA	8402	na	CADS	$0	$0	$0	$0	$0	$0	$0	CS-30
NA	8420	na	Development Sewerage	$1,720,000	$1,019,942	$700,058	$820,000	$0	$0	$0	CS-31
			Subtotal:	**$24,499,700**	**$8,348,570**	**$16,151,130**	**$10,363,195**	**$4,680,000**	**$126,000**	**$981,000**	

List of projects in FY 2015-16 (Unallocated)

A. Carry-over $5,788,000

Critical	5941	C	PS Equipment Piping Replacement	$100,000	$0	$0	$0	$100,000	$100,000	$0	CS-32
Critical	8412	C	PH Grayson Creek*	$9,450,000	$0	$0	$0	$3,050,000	$6,400,000	$0	CS-29
Critical	8415	C	Martinez Ph 4 Sewer Reno	$3,100,000	$0	$0	$0	$3,100,000	$0	$0	CS-9
Critical	8417	C	Survey Monument Install FY15-FY16	$50,000	$0	$0	$0	$50,000	$50,000	$0	CS-10
Critical	8418	C	Col System Modeling	$400,000	$0	$0	$0	$400,000	$200,000	$0	CS-24

Priority	Project Number	Current Phase	Project	Allocated to date	Prior FY(s) Spent	Remaining Budget	FY14/15	FY15/16	FY16/17	Future FY	Page
Critical	8419	P	Collection System Planning	$150,000	$0	$0	$0	$150,000	$200,000	$700,000	CS-25
Critical	8423	D	N. Orinda Sewer Reno Ph6	$500,000	$0	$0	$0	$500,000	$0	$0	CS-13
Critical	8423	C	N. Orinda Sewer Reno Ph6	$3,000,000	$0	$0	$0	$0	$3,000,000	$0	CS-13
Critical	8426	D	Laf Reno Ph 10*	$500,000	$0	$0	$0	$500,000	$0	$0	CS-16
Critical	8426	C	Laf Reno Ph 10*	$3,000,000	$0	$0	$0	$0	$3,000,000	$0	CS-16
Critical	8435	P	WC Sewer Reno Ph 12*	$150,000	$0	$0	$0	$0	$150,000	$0	CS-19
Critical	5982	C	Pipe Bursting Blanket FY15-FY18	$450,000	$0	$0	$0	$250,000	$200,000	$250,000	CS-4
Critical	8431	P	Collection System Master Plan	$1,200,000	$0	$0	$0	$600,000	$600,000	$0	CS-28
Critical	8430	P	Laf Sewer Reno Ph 11	$150,000	$0	$0	$0	$150,000	$0	$0	CS-20
Critical	8434	C	Urgent Projects	$300,000	$0	$0	$0	$270,000	$0	$0	CS-17
Very H	8436	P	Moraga/ Crossroads PS Project	$150,000	$0	$0	$0	$150,000	$0	$0	CS-35
Very H	8429	P	Fairvew Maltby	$150,000	$0	$0	$0	$150,000	$120,000	$400,000	CS-36
Medium	8437	P	Martinez Ph 5 Sewer Reno	$150,000	$0	$0	$0	$150,000	$0	$0	CS-21
NA	8420	na	Development Sewerage	$700,000	$0	$0	$0	$700,000	$0	$0	CS-31
NA	8402	na	CADS	$100,000	$0	$0	$0	$100,000	$100,000	$1,100,000	CS-30
Critical	8422	D	WC Sewer Reno Ph 11*	$500,000	$0	$0	$0	$0	$500,000	$0	CS-12
Critical	8422	C	WC Sewer Reno Ph 11*	$3,100,000	$0	$0	$0	$0	$0	$3,100,000	CS-12
Critical	8435	D	WC Sewer Reno Ph12*	$300,000	$0	$0	$0	$0	$500,000	$0	CS-19
Critical	8435	C	WC Sewer Reno Ph12*	$3,200,000	$0	$0	$0	$0	$0	$3,100,000	CS-19
Critical	8433	P	S. Orinda Sewer Reno Ph6*	$150,000	$0	$0	$0	$0	$150,000	$0	CS-22
Critical	8433	D	S. Orinda Sewer Reno Ph6*	$3,100,000	$0	$0	$0	$0	$0	$500,000	CS-22
Critical	8430	D	Lafayette Sewer Ph 11*	$350,000	$0	$0	$0	$0	$500,000	$0	CS-20
Critical	8430	C	Lafayette Sewer Ph 11*	$3,200,000	$0	$0	$0	$0	$0	$3,000,000	CS-20
Very H	5991	D	PH Sewer Renovation Ph2	$250,000	$0	$0	$0	$0	$0	$250,000	CS-18
Very H	5991	C	PH Sewer Renovation Ph2	$2,100,000	$0	$0	$0	$0	$0	$2,100,000	CS-18
Very H	8436	C	Moraga/ Crossroads PS Project	$940,000	$0	$0	$0	$0	$500,000	$440,000	CS-355
Medium	8437	D	Martinez Ph 5 Sewer Reno	$150,000	$0	$0	$0	$0	$0	$500,000	CS-21
Medium	8437	C	Martinez Ph 5 Sewer Reno	$150,000	$0	$0	$0	$0	$0	$2,500,000	CS-21
Medium	8438	P	Cathodic Protection Systems Ph2	$50,000	$0	$0	$0	$0	$50,000	$0	CS-23
NA	8420	na	Development Sewerage	$700,000	$0	$0	$0	$0	$700,000	$700,000	CS-31
NA	8432	C	Misc Pump Stations	$1,230,000	$0	$0	$0	$0	$80,000	$1,150,000	CS-37

B. Estimated Allocations for FY 2015-16 CS Program:	**$23,750,000**	**$0**	**$0**	**$0**	**$10,370,000**	**$17,100,000**
				Fixed Program Contigency:	**$900,000**	**$900,000**
				Estimated Expenditures by FY:	**$15,950,000**	**$18,126,000**
Total Proposed Authorization **A+B+Contigency =C**	**$30,438,000**				Estimated FY 2015-16 Expenditures	
					D	

* Riverwatch

TABLE 4: FY 15-16 CIB General Improvements Program Budget/ Project List

Date: 05/15/15

List of Active General Improvements Projects (Budget allocated and tracked in Sunguard)

Priority	Project Number	Current Phase	Project	Allocated to date	Prior FY(s)	Remaining Budget	Estimated Expenditures FY14/15	FY15/16	FY16/17	Future FY	Page
Critical	8227	D	GDI Treatment Plant	$265,000	$222,442	$42,558	$0	$0	$42,500	$0	GI-3
Critical	8232	D	GDI SMMS Replacement	$852,000	$444,919	$407,081	$136,000	$271,000	$0	$0	GI-4
Critical	8236	P	District Easements	$140,000	$58,894	$81,106	$70,000	$11,000	$0	$0	GI-7
Critical	8237	C	Buffer and Rental Improvements*	$240,000	$27,048	$212,952	$0	$212,000	$0	$0	GI-8
Critical	8238	P	Asset Management	$700,000	$0	$700,000	$600,000	$100,000	$0	$0	GI-16
Critical	8239	C	POD Office Improv*	$330,000	$0	$330,000	$90,000	$240,000	$0	$0	GI-9
Critical	8240	C	IT Development	$1,000,000	$0	$1,000,000	$700,000	$300,000	$0	$0	GI-5
Critical	8242	C	CMMS Replacement	$198,000	$0	$198,000	$50,000	$148,000	$0	$0	GI-6
Critical	8243	P	Server Room Relocation	$100,000	$0	$100,000	$57,000	$43,000	$0	$0	GI-10
Very H	8515	C	Equip and Vehicles	$617,200	$0	$617,200	$617,200	$0	$0	$0	GI-2
Very H	8207	P	General Security and Access	$60,000	$47,616	$12,384	$0	$0	$12,000	$0	GI-11
Very H	8233	C	CSOD Facility Improvements	$200,000	$161,103	$38,897	$20,000	$13,000	$5,500	$0	GI-12
Very H	8234	C	HOB Improvements	$334,000	$236,244	$97,756	$60,000	$10,000	$27,500	$0	GI-13
NA	8226	C	Seismic HOB	$5,941,000	$5,847,587	$93,413	$92,000	$1,000	$0	$0	GI-14
NA	8230	P	Capital Legal Services	$210,000	$79,285	$130,715	$30,000	$33,000	$67,500	$0	GI-15
			Subtotal:	**$11,187,200**	**$7,125,138**	**$4,062,062**	**$2,522,200**	**$1,382,000**	**$155,000**	**$0**	

List of Projects in FY 2015-16 (Unallocated)

A. Carry Over = $1,540,000

Critical	8236	P	District Easements	$100,000	$0	$0	$0	$1,000	$0	$0	GI-7
Critical	8238	P	Asset Management	$600,000	$0	$0	$0	$500,000	$0	$0	GI-16
Critical	8240	C	IT Development	$1,000,000	$0	$0	$0	$1,000,000	$0	$0	GI-5
Critical	8242	C	CMMS Replacement	$477,000	$0	$0	$0	$360,000	$117,000	$0	GI-6
Critical	8243	D	Server Room Relocation	$100,000	$0	$0	$0	$50,000	$0	$0	GI-10
Very H	8516	C	Equip and Vehicles FY15-16	$500,000	$0	$0	$0	$450,000	$0	$0	GI-2
Very H	8234	C	HOB Improvements	$100,000	$0	$0	$0	$1,000	$0	$0	GI-13
Very H	8233	C	CSOD Facility Improvments	$50,000	$0	$0	$0	$0	$46,000	$50,000	GI-12
Very H	8207	P	General Security and Access	$38,000	$0	$0	$0	$0	$38,000	$100,000	GI-11
Critical	8227	D	GDI TP 16-17	$120,000	$0	$0	$0	$0	$80,000	$40,000	GI-3
Critical	8236	P	District Easements 16-17	$100,000	$0	$0	$0	$0	$50,000	$50,000	GI-7
Critical	8238	P	Asset Management 16-17	$1,500,000	$0	$0	$0	$0	$900,000	$600,000	GI-16
Critical	8240	C	IT Development 16-17	$1,300,000	$0	$0	$0	$0	$1,300,000	$0	GI-4
Critical	8243	C	Server Room Relocation	$1,000,000	$0	$0	$0	$0	$1,000,000	$0	GI-10
Very H	8516	C	Equip and Vehicles 16-17	$500,000	$0	$0	$0	$0	$500,000	$0	GI-2
			B. Estimated Allocations for FY 2015-16 GI Program:	**$2,877,000**	**$0**	**$0**	**$0**	**$2,362,000**	**$4,186,000**		
								Program Contigency 10 %:	**$236,000**	**$419,000**	
								Estimated Expenditures by FY:	**$ 3,980,000**	**$ 4,605,000**	

Total Proposed Authorization A+B+Contingency = C	$4,653,000

Estimated FY 2015-16 Expenditures
D

TABLE 5: FY 15-16 CIB Recycled Water Program Budget/ Project List

Date: 05/15/15

List of Active Rew Projects (Budget allocated and tracked in Sunguard)

Priority	Project Number	Current Phase	Project	Allocated to date	Prior FY(s) Spent	Remaining Budget	Estimated Expenditures FY14/15	FY15/16	FY16/17	Future FY	Page
Critical	7299	C	Concord Landscape	$3,915,000	$3,697,629	$217,371	$130,000	$87,000	$0	$0	RW-2
Very H	7279	P	Concord Naval Weapons REW	$280,000	$264,855	$15,145	$1,100	$0	$5,000	$0	RW-3
Very H	7300	P	Refinery REW	$385,000	$283,727	$101,273	$50,000	$4,000	$47,500	$0	RW-4
Very H	7306	D	Zone 1 Recycled Water	$145,000	$35,061	$109,939	$50,000	$0	$0	$0	RW-55
Very H	7306	C	Zone 1 Recycled Water	$75,000	$0	$75,000	$0	$29,000	$46,000	$0	RW-55
			Subtotal:	**$4,800,000**	**$4,281,272**	**$518,728**	**$231,100**	**$120,000**	**$98,500**	**$0**	

List of Projects in FY 2015-16 (Unallocated)

A. Carry Over = $288,000

Critical	7344	P	Recycled Water Planning	$250,000	$0	$0	$0	$100,000	$150,000	$0	RW-6
Critical	7345	P	Filter Plant	$200,000	$0	$0	$0	$200,000	$0	$0	RW-7
Critical	7344	C	Filter Plant 16-17	$200,000	$0	$0	$0	$0	$150,000	$50,000	RW-7
Critical	7346	P	Surge Analysis 16-17	$60,000	$0	$0	$0	$0	$65,000	$0	RW-8

B. Estimated Allocations for FY 2015-16 Rew Program:	**$450,000**	**$0**	**$0**	**$0**	**$300,000**	**$365,000**	
				Program Contigency 10%	**$30,000**	**$36,500**	
				Estimated FY Expenditures:	**$450,000**	**$500,000**	
Total Proposed Authorization **A+B+Contigency = C**	**$768,000**				Estimated FY 2015-16 Expenditures **D**		

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 2015-16 the emphasis will be on 12 large projects, which together account for $19,486,000 or 63% of the total estimated expenditures. Estimated FY 2015-16 expenditures for each of these projects are noted below.

1. **Primary Treatment Renovation**
   FY 2015-16: $560,000 **Estimated total project cost: $14,947,000**
   Estimated completion date: Oct. 2015
   This project will renovate or replace the water and air supply pipelines at the primary sedimentation tanks. The grit handling facility will be renovated, and the scum collection system will be renovated with new scum sprays, new helical scum skimmers and drives, and stainless steel scum hoppers for Tanks 1 and 2. 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. Refurbishment of Primary Effluent (PE) Pump 1 and PE Pump 2 are included in the project.

2. **M1 Rehabilitation Project**
   FY 2015-16: $2,276,000 **Estimated total project cost: $2,776,000**
   Estimated completion date: Nov. 2015
   This project will renovate approximately 3,000 feet of the M1transmission line, a 42” diameter reinforced concrete pipeline located on the treatment plant site.

3. **Lafayette Sewer Renovations – Phase 9**
   FY 2015-16: $2,100,000 **Estimated total project cost: $3,154,200**
   Estimated completion date: Jan. 2016
   This project will replace/rehabilitate approximately 8,500 feet of six- and fifth teen-inch sewers in the Lafayette area.

4. **Martinez Sewer Renovations – Phase 4**
   FY 2015-16: $3,100,000 **Estimated total project cost: $3,923,000**
   Estimated completion date: May 2016
   This project will replace or rehabilitate up to 8,000 lineal feet of six and eight- inch sewer mains located in the City of Martinez.

5. **Information Technology Development**
   FY 2015-16: $1,300,000 **Estimated total project cost: $9,700,000**
   Estimated completion date: July 2024
   This project provides funding for the District’s computer and telecommunication technology needs and implementation of the IT Master Plan.

6. Pleasant Hill – Grayson Creek Trunk

FY 2015-16: $3,100,000 **Estimated total project cost: $10,700,000**
Estimated completion date: Jan. 2017

The recommended project involves installing approximately 12,000 feet of 15-, 18-, and 24-inch relief sewers and diverting the sewage away from the deficient sewers and for future renovation needs.

7. Piping Renovations - Phase 8

FY 2015-16: $1,500,000 **Estimated total project cost: $1,750,000**
Estimated completion date: May 2016

This project will improve the process reliability of the treatment plant by renovating and/or replacing various piping, instrumentation and equipment that has been identified by engineering, operations and maintenance staff.

8. Pump and Blower Seismic Upgrades

FY 2015-16: $1,200,000 **Estimated total project cost: $5,600,000**
Estimated completion date: June 2017

This project is part of the District's Seismic improvement plan created in 2009 based on the Treatment Plant Seismic Vulnerability Assessment. The project will retrofit the Pump and Blower Building to be in line with current seismic design standards.

9. Asset Management Program Development

FY 2015-16: $600,000 **Estimated total project cost: $2,700,000**
Estimated completion date: June 2018

The District is developing a comprehensive asset management program that aims to optimize the lifecycle of all assets to deliver high quality and reliable services in a sustainable manner for customers with an acceptable level of risk. Implementation will occur over the next three years and will include such tasks as standardizing and completing the asset register, drafting to consolidate treatment plant As-Built, consolidating CCTV databases, and updating the asset management plan. Specialty tasks utilizing outside assistance include utility locating, developing the reliability centered maintenance program, conducting condition assessment of critical treatment plant piping, integrating failure-based maintenance strategies, developing program management standards or software/tools, and reviewing the updated asset management plan.

10. Development Sewerage

FY 2015-16: $700,000 **Estimated total project cost: $3,481,000**
Estimated completion date: June 2018

This project provides for appropriate capitalization of District force account labor and other expenses for planning, design, and construction of developer-installed and contributed main sewer facilities.

11. Vehicle & Equipment Acquisition

FY 2015-16: $450,000 **Estimated total project cost: $500,000**
Estimated completion date: July 2016

This project provides funding and capitalization of the District's annual purchase of vehicles and major equipment.

12. Comprehensive Wastewater Master Plan

FY 2015-16: $2,600,000 **Estimated total project cost: $5,250,600**
Estimated completion date: June 2017

This project will develop a comprehensive master plan for the wastewater treatment plant and collection system for development of the Capital Improvements Plan and budgets, including condition assessments, collection system dynamic model, filter plant, in coordination with asset management.

The CWMP will be funded by several capital improvement projects listed in the FY15/16 CIB, spanning across the Treatment Plant, Collection System, and Recycled Water programs. The table below outlines those projects, their relationship to the CWMP and the amount of budget that will support all master planning efforts.

Project No.	Program	Project Name	Relationship to the CWMP	Budget Attributed to the CWMP (Including Project Contingencies)		
				FY15/16	FY16/17	Total
7301	TP	TP Planning	Funds staff time for the Treatment Plant Master Plan portion of the CWMP	$265,000	$265,000	$530,000
7343	TP	TP Master Plan	Funds consultant agreement for the Treatment Plant Master Plan portion of the CWMP. Includes project contingency.	$1,400,000	$800,000	$2,200,000
7345	ReW	Filter Plant	Funds consultant agreement for the recycled water task in the Treatment Plant Master Plan portion of the CWMP. Includes project contingency.	$200,000	$150,000	$350,000
8418	CS	CS Modeling Upgrade	Funds consultant agreement for developing the collection system model as part of the Collection System Master Plan portion of the CWMP. Includes project contingency.	$401,600	$200,000	$601,600
8419	CS	CS Planning	Funds staff time for the Collection System Master Plan portion of the CWMP	$169,000	$200,000	$369,000
8431	CS	CS Master Plan	Funds consultant agreement for the Collection System Master Plan portion of the CWMP. Includes project contingency.	$600,000	$600,000	$1,200,000

AUTHORIZATION LIMITS

Under the established CIB system, the District Board of Directors and staff have well-defined authority limits. The Board of Directors authorizes funds for the four CIB programs (Treatment Plant, Collection System, General Improvements, and Recycled Water) from the Sewer Construction Fund at the beginning of each fiscal year. The Capital Improvement Program Authorization Limits are detailed in Table 6, which follows.

Once the CIB is approved by the Board, the General Manager has the authority to allocate funds to the individual projects contained in the CIB up to the total program budget. If a project is not included in the CIB, the General Manager can allocate contingency funds up to $100,000. If an individual equipment item is not included in the CIB, the General Manager can allocate funds up to $50,000 per item. The General Manager can allocate funds from program accounts to cover project budget overruns, up to 15% of the final project budget established at the time of the construction contract award, with a maximum of $1,000,000 per project. Finally, the General Manager may award construction contracts less than $100,000 and authorize consultant agreements less than $100,000.

The Board of Directors also has an ongoing role after it approves the CIB and the CIP. Specific Board approval is required for award of construction contracts over $100,000, for consultant agreements over $100,000 and for project overruns in excess of 15% of the final project budget or over $1,000,000 per project. In addition, any allocation to a new project not included in the CIB that exceeds $100,000 must be authorized by the Board.

Table 6: Capital Improvement Program Authorization Limits

Action		General Manager	Board of Directors
Approve Capital Plan		None	No limit
Authorize Capital Program budgets		None	No limit
Allocate funds to individual project budgets		Total program budget plus contingency[1]	No Board authorization required
Authorize Consultant Contracts	Professional Consulting Services	$100,000 or less	Greater than $100,000
	Technical Consulting Services.	$100,000 or less	Greater than $100,000
	Professional Eng. Services.	$100,000 or less	Greater than $100,000
Allocate funds from program contingency accounts to projects not included in the CIB		$100,000 or less per project[2]	Greater than $100,000
Individual equipment items and equipment contingency in the Equipment Budget		Up to amount specified in Equipment Budget including contingency	Above amount specified in Equipment Budget including contingency
Individual equipment items not in the Equipment Budget		$50,000 or less	Greater than $50,000
Authorize supplemental funds to program budgets/ contingency accounts		Not applicable	Sewer Construction Fund balance
Allocate funds for project budget overruns after award of construction contract		15% of final project budget[1,2,3] or up to a maximum of $1,000,000 per project, whichever is less	Greater than 15% of final project budget[3] or above $1,000,000 per project
Award construction contracts[4]		$100,000 or less	Greater than $100,000
Authorize construction change orders	Additive	$100,000 or less	Greater than $100,000
	Deductive	No limit	No Board authorization required
Subcontractor substitutions		All substitutions unless protested by subcontractor	Substitutions protested by subcontractor
Construction project acceptance		All projects	Informational announcement to the Board
Close out project		All projects	Memo provided to the Board at end of FY

[1] Limited by the remaining balances of the applicable program and contingency account
[2] Limited by the remaining balance of the applicable program contingency account
[3] Final project budget is established at time of award of construction contract
[4] Bid protests and rejection of all bids must go to Board regardless of dollar amount

TREATMENT PLANT PROGRAM

This section includes detailed information for the Treatment Plant Program for the FY 2015-16. Detailed project information, schedules, and cash flow tables are presented in individual project sheets.

OVERVIEW

The Treatment Plant Program continues with asset preservation, future regulatory compliance, major renovation and one-time improvements, and seismic strengthening.

Regulatory Compliance/Planning/Safety (Tab 1)

This subprogram includes projects that emphasize preparing for future regulations and treatment plant planning, which includes pilot testing various new technologies and developing the Treatment Plant Master Plan. Work will be done to comply with new air permitting requirements and install incinerator emissions improvements. A long term project to identify and remove any hazardous materials at the Treatment Plant will continue. In addition, the wastewater treatment master planning effort will be started this fiscal year and continue for a total of approximately two years. Safety and security improvements will continue under this subprogram.

One-Time Renovation (Tab 2)

This subprogram includes two high expenditure projects. The largest project is the completion of the Primary Treatment Renovation Project, a two-year effort that has been renovating the primary facilities. The second project, Seismic Upgrades for the Pump and Blower Building, will retrofit the building to current design standards. Projects commencing to predesign level are the Critical Switchgear, Wet and Dry Scrubber, Centrifuge replacement, and the Headworks Screening projects.

Recurring Renovation (Tab 3)

Projects in this subprogram are targeted at asset preservation. The main project in this program is the Piping Renovations Project -Phase 8, which will improve the process reliability of the treatment plant by renovating and/or replacing various piping, instrumentation and equipment. Other projects include Plant Energy Optimization, Urgent Repairs, Laboratory Repairs and Upgrades, and Plant Electrical and Instrumentation.

Expansion (Tab 4)

There are no projects in the Expansion program in FY 2015-16.

Treatment Plant Planning

Project Name	Treatment Plant Planning	Project No.	7301
Program	Treatment Plant Program	Phase	P
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	Critical
Project Manager	Dan Frost	Ranking Score	85
Dept/Division	Engineering/Planning and Development Services	Concord %	100%
Purpose:	To fund ongoing feasibility and planning studies needed to address regulatory initiatives to maintain permit compliance and optimizations to improve the reliability and performance of existing treatment plant processes and facilities.		
History:	As wastewater regulations continue to develop and as new wastewater treatment technologies becomes available, process modifications may be required in the Treatment Plant. This project included the Suisun Bay modeling results, Facility Plan & Site Characterization Report and associated studies submitted to satisfy the District's NPDES permit.		
Description:	This project will include the District's efforts to support the BACWA Regional Optimization and Upgrade Study that is being implemented to satisfy the 2014 Nutrient Watershed Permit, evaluation of treatment plant process modifications and optimizations, and other treatment plant planning related studies.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$100,000	$0	$0	$100,000
Planning	1-11/12	4-21/22	$1,994,863	$350,000	$250,000	$350,000	$300,000	$3,244,863
Design	-	-	$0	$0	$0	$0	$0	$0
Construction	-	-	$0	$0	$0	$0	$0	$0
FY Total	-	-	$1,994,863	$350,000	$350,000	$350,000	$300,000	$3,344,863

Treatment Plant Safety Enhancements Phase 4

Project Name	Treatment Plant Safety Enhancements Phase 4	Project No.	7311
Program	Treatment Plant Program	Phase	C
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	Critical
Project Manager	Brad Leidecker	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	100%
Purpose:	To enhance plant safety through identification of safety concerns, repairs and capital improvements.		
History:	The District and the treatment plant have very pro-active safety programs that are administered by separate committees. These committees are responsible for addressing safety concerns as identified by the craftsmen, or to respond to the ever- changing regulatory requirements. Often this response will require construction of a capital project. The first three phases of this program addressed various safety repairs and improvements.		
Description:	This project is currently being bid in FY 2014-15 and is scheduled for construction in early FY 2015. The project will include a hazardous waste facility improvements and other safety related items. In addition, the project will be coordinated with safety improvements identified in the general improvements program, the costs will be assigned to its perspective program.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FYs	FY 14-15	FY 15-16	FY 16-17	Future FYs	Total
Carryover			$0	$0	$500,000	$0	$0	$500,000
Planning			$39,907	$0	$0	$0	$0	$39,907
Design			$0	$150,000	$0	$0	$0	$150,000
Construction			$0	$0	$0	$0	$0	$0
FY Total			$39,907	$150,000	$500,000	$0	$0	$689,907

Ash Facility Improvements

Project Name	Ash Facility Improvements	Project No.	7312
Program	Treatment Plant Program	Phase	P
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	Critical
Project Manager	Craig Mizutani	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	100%
Purpose:	This project will improve ash containment within the Solids Conditioning Building (SCB).		
History:	The ash system collects the ash at the bottom of the furnaces and conveys it to storage bins located on the third floor northwest corner of the SCB. A vacuum method is used to transmit the ash through the SCB where it is collected by filters and storage cyclones prior to disposal. The filter and storage location is not isolated from other processes within the SCB, so ash may on occasion spreads through the building, resulting in potentially expensive and difficult housecleaning.		
Description:	This project will make improvements to limit the amount of ash dispersed within the SCB and contain the storage area.		
Location:	Solids Conditioning Building		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$40,000	$0	$0	$40,000
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$280,000	$0	$280,000
Construction			$0	$0	$0	$0	$1,000,000	$1,000,000
FY Total			$0	$0	$40,000	$280,000	$1,000,000	$1,320,000

Fire Protection Phase 2

Project Name	Fire Protection Phase 2	Project No.	7322
Program	Treatment Plant Program	Phase	P
Sub-Program	Regulatory Compliance/ Planning/ Safety	Priority Rank	Critical
Project Manager	Craig Mizutani	Ranking Score	65
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	To repair, upgrade, or replace the main treatment plant fire alarm system.		
History:	The majority of the fire alarm system was built in the late 1970s and the control panel was upgraded in the early 2000s. However, the wiring and devices on the system continue to be problematic and is in constant need of repair. Repairs to the system has become extremely complex and difficult, therfore a long term fix is needed.		
Description:	At this stage, staff will evaluate the existing system and provide recommendations for full replacement in compliance with the authority having jurisdiction, the local fire department. The construction budget will be revised during the design stage, if needed.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$20,000	$0	$0	$20,000
Planning			$0	$20,000	$0	$0	$0	$20,000
Design			$0	$0	$200,000	$0	$0	$200,000
Construction			$0	$0	$0	$600,000	$0	$600,000
FY Total			$0	$20,000	$220,000	$600,000	$0	$840,000

Applied Research & Innovations

Project Name	Applied Research & Innovations	Project No.	7315
Program	Treatment Plant Program	Phase	P
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	Very High
Project Manager	Dan Frost	Ranking Score	50
Dept/Division	Engineering/Planning and Development Services	Concord %	100%
Purpose:	To fund applied research and development of key technologies, processes, and innovations.		
History:	In 2013, the District completed a Nutrient Visioning Plan: Cutting-Edge Nitrogen Removal Technology Review that identified the zeolite anammox process and four other processes as preferred cutting-edge nutrient removal technologies recommended for further consideration and piloting.		
Description:	This project includes piloting of technologies, processes, and innovations (such as the zeolite-anammox process or other processes) that have the potential to reduce the District's long-term capital improvement and operations and maintenance costs, address future regulatory requirements, and that also supports the District's goal to embrace innovation and to be a leader in the wastewater industry. Currently, the District is piloting Phase 1 of the zeolite-anammox process to demonstrate proof of treatment concept. If the results of Phase 1 are promising, the District may decide to proceed with Phase 2 of the pilot project. Phase 2, if implemented, would include a larger scale pilot that would be used to demonstrate process and site-specific viability, generate design criteria, confirm nutrient removal performance, and estimate capital and operating costs if the zeolite-anammox process were to be implemented full-scale. Other pilot tests such as screenings, sludge screenings, or disinfection new technologies, centrifuges, and other treatment process technologies may be contemplated and initiated under this project.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$140,000	$0	$0	$140,000
Planning	3-13/14	4-22/23	$1,671	$100,000	$100,000	$200,000	$1,000,000	$1,401,671
Design	-	-	$0	$0	$0	$0	$0	$0
Construction	-	-	$0	$0	$0	$0	$0	$0
FY Total	-	-	$1,671	$100,000	$240,000	$200,000	$1,000,000	$1,541,671

TP Master Plan

Project Name	TP Master Plan	Project No.	7343
Program	Treatment Plant Program	Phase	P
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	Critical
Project Manager	Dan Frost	Ranking Score	85
Dept/Division	Engineering/Planning and Development Services	Concord %	100%
Purpose:	To develop a comprehensive wastewater master plan that determines the future direction, capital improvement needs, and priorities for the District's wastewater treatment plant.		
History:	The 2011 Plant of the Future visioning exercises completed as part of District Project 7287 – Treatment Plant Master Plan Update included recommendations for completing a comprehensive master plan to determine the needs and direction of the District. While the District has performed a number of planning and research studies/reports, the last comprehensive treatment plant master plan was completed in 1987.		
Description:	The TP Master Plan is one component of the Comprehensive Wastewater Master Plan. A key deliverable of the TP Master Plan will be a Capital Improvement Plan (CIP) for the next 20-year planning horizon that provides the descriptions, rationale and estimated costs for the District's treatment plant capital improvement projects and on-going programs in order to address aging infrastructure, meet existing and anticipated regulatory requirements, accommodate planned growth, optimize energy use, and implement the District's vision for a "plant of the future" that is consistent with the District's Strategic Plan.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning	1-15/16	4-16/17	$0	$0	$1,400,000	$800,000	$0	$2,200,000
Design	-	-	$0	$0	$0	$0	$0	$0
Construction	-	-	$0	$0	$0	$0	$0	$0
FY Total	-	-	$0	$0	$1,400,000	$800,000	$0	$2,200,000

Walnut Creek/Grayson Creek Levee Rehabilitation

Project Name	Walnut Creek/Grayson Creek Levee Rehabilitation	Project No.	7341
Program	Treatment Plant Program	Phase	P
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	High
Project Manager	Dan Frost	Ranking Score	40
Dept/Division	Engineering/Planning and Development Services	Concord %	100%
Purpose:	To reduce the risk of flood damage to the treatment plant through a collaborative project led by the Contra Costa County Flood Control and Water Conservation District (FCD).		
History:	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 (USACE), and currently owned and maintained by the FCD. Overtopping of the levees could disable the treatment plant and result in significant facility damages, significantly 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 the 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 a 200-year water surface with 3 feet of freeboard and to consider the potential for sea level rise and climate change.		
Description:	Due to the layout of treatment facilities as well as the critical nature of them, this project will maximize the treatment plant's flood protection level for a 500-year water surface with 3 feet of freeboard. The FCD will be the lead agency on this project and the District will provide support as needed for design review and construction coordination. The FCD and the District have agreed to equally share the estimated project cost of $2.2M. The FCD is pursuing grant funding for the project to reduce the costs to the FCD and the District. The District anticipates accepting and storing soil on District buffer property that can be used as levee material in order to provide in-kind contributions of approximately $0.5M. The District will continue to evaluate in-kind financial contributions.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover:			$0	$0	$0	$0	$0	$0
Planning	1-15/16	2-15/16	$0	$0	$0	$0	$0	$0
Design	2-15/16	4-15/16	$0	$0	$0	$0	$0	$0
Construction	1-16/17	4-17/18	$0	$0	$0	$200,000	$400,000	$600,000
FY Total			$0	$0	$0	$200,000	$400,000	$600,000

Treatment Plant Safety Improvements 2016-2026

Project Name	Treatment Plant Safety Improvements 2016-2026	Project No.	7333
Program	Treatment Plant Program	Phase	P
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	Very High
Project Manager	Craig Mizutani	Ranking Score	60
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	This project will provide funding for safety projects.		
History:	The District and the treatment plant have very pro-active safety programs that are administered by separate committees. These committees are responsible for addressing safety concerns as identified by the craftsmen, or to respond to the ever- changing regulatory requirements. Often this response will require construction of a capital project.		
Description:	Install safety improvements for the treatment plant identified through District safety programs.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$50,000	$50,000	$100,000
Design			$0	$0	$0	$0	$300,000	$300,000
Construction			$0	$0	$0	$0	$700,000	$700,000
FY Total			$0	$0	$0	$50,000	$1,050,000	$1,100,000

Treatment Plant Soil Remediation

Project Name	Treatment Plant Soil Remediation	Project No.	7338
Program	Treatment Plant Program	Phase	P
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	High
Project Manager	Craig Mizutani	Ranking Score	35
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	Relocate or remove and dispose of the contaminated soil in the area northeast of existing aeration tanks.		
History:	In the 1960s, spoils from the Shell Refinery were brought onto the plant site. The spoils were contaminated with organic sludge, lead, sulfate dirt, tars and other contaminants. Approximately 150,000 cubic yards of the contaminated soil is located in the surcharge area. In order to site any new facilities in this area, the contaminated soil needs to be relocated on site or removed and disposed of at an appropriate class landfill. A separate project is characterizing and developing alternatives for relocation or removal of the contaminated soil.		
Description:	Refine the alternatives, select the appropriate method and relocate or remove and dispose of the contaminated soils located northeast of the existing aeration tanks.		
Location:	Treatment Plant area northeast of existing aeration tanks.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$50,000	$150,000	$200,000
Design			$0	$0	$0	$0		$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$0	$0	$0	$50,000	$150,000	$200,000

Primary Treatment Renovation

Project Name	Primary Treatment Renovation	Project No.	7285
Program	Treatment Plant Program	Phase	C
Sub-Program	One-Time Renovation	Priority Rank	Critical
Project Manager	Jason DeGroot	Ranking Score	90
Dept/Division	Engineering/Capital Projects	Concord %	100%
Purpose:	This project will improve the reliability of the Primary Treatment area of the plant.		
History:	Two of the four primary sedimentation tanks were constructed in the mid-1960s and the other two tanks were constructed in the mid-1970s as part of the 5A expansion project. Some components are corroding and nearing the end of their service life.		
Description:	Renovate or replace the spray water and air supply pipelines at the primary sedimentation tanks. The primary scum collection system will be renovated with new scum sprays, new helical scum skimmers and drives, and a stainless steel scum hopper for Tanks 1 and 2. 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, replacing the primary level control valve, replacing the primary MCCs and PLC panels, and installing new grit washing equipment. Refurbishment of Primary Effluent (PE) Pump 1 and PE Pump 2 are included in the project. This project is currently under construction and is anticipated to be completed in FY 2015-16.		
Location:	Primary Tanks, SCB, and Pump & Blower Building		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			-	$0	$566,000	$0	$0	$566,000
Planning			-	$0	$0	$0	$0	$0
Design			-	$0	$0	$0	$0	$0
Construction			-	$6,100,000	$0	$0	$0	$6,100,000
FY Total			$8,219,628	$6,100,000	$566,000	$0	$0	$14,885,628

Switchgear Refurbishment, Phase 2

Project Name	Switchgear Refurbishment, Phase 2	Project No.	7292
Program	Treatment Plant Program	Phase	C
Sub-Program	One-Time Renovation	Priority Rank	Critical
Project Manager	Mark Cavallero	Ranking Score	70
Dept/Division	Operations/ Plant Maintenance	Concord %	100%
Purpose:	Refurbish electrical switchgear to maintain the electrical reliability of the treatment plant.		
History:	The electrical switchgear throughout the plant was installed in the 1970s and has been well maintained using preventative techniques, such as thermographic imaging, to identify potential problems and correct them prior to failure. Inspections in 2003 and 2004 showed that many of the 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:	The remaining 480v circuit breakers (approx. 66, Westinghouse/Cutler-Hammer), will be refurbished over a five-year period. Work also includes replacement of the 2400v breakers at Substation 52, Substation 40, and air breakers at Substation 82. The labor and coordination will be performed by District maintenance staff with support from consultants when electrical design work is needed.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$250,000	$0	$0	$250,000
Planning			$0	$0	$0	$0	$0	$0
Design			$119,280	$50,000	$0	$0	$0	$169,280
Construction			$0	$0	$100,000	$250,000	$650,000	$1,000,000
FY Total			$119,280	$50,000	$350,000	$250,000	$650,000	$1,419,280

Wet and Dry Scrubber Replacement

Project Name	Wet and Dry Scrubber Replacement	Project No.	7297
Program	Treatment Plant Program	Phase	P
Sub-Program	One-Time Renovation	Priority Rank	Critical
Project Manager	Clint Shima	Ranking Score	65
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	Replace the wet and dry scrubbers on each Multiple Hearth Furnace (MHF).		
History:	The Solids Handling Facilities Plan was updated in 2005. Incinerator Rx and Industrial Furnace Company (IFCO) determined that the MHFs were in excellent condition and could last 20 or more years with current O&M practices. Included in the recommendations was that both the dry cyclone and the wet particulate scrubber were showing signs of wear and could use updating or replacement. Operations staff has also reported problems with the scrubber piping.		
Description:	Replace the wet and dry scrubbers, and their associated piping and equipment on the MHFs. The project also includes side stream treatment of the scrubber water for the removal of cyanide if nitrification is required.		
Location:	Solids Conditioning Building		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$100,000	$0	$0	$100,000
Planning			$964	$25,000	$0	$0	$0	$25,964
Design			$0	$0	$500,000	$0	$0	$500,000
Construction			$0	$0	$0	$0	$8,400,000	$8,400,000
FY Total			$964	$25,000	$600,000	$0	$8,400,000	$9,025,964

DAF Tanks Renovation

Project Name	DAF Tanks Renovation	Project No.	7309
Program	Treatment Plant Program	Phase	C
Sub-Program	One-Time Renovation	Priority Rank	Critical
Project Manager	Brad Leidecker	Ranking Score	70
Dept/Division	Engineering/Capital Projects	Concord %	100%
Purpose:	To improve the reliability of the sludge thickening process by performing structural and coating rehabilitation to the dissolved air flotation (DAF) tanks.		
History:	The District uses three DAF tanks, installed in approximately 1986, to thicken secondary sludge. In 2013, DAF Tank 1 required emergency repairs as a result of significant metal loss and failure of the rotating skimmer arms. Following the failure, each of the DAF tanks were sequentially taken out of service for detailed inspection and condition assessment. While inspection results showed Tank 1 was in the worst condition, it was recommended all tanks receive coating, structural and various repairs as a result of corrosion and wear.		
Description:	The project will primarily include structural and protective coating rehabilitation to DAF Tanks 2 and 3. DAF Tank 1 will receive additional rehabilitation, which was not performed or not adequately performed during the 2013 emergency repairs. The project will also include electrical, control and lighting upgrades to plant standards. This project is currently being closed out.		
Location:	DAFT Facility		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			-	$0	$0	$0	$0	-
Design			-	$0	$0	$0	$0	-
Construction			-	$918,500	$0	$0	$0	$918,500
FY Total			$130,292	$918,500	$0	$0	$0	$1,048,792

Sludge Blending Tank Repairs

Project Name	Sludge Blending Tank Repairs	Project No.	7316
Program	Treatment Plant Program	Phase	C
Sub-Program	One-Time Renovation	Priority Rank	Critical
Project Manager	Jason DeGroot	Ranking Score	85
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	To repair the damaged sludge blending tank.		
History:	In May 2014, the sludge blending tank experienced a significant failure and delamination to the upper section of the exterior gunite and pre-stressed rods. An emergency was declared by the Board to preform emergency repairs on the tank. After the failing gunite was removed, an inspection determined that the rest of the tank was stable and that the structural repairs could be put out to bid.		
Description:	This project will repair the damaged sludge blending tank with the installation of a Carbon Fiber Reinforced Polymer (FRP) around the exterior of the tank. The FRP will restore the structural integrity of the failing pre-stressed rods to current earthquake code and extend the useful life of the tank. This project will be closed out in early FY 2015-16.		
Location:	Solids Conditioning Building		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$25,000	$0	$0	$25,000
Planning			$27,006	$0	$0	$0	$0	$27,006
Design			$0	$130,444	$0	$0	$0	$130,444
Construction			$0	$532,000	$0	$0	$0	$532,000
FY Total			$27,006	$662,444	$25,000	$0	$0	$714,450

Centrifuge and Cake Pump Upgrades

Project Name	Centrifuge and Cake Pump Upgrades	Project No.	7286
Program	Treatment Plant Program	Phase	P
Sub-Program	One-Time Renovation	Priority Rank	Very High
Project Manager	Craig Mizutani	Ranking Score	50
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	The purpose of this project is to improve solids capture and reliability of the sludge dewatering equipment.		
History:	The existing centrifuges and cake pumps will have been in service for more than 25 years. The design life of rotating equipment is generally around 15 years. While routine rotation of the operational and stand-by centrifuge helps increase the operating lifespan, Operations can expect more frequent and extensive O&M requirements as the centrifuges and cake pumps continue to age. Historical plant data has shown that that the solids capture has decreased throughout the years. In addition, as centrifuge design and materials of construction continue to develop, the next generation of centrifuges is expected to last longer, cost less to operate, and produce a drier sludge, which would result in less furnace fuel to burn.		
Description:	This project will use the information gathered under the Solids Handling Evaluation project as well as recent pilot test data to make improvements to the dewatering equipment and process for construction. Additional, related tasks will be included in this project as appropriate. A portion of this project, centrifuge replacement, is being considered under the Plant Energy Optimization project being developed by District staff, PG&E, and AECOM.		
Location:	Solids Conditioning Building		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$170,000	$0	$0	$170,000
Planning			$0	$30,000	$0	$0	$0	$30,000
Design			$0	$0	$200,000	$400,000	$0	$600,000
Construction			$0	$0	$0	$200,000	$1,000,000	$1,200,000
FY Total			$0	$30,000	$370,000	$600,000	$1,000,000	$2,000,000

Pump & Blower Building Seismic Upgrades

Project Name	Pump & Blower Building Seismic Upgrades	Project No.	7291
Program	Treatment Plant Program	Phase	D
Sub-Program	One-Time Renovation	Priority Rank	Very High
Project Manager	Jason DeGroot	Ranking Score	55
Dept/Division	Engineering/Capital Projects	Concord %	100%
Purpose:	Improve the seismic safety of the Pump & Blower Building.		
History:	In January 2008, 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 of treatment plant facilities (Martinez Wastewater Treatment Plant Seismic Vulnerability Assessment of Selected Facilities, December 2009). Included in the evaluation are recommendations to bring the Pump & Blower Building in line with current seismic design standards.		
Description:	Make seismic improvements to the Pump & Blower Building.		
Location:	Pump & Blower Building		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$70,000	$0	$0	$70,000
Planning			$0	$0	$0	$0	$0	$0
Design			$357,409	$75,000	$50,000	$0	$0	$482,409
Construction			$0	$0	$1,000,000	$4,000,000	$0	$5,000,000
FY Total			$357,409	$75,000	$1,120,000	$4,000,000	$0	$5,552,409

PLC System Upgrades

Project Name	PLC System Upgrades	Project No.	7304
Program	Treatment Plant Program	Phase	C
Sub-Program	One-Time Renovation	Priority Rank	Very High
Project Manager	Chuck Burnash	Ranking Score	50
Dept/Division	Plant Operations/Operations	Concord %	100%
Purpose:	Upgrade Programmable Logic Controller (PLC) system to current technology for increased performance and improved compatibility.		
History:	The first PLCs were installed in the treatment plant in 1986. The number of PLCs has increased from the original 2 to more than 30. Programming software for the newer PLCs no longer runs efficiently on the older programming units.		
Description:	This project will continue to upgrade the treatment plant's PLC system by: • Providing and upgrading hardware and software necessary to maintain the PLC application. • Replacing older computers with newer ones capable of running current software. • Upgrading older PLC models to maintain compatibility with new equipment.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$57,000	$0	$0	$57,000
Planning			$0	$0	$0	$0	$0	$0
Design			$96,669	$0	$0	$0	$0	$96,669
Construction			$0	$80,000	$100,000	$100,000	$400,000	$680,000
FY Total			$96,669	$80,000	$157,000	$100,000	$400,000	$833,669

Plant Control System Network Upgrades

Project Name	Plant Control System Network Upgrades	Project No.	7317
Program	Treatment Plant Program	Phase	C
Sub-Program	One-Time Renovation	Priority Rank	Very High
Project Manager	Nate Morales	Ranking Score	50
Dept/Division	Operations/ Plant Operations	Concord %	100%
Purpose:	Upgrade the Plant Control System Ethernet Network to Industrial Ethernet standards.		
History:	In 2006 the District's 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 plant but the redundancy was not maintained. Currently, the primary path for plant data traffic runs over the Ethernet system that is neither redundant nor sufficiently reliable to meet control system standards.		
Description:	Industrial Ethernet defines a set of standards for redundancy and reliability that are required for failsafe operation. This project will install and configure industrial type network switches, and install fiber optic lines to meet the standards for Industrial Ethernet for the plant control system. Additionally software shall be installed to allow remote programming and maintenance.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$65,000	$0	$0	$65,000
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$15,000	$50,000	$100,000	$300,000	$465,000
FY Total			$0	$15,000	$115,000	$100,000	$300,000	$530,000

Critical Switchgear

Project Name	Critical Switchgear	Project No.	7324
Program	Treatment Plant Program	Phase	P
Sub-Program	One Time Renovation	Priority Rank	Critical
Project Manager	Craig Mizutani	Ranking Score	65
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	Refurbish and replace critial switchgear and associated equipment that provides electrical service to main areas of the Treatment Plant.		
History:	The switchgear serving the Headworks (Substation 16) was installed in the early 1990s and is comprised of equipment that had a short production run. The ABB equipment is obsolete and spare parts have become rare. Recent issues with the circuit breakers have revealed that they will only become harder to service. The CDM final report recommended replacing the swtichgear in its entirety to assure reliable service from the influent pumps for the plant.		
Description:	The switchgear serving the Headworks (Substation 16) will be replaced. Work includes removal of the existing switchgear and modifications of the building and support facilities as necessary for the installation. The work will be performed by an outside contractor with support from District Staff and consultants.		
Location:	Headworks Facility		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$350,000	$250,000	$0	$600,000
Construction			$0	$0	$0	$0	$1,500,000	$1,500,000
FY Total			$0	$0	$350,000	$250,000	$1,500,000	$2,100,000

Headworks Screening Upgrade

Project Name	Headworks Screening Upgrade	Project No.	7327
Program	Treatment Plant Program	Phase	P
Sub-Program	One Time Renovation	Priority Rank	Critical
Project Manager	Brad Leidecker	Ranking Score	65
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	To separate and remove screenings and plastics from wastewater and/or sludge.		
History:	The treatment plant's current screenings operation utilizes coarse bar screens at the headworks to separate screenings. The screenings then are processed by grinders and reintroduce immediately downstream of the screens. This operation does not remove any of the plastics in the wastewater which has contributed to fouling of numerous liquid and solids stream processes and are suspected to potentially contribute to the upcoming HCL furnace emission regulations. Removal of screenings will protect downstream treatment plant facilities, extend equipment life and reduce maintenance of equipment.		
Description:	The project will investigate the current headworks screening operation and recommend the most strategic and cost effective improvements. Following this phase, the project will include design and construction of improvements to implement the recommendations.		
Location:	Headworks Facility		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$250,000	$0	$0	$250,000
Design			$0	$0	$150,000	$500,000	$0	$650,000
Construction			$0	$0	$0	$0	$6,000,000	$6,000,000
FY Total			$0	$0	$400,000	$500,000	$6,000,000	$6,900,000

Plant Control System I/O Replacement

Project Name	Plant Control System I/O Replacement	Project No.	7339
Program	Treatment Plant Program	Phase	P
Sub-Program	One-Time Renovation	Priority Rank	Very High
Project Manager	Nate Morales	Ranking Score	55
Dept/Division	Operations/ Plant Operations	Concord %	100%
Purpose:	Upgrade the Treatment Plant Programmable Logic Controller Input and Output (I/O) cards and associated hardware with current technology to maintain reliable operation and vendor support.		
History:	The first treatment plant I/O was installed in 1986. The number of I/O cards in use has increased from relatively few to nearly 1,800. Approximately 1,100 of these are currently obsolete. Replacement units cannot be purchased from the manufacturer nor are they fully supported. The District maintains an inventory of over 100 spare I/O cards to replace units as they fail.		
Description:	This project will replace and update the treatment plant's obsolete I/O cards along with their mounting racks, communication modules, and power supplies with modern, fully supported products.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$100,000	$100,000	$0	$200,000
Design			$0	$0	$0	$100,000	$500,000	$600,000
Construction			$0	$0	$0	$0	$3,500,000	$3,500,000
FY Total			$0	$0	$100,000	$200,000	$4,000,000	$4,300,000

Plant Cyber Security Evaluation Study

Project Name	Plant Cyber Security Evaluation Study	Project No.	7331
Program	Treatment Plant Program	Phase	P
Sub-Program	One-Time Renovation	Priority Rank	High
Project Manager	Nate Morales	Ranking Score	35
Dept/Division	Operations/ Plant Operations	Concord %	100%
Purpose:	Protect the plant from potential electronic breaches through the plant control system, electrical distribution system, and/or equipment.		
History:	In 2008, NACWA informed its members of the newly-identified risk for major service interruption through cyber vulnerabilities. The Water Sector Coordinating Council and the Department of Homeland Security developed a security sensitive Mitigation Plan, which included identification of all Programmable Language Controllers and Variable Frequency Drives for the plant's electrical and instrumentation systems; installation of electronic locks and intrusion alarms at Substation 82; installation of additional cameras to monitor the treatment plant; testing the integrity of the existing firewall; and obtaining a Cisco switch for electrical substation security. Some recommendations have already been implemented. This project will address the remaining, more costly measures.		
Description:	The project will evaluate the plant control system and electrical distribution system for vulnerabilities to electronic breaches. If vulnerabilities are identified, then solutions will be identified, evaluated, and implemented to address these vulnerabilities.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$50,000	$0	$50,000
Design			$0	$0	$0	$0	$100,000	$100,000
Construction			$0	$0	$0	$0	$350,000	$350,000
FY Total			$0	$0	$0	$50,000	$450,000	$500,000

Aeration System Improvements

Project Name	Aeration System Improvements	Project No.	7323
Program	Treatment Plant Program	Phase	P
Sub-Program	One-Time Renovation	Priority Rank	Unranked
Project Manager	Clint Shima	Ranking Score	TBD
Dept/Division	Engineering/Capital Projects	Concord %	100%
Purpose:	To renovate the existing aeration system to ensure it will meet the treatment plant's aeration air demands when the steam powered turbine blowers are out of service.		
History:	The electric blower serves as a back up to the two steam-powered turbine blowers. The electric blower has enough capacity to meet the treatment plant's needs during the winter months. However, during the summer months, the treatment plant's air demand increases and the electric blowers doo not have enough capacity to meet the demand. The existing blowers are in good shape because they were rebuilt in the early 2000s (steam blowers) or because of low run times as back-up system (electric blowers).		
Description:	This project will continue to evaluate the capacity needed by the electric blower. Further refine the most efficient use of the steam and electric blowers. The following work will be considered: • Replace guide vanes on the electric blower • Install new impeller and high efficiently blower • Consider installing smaller blowers at the Primary facilities This project will also assess the old controls and electrical equipment on this system. Upon further investigation, this project will be budgeted for total project costs.		
Location:			

Schedule & Budget — Secondary Tanks and Pump & Blower building

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$100,000	$0	$100,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$0	$0	$0	$100,000	$0	$100,000

Disinfection System Upgrades

Project Name	Disinfection System Upgrades	Project No.	7325
Program	Treatment Plant Program	Phase	P
Sub-Program	One-Time Renovation	Priority Rank	Unranked
Project Manager	Craig Mizutani	Ranking Score	TBD
Dept/Division	Engineering/Capital Projects	Concord %	100%
Purpose:	Reduce utility and maintenance costs, increase reliability, and improve performance of the ultraviolet (UV) disinfection systems		
History:	The District's UV disinfection system was installed in 1996 to eliminate the use of Chlorine for disinfection. The system was expanded in 2007, utilizing the same low-pressure UV technology as the original installation. The equipment has been well maintained and parts continue to be available via a third party reseller since the original manufacturer is no longer in business. However, newer systems offer considerable benefits in the form of reduced maintenance and power costs. In addition, although parts are available, they may become more difficult to obtain as the existing systems are replaced with new technology.		
Description:	This project will replace the existing UV disinfection system with a new system. State-of-the-art systems feature lower energy consumption and significantly reduced maintenance (labor) costs due to the ease of lamp cleaning.		
Location:	UV Facility		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$150,000	$1,585,000	$1,735,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$0	$0	$0	$150,000	$1,585,000	$1,735,000

MHF Burner Upgrade

Project Name	MHF Burner Upgrade	Project No.	7329
Program	Treatment Plant Program	Phase	P
Sub-Program	One-Time Renovation	Priority Rank	Unranked
Project Manager	Craig Mizutani	Ranking Score	TBD
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	Improve the operational flexibility of the existing multiple hearth furnaces to meet compliance parameters. Improve utilization of Landfill gas, reduce energy consumption.		
History:	The furnaces were constructed during the early 1970s and made operational in 1985. They were originally designed to burned comingled solid waste and sludge; however, they have historically only burned sludge. As a result, some of the burners are not optimally sized for the furnace loading. This results in difficulty maintaining proper temperatures in the furnace. In addition, the existing burners do not allow optimization of landfill gas use. 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 developed leaks that require continued attention in order to meet BAAQMD leak guidelines.		
Description:	The original gas fuel system piping will be replaced using welded joints, and a new diesel fuel system will be added as an additional fuel source (to allow furnace operations during an emergency. The project will include replacement of 2 to 4 of the top hearth burners (8 MMBtu/hr) with smaller low NOx/High mix burners (2 MMBtu/hr). To provide better temperature control to comply with 129 regulations. Modernizing the control system to economize fuel consumption and realize cost savings.		
Location:	Solids Conditioning Building		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$100,000	$750,000	$850,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$0	$0	$0	$100,000	$750,000	$850,000

Equipment Replacement Program

Project Name	Equipment Replacement Program	Project No.	7265
Program	Treatment Plant Program	Phase	C
Sub-Program	Recurring Renovation	Priority Rank	Critical
Project Manager	Edgar Lopez	Ranking Score	80
Dept/Division	Engineering/Capital Projects	Concord %	100%
Purpose:	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 supported by its manufacturer.		
History:	The initial work on this project assembled a list of current equipment; verified equipment name, number, and size; acquired design records; and estimated equipment life and replacement cost. Several major pieces of equipment are reaching the end of their service life and require replacement/upgrading or reconditioning. The Treatment Plant Asset Management Plan project documented recent projects/ replacement schedules and will be used to provide recommendations for additional renewal and replacement needs.		
Description:	Following are examples of equipment included in this project: Filter Plant Polymer Pumps Influent Pump Wear Rings Scum Tank Assy. 3WLP 12" Strainer Waste Steam Exchanger Shell Headworks A/C Grease Separator This project is scheduled to be closed in FY 15-16 and a similar project with new scope will be initiated.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$1,107,400	$300,000	$0	$0	$0	$1,407,400
FY Total			$1,107,400	$300,000	$0	$0	$0	$1,407,400

Piping Renovations, Phase 8

Project Name	Piping Renovations, Phase 8	Project No.	7310
Program	Treatment Plant Program	Phase	D
Sub-Program	Recurring Renovation	Priority Rank	Critical
Project Manager	Brad Leidecker	Ranking Score	70
Dept/Division	Engineering/Capital Projects	Concord %	100%
Purpose:	To improve the reliability of the piping systems above and below ground in the treatment plant by inspection, renovation, and replacement where required.		
History:	During the 5A project, numerous piping systems were installed throughout the treatment plant. These pipes carry the processed wastewater, sludge, steam, air, and other utility services between the various sections of the plant. These pipes have been in place for more than 40 years. Some of these pipes are leaking due to corrosion. The first seven phases of this program renovated or replaced various piping systems.		
Description:	This phase of the Treatment Plant Piping Renovations Project will include previously identified piping renovations and replacement work not yet included in a construction project.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$1,500,000	$0	$0	$1,500,000
Planning			$86,917	$0	$0	$0	$0	$86,917
Design			$0	$163,000	$0	$0	$0	$163,000
Construction			$0	$0	$0	$0	$0	$0
FY Total			$86,917	$163,000	$1,500,000	$0	$0	$1,749,917

Laboratory Upgrades and Repair

Project Name	Laboratory Upgrades and Repair	Project No.	7319
Program	Treatment Plant Program	Phase	C
Sub-Program	Recurring Renovation	Priority Rank	Critical
Project Manager	Craig Mizutani	Ranking Score	65
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	Repair, replace, and/or upgrade the treatment plant laboratory equipment. The laboratory is a critical component to regulatory reporting and the equipment used in this facility is specialized and requires climate control.		
History:	The District's laboratory was built in 2001 and operates several critical systems to maintain the facilities required to conduct testing. Such systems include hot water storage and distribution, compressed air, temperature control (heating and cooling), chiller, ventilation, hoods, vacuum system, and DI water. As these systems age, repairs and/or replacements/upgrades will be needed so that the laboratory remains operational.		
Description:	This is a multi-year program to repair and upgrade the laboratory. Project work identified to date includes the following: • Hot water heat exchangers and tanks are corroded. • HVAC control systems are obsolete and outdated. • DI tank may need replacement/ upgrade.		
Location:	Laboratory		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$4,000	$0	$0	$4,000
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$144,000	$150,000	$150,000	$150,000	$594,000
FY Total			$0	$144,000	$154,000	$150,000	$150,000	$598,000

Urgent Repairs Blanket Contract

Project Name	Urgent Repairs Blanket Contract	Project No.	7314
Program	Treatment Plant Program	Phase	C
Sub-Program	Recurring Renovation	Priority Rank	Critical
Project Manager	Craig Mizutani	Ranking Score	80
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	Provide staff the capability to perform immediate electrical, mechanical, and other miscellaneous repairs within the treatment plant.		
History:	Projects included in this category are those that cannot be completed by the District's Plant Maintenance staff, and cannot afford the longer timeline to be incorporated in the budget process. This project will include bidding and executing a blanket contract that will allow the District to use a contractor for urgent construction work.		
Description:	Urgent treatment plant projects which require immediate repairs or replacement may arise anytime during the current fiscal year. These projects may be triggered by: • Equipment or process piping failure • Comply with regulatory or code issues • Impacts operational procedures or process • Safety hazards Budget for this work will be paid for using Program Contingency.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$20,000	$0	$0	$20,000
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$20,000	$0	$0	$0	$20,000
FY Total			$0	$20,000	$20,000	$0	$0	$40,000

Plant Energy Optimization

Project Name	Plant Energy Optimization	Project No.	7320
Program	Treatment Plant Program	Phase	P
Sub-Program	Recurring Renovation	Priority Rank	Very High
Project Manager	Craig Mizutani	Ranking Score	55
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	Increase energy efficiency and decrease greenhouse gas emissions for the treatment plant.		
History:	The implementation of AB 32 causes energy consumers to evaluate their energy use and develop carbon offsetting efficiencies to comply with new regulations. A number of potential energy efficiency projects are being refined. Many of these concepts are from the 2010 HDR report "AB 32 Compliance and Energy Optimization Evaluation." These project concepts require further evaluation and an understanding of potential implementation issues before implementation can move forward.		
Description:	Evaluate proposed energy optimization projects. Many projects include rebates from PG&E. Staff will coordinate work with PG&E in order to obtain rebates and improve the payback of implemented projects. Current proposals to be evaluated include installing variable frequency drives on the furnace's combustion air blowers. As other energy efficiency proposals are made they will be included in this evaluation project.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$55,000	$0	$0	$55,000
Planning			$0	$35,000	$0	$0	$0	$35,000
Design			$0	$0	$300,000	$0	$0	$300,000
Construction			$0	$0	$0	$200,000	$800,000	$1,000,000
FY Total			$0	$35,000	$355,000	$200,000	$800,000	$1,390,000

Equipment Replacement

Project Name	Equipment Replacement	Project No.	7326
Program	Treatment Plant Program	Phase	C
Sub-Program	Recurring Renovation	Priority Rank	Critical
Project Manager	Craig Mizutani	Ranking Score	80
Dept/Division	Engineering/Capital Projects	Concord %	100%
Purpose:	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 supported by its manufacturer.		
History:	The initial work on this project assembled a list of current equipment; verified equipment name, number, and size; acquired design records; and estimated equipment life and replacement cost. Several major pieces of equipment are reaching the end of their service life and require replacement/upgrading or reconditioning. This project will be coordinated with the Asset Management program.		
Description:	The following are examples of equipment included in the project: 3WHP pumps, Influent Pump Wear Rings, 3WLP Pump impellers/parts, Steam system traps/accessories/piping, Headworks A/C, MCB A/C, Sub 40 A/C, and other equipment identified through asset management, maintenance, and operations groups.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$250,000	$250,000	$1,900,000	$2,400,000
FY Total			$0	$0	$250,000	$250,000	$1,900,000	$2,400,000

Piping Renovation, Phase 9

Project Name	Piping Renovation, Phase 9	Project No.	7330
Program	Treatment Plant Program	Phase	P
Sub-Program	Recurring Renovation	Priority Rank	Very High
Project Manager	Brad Leidecker	Ranking Score	55
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	To improve the reliability of the piping systems above and below ground in the treatment plant by inspection, renovation, and replacement where required.		
History:	During the 5A project, numerous piping systems were installed throughout the treatment plant. These pipes carry processed wastewater, sludge, steam, air, and other utility services between the various sections of the plant and have been in place for more than 40 years. Some of these pipes are leaking due to corrosion. The first eight phases of this program renovated or replaced various piping systems.		
Description:	This phase of the Treatment Plant Piping Renovations Project will include previously identified piping renovations and replacement work not yet included in a construction project.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$100,000	$0	$0	$100,000
Design			$0	$0	$300,000	$0	$0	$300,000
Construction			$0	$0	$0	$1,200,000	$0	$1,200,000
FY Total			$0	$0	$400,000	$1,200,000	$0	$1,600,000

Treatment Plant Security Upgrade

Project Name	Treatment Plant Security Upgrade	Project No.	7335
Program	Treatment Plant Program	Phase	P
Sub-Program	Recurring Renovation	Priority Rank	Very High
Project Manager	Craig Mizutani	Ranking Score	50
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	Reduce the District's exposure to liability and property loss; meet reliability/safety standards and reduce operations and maintenance expenses.		
History:	The District has experienced loss of property in the past and improvements to the security system are being identified and refined. Also, the current national security situation may require additional security measures for essential public services.		
Description:	This project will identify and implement projects to improve the security of District personnel and property. This project could include, but is not limited to, installation of alarm systems at critical sites on District property, additional gates in the perimeter security fencing, upgrading plant security cameras, signage, and improving general area lighting.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$80,000	$25,000	$300,000	$405,000
FY Total			$0	$0	$80,000	$25,000	$300,000	$405,000

Electrical Cable Replacement

Project Name	Electrical Cable Replacement	Project No.	7340
Program	Treatment Plant Program	Phase	P
Sub-Program	Recurring Renovation	Priority Rank	Very High
Project Manager	Craig Mizutani	Ranking Score	50
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	The purpose of this project is to identify deficiencies in the existing electrical system and replace cables prior to failure.		
History:	Treatment Plant operation is dependent on the electrical power system including the collection of feeders from the main substations to the local area substations. Loss or failure of these power conveyances would disrupt the plant's electrical system.		
Description:	This project will evaluate the treatment plant's electrical feeders, and replace deficient cables due to age, undersize or functional obsolescence.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$100,000	$0	$100,000
Design			$0	$0	$0	$0	$500,000	$500,000
Construction			$0	$0	$0	$0	$1,400,000	$1,400,000
FY Total			$0	$0	$0	$100,000	$1,900,000	$2,000,000

Electrical/Instrumentation Replacement Program

Project Name	Electrical/Instrumentation Replacement Program	Project No.	7332
Program	Treatment Plant Program	Phase	P
Sub-Program	Recurring Renovation	Priority Rank	High
Project Manager	Craig Mizutani	Ranking Score	45
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	Identify deficiencies in the existing electrical and instrumentation system components and replace them prior to failure.		
History:	The electrical/instrumentation system throughout the plant was installed in the mid- 1970s, with significant upgrades from several major projects. However, the majority of equipment is 35 years old.		
Description:	Replace antiquated and poor-performing field instrumentation and electrical equipment and systems. Appropriate upgrading will also be included to meet the latest governing codes such as the National Electric Code.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$100,000	$100,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$0	$0	$0	$0	$100,000	$100,000

Coating Renovation

Project Name	Coating Renovation	Project No.	7334
Program	Treatment Plant Program	Phase	P
Sub-Program	Recurring Renovation	Priority Rank	Medium
Project Manager	Craig Mizutani	Ranking Score	20
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	Extend the useful life and minimize corrosion of select treatment plant equipment, piping, and surfaces through the application of coatings.		
History:	The original treatment plant was built in the late 1940s. Since then, there have been multiple additions and expansions. Much of the process infrastructure has received limited coating or repainting. Prior phases of this project applied coatings to many components at the plant. During the summer of 2009, KTA-Tator, Inc. performed an evaluation of the protective coatings on the components around the treatment plant. The work was part of the Treatment Plant Protective Coatings, Phase 4 (DP 7247) project. The Asset Management program is documenting recent renewal and replacement projects and will ultimately provide recommendations for future renewal and/or replacement of equipment and facilities at the treatment plant.		
Description:	Recommendations from both projects listed above will be used to plan future phases of the long-term protective coating program.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$100,000	$50,000	$150,000
Design			$0	$0	$0	$0	$500,000	$500,000
Construction			$0	$0	$0	$0	$3,500,000	$3,500,000
FY Total			$0	$0	$0	$100,000	$4,050,000	$4,150,000

Pavement Renovation

Project Name	Pavement Renovation	Project No.	7336
Program	Treatment Plant Program	Phase	P
Sub-Program	Recurring Renovation	Priority Rank	Medium
Project Manager	Craig Mizutani	Ranking Score	15
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	Renovate pavement throughout the treatment plant to maximize service life and maintain safe conditions.		
History:	In 2009, the TP Asset Management project funded several condition assessments in the plant including one for asphalt pavement by Fugro West, which identified future renovations.		
Description:	Renovate asphalt pavement as identified in multiple phases based on the condition assessment and changing condition of the pavement over time.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$150,000	$150,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$0	$0	$0	$0	$150,000	$150,000

Concrete Renovation

Project Name	Concrete Renovation	Project No.	7337
Program	Treatment Plant Renovation	Phase	P
Sub-Program	Recurring Renovation	Priority Rank	Medium
Project Manager	Craig Mizutani	Ranking Score	15
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	Renovate concrete throughout the treatment plant.		
History:	In 2009, the TP Asset Management project funded several condition assessments in the plant including one for concrete structures by Villalobos & Associates. Defects identified included cracking, corrosion, and spalling. The defects were prioritized for repair.		
Description:	Renovate concrete structures where urgent repairs were identified in the condition assessment. This work will be incorporated into concurrent capital projects as appropriate. Future phases will address the remaining repairs and any additional ones that are identified.		
Location:	Entire Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$150,000	$150,000
Design			$0	$0	$0	$0	$250,000	$250,000
Construction			$0	$0	$0	$0	$800,000	$800,000
FY Total			$0	$0	$0	$0	$1,200,000	$1,200,000

COLLECTION SYSTEM PROGRAM

OVERVIEW

The major points of emphasis for the Collection System Program in FY 2015-16 are:

- Collection System Master Plan to update the collection system hydraulic hydrodynamic model;
- Renovate sewers as they reach the end of their useful lives to avoid structural failure, reduce dry-weather overflows, and control maintenance costs;
- Expand sewer and pumping facilities to accommodate approved growth in the District's service area;
- Upgrade District sewers to relieve capacity constraints and for future renovations;
- Improve the reliability of pumping stations; and
- Respond to regulatory requirements related to sanitary sewer overflows (SSOs).

The process for project identification, prioritization, and scheduling includes seven major components:

- Results from the District's TV inspection program that identify lines in need of rehabilitation or replacement, including the Riverwatch agreement;
- CSO maintenance records including overflows and stoppages;
- The Pumping Station Inventory Update (2011), which identified necessary reliability improvements;
- Collection system facility plans, which identify capacity limitations in the six through ten inch lines;
- Coordination with capital improvement programs for paving and pipeline projects of other agencies/utilities; and
- Reduce impacts to customers/ residents.

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 CCTV 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 subprograms.

Renovation (Tab 1)

There are more than 1,500 miles of sewer in the District's collection system. Sewers and associated facilities have fixed useful lives. When a sewer nears the end of its useful life, maintenance costs, infiltration/inflow rates, and the threat of structural degradation increase. Proper management of the District's collection system requires a program for the renovation of sewers that have reached the end of their useful lives.

In the FY 2015-16 CIB, the largest renovation projects focus on multiple sites in Pleasant Hill, Orinda, Lafayette and Martinez.

The FY 2001-02 CIB initiated a District-wide TV inspection program to help identify and prioritize renovation needs. In FY 2013-14, the TV inspection program focused on high maintenance and problem areas in Orinda, Lafayette, and Walnut Creek. Beginning in FY 2014-15, the TV Inspection program was moved from the capital program to the Operations and Maintenance (O&M) budget.

Urgent projects may arise during a fiscal year or in the closing months of the prior fiscal year. These projects, which cannot afford the longer timeline to be incorporated in the year-long budget process, are included in this category of projects.

Smaller collection system projects are initiated through the ongoing collection system planning process. This planning activity evaluates capacity of sewers smaller than 12-inches in diameter on a case-by-case basis when triggered by one of the following:

- Capacity-related overflows
- Structural failure in a pipe
- Maintenance records indicate a persistent problem

By agreement with California River Watch, repairs of defective sewer pipes within two hundred feet of creeks are given higher priority.

Regulatory Compliance/Planning/Safety (Tab 2)

The Collection System Master Plan will also start this fiscal year to accommodate the changing general and specific plans of the County and the municipalities that are served where higher densities of development are being widely adopted. The Collection System Master plan will review our large and complex collection system, force mains, and the nineteen (19) pump stations and determine the timely reconstruction and replacement of the collection system as needed. As part of the Master Plan effort, the hydraulic (dynamic) model will be updated to determine improvements that may be required to provide adequate capacity within the sewer system.

A Pumping Station Inventory document is periodically updated to include information as projects are completed and will be coordinated with the Master Plan effort. Asset

Management Plan information is being used to update the Pumping Station Inventory.

Expansion (Tab 3)

Design of the trunk sewer improvements along the Pleasant Hill Grayson Creek and Corridor started in FY 2012-13 and will continue this fiscal year, with major project construction to take place in 2016-17. This project will be coordinated with the Collection System Master Plan before it is advertised to bid to verify scope, size, timing and cost estimate. The subprogram includes Development Sewerage for 2015-16 and potential Contractual Assessment District projects.

Pumping Stations (Tab 4)

The Pumping Stations subprogram focuses on reliability, safety and operational improvements. Pump station condition assessments will be conducted under the Collection System Master Plan and will help confirm near term and recommend future projects in this subprogram. Projects this year will be minor equipment replacement, or safety improvements, and implementing any recommendations from the Arc Flash study.

Pipeburst Blanket Contract

Project Name	Pipeburst Blanket Contract	Project No.	5982
Program	Collection System Program	Phase	C
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Alex Rozul	Ranking Score	75
Dept/Division	Operations/ Collection System Operations Division	Concord %	0%

Purpose:

Urgent pipeline projects which require immediate repairs may arise anytime during the current fiscal year.

History:

Projects included in this category are those that cannot be completed by the District's Collection System Operations Division, and cannot afford the longer timeline to be incorporated in the year-long budget process. This project will include bidding and executing a blanket contract that will allow the District to use a contractor to perform urgent pipebursting work.

Description:

Project work may be triggered by one of the following situations:

- imminent threat of pipe break or collapse
- potential for an overflow
- structural failure in a pipe

Budget for this urgent work will be paid for using Program Contingency funds as needed.

Location:

Throughout the service area.

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$652,285	$150,000	$225,000	$200,000	$250,000	$1,477,285
FY Total			$652,285	$150,000	$225,000	$200,000	$250,000	$1,477,285

CIPP Blanket Contract

Project Name	CIPP Blanket Contract	Project No.	5999
Program	Collection System Program	Phase	C
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Alex Rozul	Ranking Score	75
Dept/Division	Operations/ Collection System Operations Division	Concord %	0%
Purpose:	Urgent pipeline projects which require immediate repairs may arise anytime during current fiscal year.		
History:	Projects included in this category are those that cannot be completed by the District's Collection System Operations Division, and cannot afford the longer timeline to be incorporated in the year-long budget process. This project will include bidding and executing a blanket contract that will allow the District to use a contractor to perform urgent CIPP lining work.		
Description:	These projects may be triggered by one of the following situations: • imminent threat of pipe break or collapse • potential for an overflow • structural failure in a pipe. Budget for this urgent work will be paid for using Program Contingency funds as needed.		
Location:	Throughout the service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$113,619	$100,000	$125,000	$125,000	$0	$463,619
FY Total			$113,619	$100,000	$125,000	$125,000	$0	$463,619

Lafayette Sewer Renovations, Phase 8

Project Name	Lafayette Sewer Renovations, Phase 8	Project No.	8404
Program	Collection System Program	Phase	C
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Nancy Molina	Ranking Score	75
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	To replace or renovate 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 the residents/ratepayers.		
History:	The Lafayette Sewer renovations is part of the ongoing Collection System Sewer Renovation Program.		
Description:	The Phase 8 project replaced/rehabilitated approximately 8,300 feet of 6 and 8-inch sewer pipe predominately in the South Peardale area. This project is in the closeout phase.		
Location:	City of Lafayette		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$8,000	$0	$0	$8,000
Planning			-	$0	$0	$0	$0	-
Design			-	$0	$0	$0	$0	-
Construction			-	$300,000	$0	$0	$0	-
FY Total			$2,426,698	$300,000	$8,000	$0	$0	$2,734,698

North Orinda Sewer Renovations, Phase 5

Project Name	North Orinda Sewer Renovations, Phase 5	Project No.	8411
Program	Collection System Program	Phase	C
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Mark Wenslawski	Ranking Score	75
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	To replace or renovate 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 the residents/ratepayers.		
History:	The District's over 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 collection system overflows. The District implemented a sewer renovation program in 1991. Since that time, an annual allowance for this renovation program has been included in the Capital Improvement Budget and Plan.		
Description:	The North Orinda Sewer Renovations, Phase 5 project replaced/rehabilitated 7,370 feet of sewer line located in the public right of way and easements. This project is in the closeout phase.		
Location:	Locations mainly in the city of Orinda service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$400,000	$443,000	$0	$843,000
Planning			-	$0	$0	$0	$0	-
Design			-	$0	$0	$0	$0	-
Construction			-	$1,550,000	$0	$0	$0	-
FY Total			$626,590	$1,550,000	$400,000	$443,000	$0	$3,019,590

Walnut Creek Renovations, Phase 10

Project Name	Walnut Creek Renovations, Phase 10	Project No.	8413
Program	Collection System Program	Phase	C
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Nancy Molina	Ranking Score	75
Dept/Division	Engineering/Capital Projects	Concord %	0%

Purpose: To replace or renovate 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 the residents/ratepayers.

History: The District's over 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 collection system overflows. The District implemented a sewer renovation program in 1991. Since that time, an annual allowance for this renovation program has been included in the Capital Improvement Budget and Plan.

Description: The Walnut Creek Renovations, Phase 10 project will replace/rehabilitate approximately 8,500 feet of 6 and 8-inch sewer in the public right of way and easements throughout the City of Walnut Creek. Design of this project started in FY 2012-13 with construction scheduled for FY 2014-15. This project is in the closeout phase.

Location: Locations are mainly in the city of Walnut Creek service area.

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			-	$0	$0	$0	$0	-
Design			-	$0	$0	$0	$0	-
Construction			-	$3,073,180	$0	$0	$0	-
FY Total			$805,818	$3,073,180	$0	$0	$0	$3,878,998

Martinez Sewer Renovations, Phase 4

Project Name	Martinez Sewer Renovations, Phase 4	Project No.	8415
Program	Collection System Program	Phase	D
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Michael Penny	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	Replace or renovate 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 the residents/ratepayers.		
History:	The District's over 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 collection system overflows. The District implemented a sewer renovation program in 1991. Since that time, an annual allowance for this renovation program has been included in the Capital Improvement Budget and Plan.		
Description:	The Martinez Sewer Renovations, Phase 4 project will replace or rehabilitate small diameter sewer pipe located in the public right of ways, easements, and near creeks. As a result of easement acquisitions between the City of Martinez and the District, costs for easements are included within this project.		
Location:	Locations mainly in the city of Martinez service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$216,739	$0	$0	$0	$0	$216,739
Design	3/12-13	4/14-15	$0	$606,000	$0	$0	$0	$606,000
Construction	4/14-15	4/15-16	$0	$0	$3,100,000	$0	$0	$3,100,000
FY Total			$216,739	$606,000	$3,100,000	$0	$0	$3,922,739

Survey Monument Installation Project

Project Name	Survey Monument Installation Project	Project No.	8417
Program	Collection System Program	Phase	C
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Greg St. John	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	This project will provide resources necessary to fulfill Survey's professional and legal obligation to reference and replace survey monuments that are destroyed during the construction process.		
History:	Sewer renovation projects frequently remove survey monuments either because the monument lies directly in the path of the new sewer or in the pavement restoration zone. The survey monument installations will be throughout the District service area wherever sewer renovation projects have been completed. Survey monuments must be replaced according to California law (§8771 Business and Professions Code).		
Description:	The current project scope of work consists of the installation of survey monuments that were removed during sewer renovation. This project will allow Survey staff to work with a contractor to restore the required survey monuments.		
Location:	Throughout Service Area		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$10,000	$0	$0	$10,000
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$98,259	$40,000	$40,000	$50,000	$250,000	$478,259
FY Total			$98,259	$40,000	$50,000	$50,000	$250,000	$488,259

Lafayette Sewer Renovations, Phase 9

Project Name	Lafayette Sewer Renovations, Phase 9	Project No.	8421
Program	Collection System Program	Phase	C
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Nancy Molina	Ranking Score	75
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	To replace or renovate small-diameter sewers near creeks, 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 the residents/ratepayers.		
History:	The District's over 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 collection system overflows. The District implemented a sewer renovation program in 1991. Since that time, an annual allowance for this renovation program has been included in the Capital Improvement Budget and Plan.		
Description:	The Lafayette Sewer Renovations, Phase 9 project will replace or rehabilitate approximately 8,500 LF of small diameter sewer pipe located in the public right of ways and easements.		
Location:	Locations mainly in the city of Lafayette service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$2,004,200	$0	$0	$2,004,200
Planning			$0	$0	$0	$0	$0	$0
Design			$283,081	$366,000	$0	$0	$0	$649,081
Construction			$0	$500,000	$0	$0	$0	$500,000
FY Total			$283,081	$866,000	$2,004,200	$0	$0	$3,153,281

Walnut Creek Renovations, Phase 11

Project Name	Walnut Creek Renovations, Phase 11	Project No.	8422
Program	Collection System Program	Phase	P
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Nancy Molina	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	0%

Purpose: To replace or renovate 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 the residents/ratepayers.

History: The District's over 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 collection system overflows. The District implemented a sewer renovation program in 1991. Since that time, an annual allowance for this renovation program has been included in the Capital Improvement Budget and Plan.

Description: The Walnut Creek Sewer Renovations, Phase 11 project will replace or rehabilitate small diameter sewer pipe located in the public right of ways and easements.

Location: Locations are mainly in the City of Walnut Creek service area.

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$88,342	$61,658	$0	$0	$0	$150,000
Design			$0	$0	$0	$500,000	$0	$500,000
Construction			$0	$0	$0	$0	$3,100,000	$3,100,000
FY Total			$88,342	$61,658	$0	$500,000	$3,100,000	$3,750,000

North Orinda Sewer Renovations, Phase 6

Project Name	North Orinda Sewer Renovations, Phase 6	Project No.	8423
Program	Collection System Program	Phase	P
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Mark Wenslawski	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	To replace or renovate 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 the residents/ratepayers.		
History:	The District's over 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 collection system overflows. The District implemented a sewer renovation program in 1991. Since that time, an annual allowance for this renovation program has been included in the Capital Improvement Budget and Plan.		
Description:	The North Orinda Sewer Renovations, Phase 6 project will replace or rehabilitate small diameter sewer pipe located in the public right of ways and easements.		
Location:	Locations mainly in the city of Orinda service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$92,333	$57,000	$0	$0	$0	$149,333
Design			$0	$0	$500,000	$0	$0	$500,000
Construction			$0	$0	$0	$3,000,000	$0	$3,000,000
FY Total			$92,333	$57,000	$500,000	$3,000,000	$0	$3,649,333

M1 CIPP Rehabilitation Project

Project Name	M1 CIPP Rehabilitation Project	Project No.	8424
Program	Collection System Program	Phase	C
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Mark Wenslawski	Ranking Score	75
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	To ensure reliability of the Martinez Transmission line by protecting against corrosion in the M1 line.		
History:	A study was completed in 2004 that identified multiple portions of the Martinez Transmission line as having corrosion issues. The study recommended renovation by CIPP lining. In 2014 the District completed the first phase of lining. This project is the second phase of lining identified by the study.		
Description:	This project will renovate approximately 3,100 feet of M1, a 42" diameter reinforced concrete pipeline located on the treatment plant site.		
Location:	CCCSD Treatment Plant Site		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$2,276,000	$0	$0	$2,276,000
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$250,000	$0	$0	$0	$250,000
Construction			$0	$250,000	$0	$0	$0	$250,000
FY Total			$0	$500,000	$2,276,000	$0	$0	$2,776,000

Cathodic Protection Systems - Phase 1

Project Name	Cathodic Protection Systems - Phase 1	Project No.	8425
Program	Collection System Program	Phase	C
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Michael Penny	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	20%
Purpose:	This project will repair, update, and upgrade underground facilities, including the pumping stations and buried metallic piping, by replacing existing spent facilities and installing new systems where required.		
History:	A comprehensive cathodic protection survey of the collection system, pumping stations and treatment plant was prepared in 2008 and was updated in 2012. Based on the results of the survey, the Cathodic Protection System Replacement project developed the scope and initial design concepts for this project.		
Description:	This project will include required maintenance, replacement, and/or addition of cathodic protection systems to those sites identified as high or moderate priority in the 2012 survey update. Work includes installation of new anode beds, vent piping, test stations, and induced current cathodic protection systems on the treatment plant site, eight pump stations, and six force mains. Miscellaneous corrosion related repairs will be included in the scope of this project.		
Location:	Throughout the service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$9,000	$0	$0	$9,000
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$550,000	$0	$0	$0	$550,000
FY Total			$0	$550,000	$9,000	$0	$0	$559,000

Lafayette Sewer Renovations, Phase 10

Project Name	Lafayette Sewer Renovations, Phase 10	Project No.	8426
Program	Collection System Program	Phase	D
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Nancy Molina	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	To replace or renovate small-diameter sewers near creeks, 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 the residents/ratepayers.		
History:	The District's over 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 collection system overflows. The District implemented a sewer renovation program in 1991. Since that time, an annual allowance for this renovation program has been included in the Capital Improvement Budget and Plan.		
Description:	The Lafayette Sewer Renovations, Phase 10 project will replace or rehabilitate small diameter sewer pipe located in the public right of ways and easements.		
Location:	Locations primarily in the City of Lafayette service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$45,000	$0	$0	$45,000
Planning			$0	$210,000	$0	$0	$0	$210,000
Design			$0	$0	$500,000	$0	$0	$500,000
Construction			$0	$0	$0	$3,000,000	$0	$3,000,000
FY Total			$0	$210,000	$545,000	$3,000,000	$0	$3,755,000

Collection System Urgent Projects

Project Name	Collection System Urgent Projects	Project No.	8434
Program	Collection System Program	Phase	C
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Sasha Mestetsky	Ranking Score	75
Dept/Division	Engineering/Capital Projects	Concord %	TBD
Purpose:	This project will restore and protect sewers damaged or threatened during winter storms. In addition, the program will address structurally deficient sewers identified by CSO.		
History:	During major storm events, sewers at various locations may be damaged or threatened. In some cases, landslides or soil erosion may undermine the sewers. The repair and restoration of these sewers is typically time sensitive. In addition, the District has embarked on an extensive investigation of the condition of its sewer system. Occasionally, sewers in very poor condition are identified and cannot wait for incorporation into the CIB/CIP. Such situations will be addressed under this program		
Description:	A standby contractor will be selected by the District team and be used for urgent or emergency needs for the collection system, recycled water, and pump station forcemains. Funding will be used with the program contigency accounts as needed.		
Location:	Throughout the District.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$270,000	$0	$0	$270,000
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$25,000	$0	$0	$0	$25,000
FY Total			$0	$25,000	$270,000	$0	$0	$295,000

Pleasant Hill Sewer Renovations, Phase 2

Project Name	Pleasant Hill Sewer Renovations, Phase 2	Project No.	5991
Program	Collection System Program	Phase	P
Sub-Program	Renovation	Priority Rank	Very High
Project Manager	Sasha Mestetsky	Ranking Score	60
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	To replace or renovate 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 the residents/ratepayers.		
History:	The District's over 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 collection system overflows. The District implemented a sewer renovation program in 1991. Since that time, an annual allowance for this renovation program has been included in the Capital Improvement Budget and Plan.		
Description:	The Pleasant Hill Sewer Renovations, Phase 2 project will replace or rehabilitate small diameter sewer pipe located in the public right of ways and easements. This project will be coordinated with the Pleasant Hill - Grayson Creek trunk sewer project, which is in the Expansion subprogram.		
Location:	City of Pleasant Hill		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$66,000	$0	$0	$66,000
Planning			$133,017	$1,000	$0	$0	$0	$134,017
Design			$0	$0	$0	$0	$250,000	$250,000
Construction			$0	$0	$0	$0	$2,100,000	$2,100,000
FY Total			$133,017	$1,000	$66,000	$0	$2,350,000	$2,550,017

Walnut Creek Renovations, Phase 12

Project Name	Walnut Creek Renovations, Phase 12	Project No.	8435
Program	Collection System Program	Phase	P
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Sasha Mestetsky	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	0%

Purpose: To replace or renovate 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 the residents/ratepayers.

History: The District's over 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 collection system overflows. The District implemented a sewer renovation program in 1991. Since that time, an annual allowance for this renovation program has been included in the Capital Improvement Budget and Plan.

Description: This project will replace or rehabilitate small diameter sewer pipe located in the public right of ways and easements.

Location: Locations are mainly in the City of Walnut Creek service area.

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$150,000	$0	$150,000
Design			$0	$0	$0	$500,000	$0	$500,000
Construction			$0	$0	$0	$0	$3,100,000	$3,100,000
FY Total			$0	$0	$0	$650,000	$3,100,000	$3,750,000

Lafayette Sewer Renovation, Phase 11

Project Name	Lafayette Sewer Renovation, Phase 11	Project No.	8430
Program	Collection System Program	Phase	P
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Nancy Molina	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	To replace or renovate 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 the residents/ratepayers.		
History:	The District's over 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 collection system overflows. The District implemented a sewer renovation program in 1991. Since that time, an annual allowance for this renovation program has been included in the Capital Improvement Budget and Plan.		
Description:	This project will replace or rehabilitate small diameter sewer pipe located in the public right of ways and easements.		
Location:	Locations are mainly in the City of Lafayette service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$150,000	$0	$0	$150,000
Design			$0	$0	$0	$500,000		$500,000
Construction			$0	$0	$0	$0	$3,000,000	$3,000,000
FY Total			$0	$0	$150,000	$500,000	$3,000,000	$3,650,000

Martinez Sewer Renovation Phase 5

Project Name	Martinez Sewer Renovation Phase 5	Project No.	8437
Program	Collection System Program	Phase	P
Sub-Program	Renovation	Priority Rank	High
Project Manager	Sasha Mestetsky	Ranking Score	30
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	Replace or renovate 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 the residents/ratepayers.		
History:	The District's over 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 collection system overflows. The District implemented a sewer renovation program in 1991. Since that time, an annual allowance for this renovation program has been included in the Capital Improvement Budget and Plan.		
Description:	This project will replace or rehabilitate small diameter sewer pipe located in the public right of ways and easements.		
Location:	Martinez		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$150,000	$0	$0	$150,000
Design			$0	$0	$0	$0	$500,000	$500,000
Construction			$0	$0	$0	$0	$2,500,000	$2,500,000
FY Total			$0	$0	$150,000	$0	$3,000,000	$3,150,000

South Orinda Sewer Renovation, Phase 6

Project Name	South Orinda Sewer Renovation, Phase 6	Project No.	8433
Program	Collection System Program	Phase	P
Sub-Program	Renovation	Priority Rank	Critical
Project Manager	Sasha Mestetsky	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	0%

Purpose: To replace or renovate 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 the residents/ratepayers.

History: The District's over 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 collection system overflows. The District implemented a sewer renovation program in 1991. Since that time, an annual allowance for this renovation program has been included in the Capital Improvement Budget and Plan.

Description: This project will replace or rehabilitate small diameter sewer pipe located in the public right of ways and easements.

Location: Locations are mainly in the City of Orinda service area.

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$150,000	$0	$150,000
Design			$0	$0	$0	$0	$500,000	$500,000
Construction			$0	$0	$0	$0	$3,000,000	$3,000,000
FY Total			$0	$0	$0	$150,000	$3,500,000	$3,650,000

Cathodic Protection Systems - Phase 2

Project Name	Cathodic Protection Systems - Phase 2	Project No.	8438
Program	Collection System Program	Phase	P
Sub-Program	Renovation	Priority Rank	Medium
Project Manager	Sasha Mestetsky	Ranking Score	20
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	This project will repair, update, and upgrade underground facilities, including the pumping stations and buried metallic piping, by replacing existing spent facilities and installing new systems where required.		
History:	A comprehensive cathodic protection survey of the collection system, pumping stations and treatment plant was prepared in 2008 and was updated in 2012. Future updates are scheduled to be completed by end of FY 2015-16. Based on the results of the survey, the Cathodic Protection System Replacement project developed the scope and initial design concepts for this project.		
Description:	This project will include required maintenance, replacement, and/or addition of cathodic protection systems to those sites identified as high or moderate priority in the 2012 survey update and potential future items.		
Location:	Throughout the service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$50,000	$0	$50,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$0	$0	$0	$50,000	$0	$50,000

Collection System Modeling Upgrade

Project Name	Collection System Modeling Upgrade	Project No.	8418
Program	Collection System Program	Phase	D
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	Critical
Project Manager	Justin Waples	Ranking Score	65
Dept/Division	Engineering/Planning and Environmental Services	Concord %	0%
Purpose:	Migrate from a proprietary steady state hydraulic model to a commercially available dynamic hydraulic model.		
History:	Staff commenced initial steps to migrate towards a dynamic model. District intends to have consultant implement the new dynamic model as part of the upcoming Comprehensive Wastewater Master Plan Project.		
Description:	Collection System hydraulic model provides the foundation for managing the capacity needs of the District's sewers. The existing steady state model is not suited to Master Planning capacity studies, and the programming language used for the foundation of the model is no longer supported by the vendor. A commercially available dynamic model is needed.		
Location:	Throughout the service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			-	$0	$1,600	$0	$0	$1,600
Planning			-	$0	$0	$0	$0	$0
Design			-	$100,000	$100,000	$0	$0	$200,000
Construction			-	$100,000	$300,000	$200,000	$0	$600,000
FY Total			$148,398	$200,000	$401,600	$200,000	$0	$949,998

Collection System Planning

Project Name	Collection System Planning	Project No.	8419
Program	Collection System Program	Phase	P
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	Critical
Project Manager	Justin Waples	Ranking Score	70
Dept/Division	Engineering/Planning and Development Services	Concord %	0%
Purpose:	To identify, evaluate, and schedule short and long-term sewer improvement projects and to provide design flow rates for major facility plans.		
History:	Staff performs on-going Collection System Planning and project priority analyses to ensure that District goals for collection system performance are met.		
Description:	Collection System Planning studies provide the basis for improvements to the District's sewer system and flow rates for facility plans. Studies focus on Local Capacity Studies, Collection System Database Management, Flow Rates for Facility Plans, and Special Studies. This project also provides funding for small scale flow monitoring studies and technology trials and assessments and pilot studies.		
Location:	Throughout the collection system.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$19,000	$0	$0	$19,000
Planning			$100,315	$200,000	$150,000	$200,000	$700,000	$1,350,315
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$100,315	$200,000	$169,000	$200,000	$700,000	$1,369,315

Force Main Assessment

Project Name	Force Main Assessment	Project No.	5993
Program	Collection System Program	Phase	P
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	Very High
Project Manager	Justin Waples	Ranking Score	50
Dept/Division	Engineering/Planning and Development Services	Concord %	0%
Purpose:	To assess and document the condition of force mains.		
History:	The District owns or operates 19 pumping stations (PS), which pump flow into a series of force mains. In 2013, the District developed a Force Main Asset Management Plan. This documented the force main inventory, estimated the replacement cost, identified condition assessment methods and failure modes, determined the consequence of failure of the force mains, and the likelihood of failure based on existing information. This was used to determine the risk of the assets which will be used as triggers for further condition assessments and prioritization of capital projects for rehabilitation or replacement.		
Description:	The District will inspect the condition of force mains, with consultant assistance if necessary. The District may conduct a feasibility study for installing launching platforms and cleaning junctions at pump stations and force mains, and conduct preliminary investigations on the integrity and remaining service lives of force mains.		
Location:	Throughout the service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$96,535	$1,000	$0	$0	$0	$97,535
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$96,535	$1,000	$0	$0	$0	$97,535

Manhole Remote Level Monitoring

Project Name	Manhole Remote Level Monitoring	Project No.	5962
Program	Collection System Program	Phase	P
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	High
Project Manager	Justin Waples	Ranking Score	35
Dept/Division	Engineering/Planning and Development Services	Concord %	0%
Purpose:	To monitor the most critical collection system manholes.		
History:	The District has approximately 30,000 active manhole structures throughout the service area. Some of these manholes are in remote areas where an overflow may not be detected for weeks, or in environmentally sensitive areas where an overflow would cause significant harm to creeks or reservoirs.		
Description:	This project will include the identification and modification of manholes with the installation of remote level monitoring products. The remote monitoring product will alert dispatch or on-call crew members via cell phone of a potential overflow or stoppage event. The early notification will allow crews to respond more quickly, reducing impacts to the environment, potential fines, and District liability.		
Location:	Throughout the service area		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$131,963	$5,357	$1,000	$0	$0	$138,320
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$131,963	$5,357	$1,000	$0	$0	$138,320

Collection System Master Plan

Project Name	Collection System Master Plan	Project No.	8431
Program	Collection System Program	Phase	P
Sub-Program	Regulatory Compliance/Planning/Safety	Priority Rank	Critical
Project Manager	Nathan Hodges	Ranking Score	70
Dept/Division	Engineering/Planning	Concord %	100%
Purpose:	To develop a comprehensive wastewater master plan that determines the future direction, capital improvement needs, and priorities for the District's wastewater treatment plant.		
History:	The 2011 Plant of the Future visioning exercises completed as part of District Project 7287 – Treatment Plant Master Plan Update included recommendations for completing a comprehensive master plan to determine the needs and direction of the District. While the District has performed a number of planning and research studies/reports, the last treatment plant master plan was completed in 1987.		
Description:	The TP Master Plan is one component of the Comprehensive Wastewater Master Plan. A key deliverable of the TP Master Plan will be a Capital Improvement Plan (CIP) for the next 20-year planning horizon that provides the descriptions, rationale and estimated costs for the District's treatment plant capital improvement projects and on-going programs in order to address aging infrastructure, meet existing and anticipated regulatory requirements, accommodate planned growth, optimize energy use, and implement the District's vision for a "plant of the future" that is consistent with the District's Strategic Plan.		
Location:	Throughout the service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$600,000	$600,000	$0	$1,200,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$0	$0	$600,000	$600,000	$0	$1,200,000

Pleasant Hill – Grayson Creek Trunk Sewer

Project Name	Pleasant Hill – Grayson Creek Trunk Sewer	Project No.	8412
Program	Collection System Program	Phase	D
Sub-Program	Expansion	Priority Rank	Critical
Project Manager	Nancy Molina	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	To achieve the Collection System Program goal of reducing sanitary sewer overflows by adding a new trunk sewer for diversion of flows. This new trunk sewer will give Staff the ability to implement the necessary renovation work in the City of Pleasant Hill.		
History:	The Pleasant Hill-Grayson Creek Trunk Sewer project was recommended in the Collection System Master Plan 2010 update due to a series of capacity-deficient sewers that were identified in the City of Pleasant Hill. District staff have been designing the project since 2012.		
Description:	The project involves installing sewer pipeline of various diameter relief sewers and diverting the sewage away from the existing capacity-deficient sewers and connect to the existing 36-inch trunk sewer that runs along Ardith Drive. The new relief sewer alignment is within city streets in both the City of Pleasant Hill and the City of Martinez. Due to the City of Pleasant Hill proposed paving projects, the District may need to include additional sewer lines along Pleasant Hill Road in order to avoid work in the proposed paving areas. This project may be coordinated with the Pleasant Hill Corridor project included in the CIP to avoid significant paving reconstruction on Pleasant Hill Road.		
Location:	City of Pleasant Hill		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$70,000	$0	$0	$70,000
Planning			-	$0	$0	$0	$0	$0
Design			-	$600,000	$0	$0	$0	$600,000
Construction			-	$0	$3,050,000	$6,400,000	$0	$9,450,000
FY Total			$579,074	$600,000	$3,120,000	$6,400,000	$0	$10,699,074

Contractual Assessment Districts

Project Name	Contractual Assessment Districts	Project No.	8402
Program	Collection System Program	Phase	C
Sub-Program	Expansion	Priority Rank	N/A
Project Manager	Russell Leavitt	Ranking Score	N/A
Dept/Division	Engineering/Planning and Environmental Services	Concord %	0%
Purpose:	The District developed a Contractual Assessment District (CAD) Program to provide a financing mechanism for the extension of public sewers into areas which are currently served by septic tanks.		
History:	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. The District developed the CAD Program to address this 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 repaid to the District.		
Description:	A number of CADs will likely be proposed during the budget year. Funding for the CADs will be paid for under the Program Contingency account.		
Location:	To be determined. CADs are currently being considered in neighborhoods in Alamo and Danville.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$100,000	$100,000	$1,100,000	$1,300,000
FY Total			$0	$0	$100,000	$100,000	$1,100,000	$1,300,000

2015-16 Development Sewerage

Project Name	2015-16 Development Sewerage	Project No.	8420
Program	Collection System Program	Phase	C
Sub-Program	Expansion	Priority Rank	N/A
Project Manager	Tom Godsey	Ranking Score	N/A
Dept/Division	Engineering/Planning and Environmental Services	Concord %	0%
Purpose:	This project provides for appropriate capitalization of District force account labor and other expenses for planning, design, and construction of developer installed and contributed main sewer facilities.		
History:	This is a cost neutral project paid for by Development fees.		
Description:	The District requires property owners to pay for the main sewers needed to serve their property. Where sewers are designed and installed by developers or other private parties, District planning, plan review, right-of-way, inspection and record drawing/mapping effort is required to ensure that contributed sewers meet the District's Standard Specifications for Design and Construction. These activities are capitalized under this project. A portion of the revenue collected for plan review, right-of-way, and inspection is credited to the Sewer Construction Fund and offsets some of the expenditures made under this capital project.		
Location:	Throughout the service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			-	-	-	-	-	-
Design			-	-	-	-	-	-
Construction			-	-	-	-	-	-
FY Total			$1,019,942	$820,000	$700,000	$700,000	$700,000	$3,939,942

Pumping Stations Equipment and Piping Replacement

Project Name	Pumping Stations Equipment and Piping Replacement	Project No.	5941
Program	Collection System Program	Phase	C
Sub-Program	Pump Station	Priority Rank	Critical
Project Manager	Neil Meyer	Ranking Score	65
Dept/Division	Collection System Operations	Concord %	0%
Purpose:	The purpose of this project is to replace or recondition failed and obsolete pumps, piping, valves, and other equipment; to provide for proper emergency response at District pumping stations; to purchase major spare assemblies for various pieces of pumping stations equipment; and to meet new regulatory requirements.		
History:	This project has been an ongoing replacement of old equipment and piping at the Pump Stations. Selection of equipment is done by the Operations staff, Engineering, and in coordination with the ongoing Asset Management Program.		
Description:	The scope of work for this project includes, as examples, the following: • Addition of control and isolation valves for shutdown and protection of the stations; • Revisions to control strategies and equipment response times; • Possible protections for pumping stations and equipment, if flooded; • Investigation and installation of "pump around" capabilities; • Development of emergency response procedures and purchasing equipment; • Reconditioning of major pieces of equipment to original factory specifications; • Purchase of large-dollar spare assemblies for major PS equipment; • Other work or equipment requirements that might be defined by regulators.		
Location:	All pumping stations		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			-	$0	$0	$0	$0	-
Design			-	$0	$0	$0	$0	-
Construction			$568,793	$50,000	$100,000	$100,000	$0	$818,793
FY Total			$568,793	$50,000	$100,000	$100,000	$0	$818,793

Pumping Station Safety and Security Improvements

Project Name	Pumping Station Safety and Security Improvements	Project No.	8406
Program	Collection System Program	Phase	C
Sub-Program	Pump Station	Priority Rank	Critical
Project Manager	Brad Leidecker	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	0%

Purpose:

The project will improve the safety and security of select pumping stations by adding or replacing surveillance, fire alarm and intrusion alarm systems.

History:

One of the many responsibilities of the District's safety programs is to address and support solutions for safety and security concerns identified by operations or maintenance personnel.

District pumping station operations staff has identified safety and security concerns at critical pumping stations. These stations have obsolete, inoperable or nonexistent video surveillance, fire alarm and intrusion alarm systems. A lack of pumping station security, particularly at remote stations, results in liability exposure to the District. Many of the existing fire alarm systems do not meet current fire code and are integrated with the intrusion alarm systems.

Description:

This project added new or replaced existing video surveillance, fire alarm and/or intrusion alarm systems at the highest priority pumping stations. This project is in the closeout phase.

Location:

Throughout the service area.

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$2,000	$0	$0	$2,000
Planning			-	$0	$0	$0	$0	-
Design			-	$0	$0	$0	$0	-
Construction			-	$442,000	$0	$0	$0	-
FY Total			$166,769	$442,000	$2,000	$0	$0	$610,769

Pumping Station Arc Flash Study

Project Name	Pumping Station Arc Flash Study	Project No.	8427
Program	Collection System Program	Phase	P
Sub-Program	Pump Station	Priority Rank	Critical
Project Manager	Jason DeGroot	Ranking Score	85
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	Evaluate all pumping station electrical systems, provide an Arc Flash Hazard Analysis Study per the current NFPA 70E Standard for Electrical Safety, and related codes.		
History:	The lifeline of the pumping stations electrical system is the feeders from PG&E to the main switchgear and breakers. Most of the pumping stations are equipped with backup generators, including automatic transfer when PG&E power is not available. Loss or failure of these power conveyances or transfer switches would disrupt the pumping station electrical system and more importantly, pose a safety hazard to Operations staff.		
Description:	The scope of work will include the following: • Short –Circuit, Protective coordination, Load-Flow and Arc Flash Analysis Study per requirements outlined in the current version of NFPA 70E. • The arc flash analysis shall be performed according to the IEEE standard 1584. • The Study shall be done using SKM Systems Analysis Power Tools for Windows (PTW) software program. • Arc–flash labeling of the electrical equipment.		
Location:	Throughout the service area.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$30,000	$0	$0	$30,000
Planning			$0	$70,000	$0	$0	$0	$70,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$0	$70,000	$30,000	$0	$0	$100,000

Moraga/Crossroads PS Project

Project Name	Moraga/Crossroads PS Project	Project No.	8436
Program	Collection System Program	Phase	P
Sub-Program	Pumping Stations	Priority Rank	Very High
Project Manager	Sasha Mestetsky	Ranking Score	55
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	To evaluate the Moraga and Crossroads Pump stations for replacement or rehabilliation needs.		
History:	Both Pump stations have been modified in the last several years. However, the stations continue to be backed up by the original generators. In addition, the Moraga station does not have grinders.		
Description:	This project is being initiated at the request of the Operations staff to evaluate the electrical/ standby generators at these facilities. In addition, grinders are being considered at the Moraga station.		
Location:	Moraga and Crossroads Pumping Stations in Moraga and Orinda.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$150,000	$0	$0	$150,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$500,000	$440,000	$940,000
FY Total			$0	$0	$150,000	$500,000	$440,000	$1,090,000

Fairview Maltby Pump Stations Upgrades

Project Name	Fairview Maltby Pump Stations Upgrades	Project No.	8429
Program	Collection System Program	Phase	P
Sub-Program	Pumping Stations	Priority Rank	Very High
Project Manager	Sasha Mestetsky	Ranking Score	55
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	To replace or rehabilitate the Fairview and Maltby Pump Stations as determined by ongoing condition assessments.		
History:	There are several improvements and some electrical equipment replacement required at these stations. A project has been created to handle the evaluation of these stations and to replace several critical equipment. Last year, the Maltby station had a Automatic Transfer Switch (ATS) failure that staff has evaluated and several recommendations are proposed to these station. Fairview is built similar to Maltby.		
Description:	This project will replace the Automatic Transfer switch at Fairview and evaluate the overall condition. The project will also build any recommendations provided by the Arc Flash report at these locations.		
Location:	Fairview and Maltby Pumping Stations in Martinez		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$150,000	$120,000	$400,000	$670,000
FY Total			$0	$0	$150,000	$120,000	$400,000	$670,000

Other Pump Stations Projects

Project Name	Other Pump Stations Projects	Project No.	8432
Program	Collection System Program	Phase	P
Sub-Program	Pumping Stations	Priority Rank	Unranked
Project Manager	Sasha Mestetsky	Ranking Score	N/A
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	This project is a placeholder for the scope provided under several Pump Station program projects.		
History:	This is a continuation of projects identified at all the pump stations, including the Miscellaneous Forcemain Improvements, Pump Station Hazard Identification and Remediation, and the PS Master Plan from the FY 14-15 CIB.		
Description:	This project will evaluate and install, if practical, the ability to inspect, assess and clean the forcemains. Also, help identify any hazardous condition that require immediate abatement and document any improvements for future projects.		
Location:			

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	-	-	-
Design			$0	$0	$0	$0	$0	-
Construction			$0	$0	$0	$80,000	$1,150,000	$1,230,000
FY Total			$0	$0	$0	$80,000	$1,150,000	$1,230,000

GENERAL IMPROVEMENTS PROGRAM

OVERVIEW

The General Improvements Program is primarily concerned with the property, administrative buildings, management information systems, asset management, and equipment/ vehicle needs of the District.

Vehicles and Equipment Acquisition (Tab 1)

The Vehicles and Equipment subprogram comprises the items budgeted and purchased under the annual District Equipment Budget, which is included in this document. The Capital Improvement Budget includes an allowance for the equipment budget. Specific equipment items are approved through the annual budget process.

Management Information Systems (Tab 2)

The Management Information Systems subprogram reflects the importance of IT in the daily operation of the District. The District has developed an IT Master Plan which 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 the District's Geographic Data Integration systems and Enterprise Resource Planning software platform are included in the CIB.

General Improvements Projects (Tab 3)

This subprogram includes improvements to the Headquarters Office Building, 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 Program (Tab 4)

The District 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.

Vehicles and Equipment Acquisition – 2015-16

Project Name	Vehicles and Equipment Acquisition – 2015-16	Project No.	8516
Program	General Improvements Program	Phase	P
Sub-Program	Vehicles and Equipment Acquisition	Priority Rank	Very High
Project Manager	Amal Lyon	Ranking Score	55
Dept/Division	Administrative/Finance and Accounting	Concord %	TBD
Purpose:	To provide the District with safe and cost-effective vehicles and equipment.		
History:	A project is developed on a yearly basis to procure required equipment and vehicles throughout the District.		
Description:	This is the District's 2015-16 capital project for purchase of vehicles and equipment.		
Location:	District-wide		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$617,200	$450,000	$500,000	$0	$1,567,200
FY Total			$0	$617,200	$450,000	$500,000	$0	$1,567,200

Central Contra Costa Sanitary District

Protecting Public Health and the Environment

2015-2016 EQUIPMENT BUDGET

1127B-2/15

2015 - 2016 EQUIPMENT BUDGET

Introduction/Routine Procedures: The following tables show items anticipated to be purchased via the 2015 - 2016 Equipment Budget. In addition to the specific purchases, a $50,500 contingency is budgeted for unanticipated needs. When the contingency budget is utilized, a memo is sent to the General Manager who can approve purchases up to $50,500. Equipment purchased over $50,500 will be submitted for Board approval as a part of the Capital Improvement Budget.

Equipment Item Overrun: When the actual cost of an equipment budget item is more than the budgeted amount, the following guidelines should be observed:

- If the overrun does not exceed $5,000 or 10%, whichever is greater, and there are sufficient funds in the department's Equipment Budget line account to cover the overrun, then the purchase can proceed. An informational memo should be sent to the General Manager in these cases, to keep him/her aware of budget variances. When Purchasing receives their copy of the memo, the purchase may proceed.

- If the overrun exceeds the above criteria, a contingency memo, or position paper will be required. If the dollar overrun is less than $50,500, the additional funds may be requested through contingency. If the dollar overrun is more than $50,500, a position paper is required.

Substitutions: Occasionally, the need to substitute a functionally different equipment item for a previously authorized Equipment Budgeted item arises. The following procedure should be followed in these instances:

- Situation One: Where a substitution is necessary, but the total does not exceed the authorized Equipment Budgeted amount, a memo will be sent to the General Manager detailing the need for the substitution.

- Situation Two: If the substitution or an unanticipated cost increase will result in the purchase exceeding the authorized Equipment Budgeted amount, a contingency memo (up to $50,500) should be sent to the General Manager outlining the need for substitution and/or the additional amount from contingency that is required for purchase.

  In both situations, if the substitution is warranted, the General Manager will approve the memo, and Purchasing can then proceed with the procurement process after their copy of the memo is received. Changes to authorized Equipment Budgeted purchases exceeding $50,500 additional cost must be requested by a position paper to the Board.

Summarized below is a comparison of the 2015-2016 Equipment Budget with the approved budgets of the four prior years:

	2015-2016	2014-2015	2013-2014	2012-2013	2011-2012
Administrative	0	0	8,000	0	0
Engineering	24,000	9,000	0	0	34,867
Collection System Operations	12,000	32,500	74,000	97,050	0
Plant Operations	219,500	365,700	56,400	273,604	185,063
Subtotal	255,500	407,200	138,400	370,654	219,930
Vehicles					
New	0	0	0	0	0
Replacement	144,000	135,000	407,000	486,000	619,000
Rodding Truck ordered April 2012			**241,000**		
Rodding Truck April 2015 (move 14/15 CS contingency to GI program) **		**400,000**			
Subtotal	144,000	535,000	648,000	486,000	619,000
Equipment Request Total	399,500	942,200	786,400	856,654	838,930
Contingency	50,500	75,000	100,000	100,000	60,000
District Total	**$450,000**	**$1,017,200**	**$886,400**	**$956,654**	**$898,930**
Contingency as a % of Total Budget	11.22%	7.37%	11.28%	10.45%	6.67%

** Board approved transfer of $400,000 from Collection System program contingency to the equipment budget to fund purchase of a Vactor truck.

CENTRAL CONTRA COSTA SANITARY DISTRICT
2015– 2016 EQUIPMENT BUDGET
ENGINEERING DEPARTMENT

Quantity	Item Description	Replacement	Productivity Office	Productivity Field	Safety	Total
CAPITAL PROJECTS						
1	GPS Receiver with Software And accssories	24,000				24,000
	Engineering Total	24,000				24,000

CENTRAL CONTRA COSTA SANITARY DISTRICT
2015 – 2016 EQUIPMENT BUDGET
COLLECTION SYSTEM OPERATIONS DEPARTMENT

Quantity	Item Description	Replacement	Productivity Office	Productivity Field	Safety	Total
FIELD OPERATIONS						
1	Brake Lathe	12,000				12,000
	Subtotal					
	CSO Total	12,000				12,000

CENTRAL CONTRA COSTA SANITARY DISTRICT
2015– 2016 EQUIPMENT BUDGET
PLANT OPERATIONS DEPARTMENT

Quantity	Item Description	Replacement	Productivity Office	Productivity Field	Safety	Total
	OPERATIONS					
1	Gas Chromatograph – Mass Spectrometer with Data System	134,000				134,000
	Subtotal	134,000				134,000
	MAINTENANCE					
1	Infrared Camera	8,700				8,700
1	Cogeneration Analyzer	25,000				25,000
1	Vibration Spectrum Analyzer			8,400		8,400
1	Portable Pump	43,400				43,400
	Subtotal	77,100		8,400		85,500
	POD Total	211,100		8,400		219,500

CENTRAL CONTRA COSTA SANITARY DISTRICT
2015 – 2016 EQUIPMENT BUDGET
VEHICLES

Quantity	Item Description	Replacement	Productivity Office	Productivity Field	Safety	Total
FLEET SERVICES						
1	Electric Truck	27,000				27,000
1	Mid-Size 4 X 4 Truck w/shell	37,000				37,000
2	Half-ton 4 X 4 Truck	80,000				80,000
8	Vehicle Total	144,000				144,000

GDI Treatment Plant

Project Name	GDI Treatment Plant	Project No.	8227
Program	General Improvements Program	Phase	C
Sub-Program	Management Information Systems	Priority Rank	Critical
Project Manager	Carolyn Knight	Ranking Score	65
Dept/Division	Engineering/Planning and Development Services	Concord %	100%
Purpose:	Support the asset management program by providing an effective means of accessing treatment plant asset data through an interactive map linked to multiple datasets.		
History:	The successful implementation of the collection system GDI indicates that a similar web interface for the treatment plant would provide efficient access to asset data. A pilot treatment plant GDI was developed and is currently used by staff.		
Description:	Implement a geographically based asset management tool for the treatment plant. The Treatment Plant GDI will be modeled after the collection system GDI; mirroring the graphic interface and functionality but accessing and delivering treatment plant related data sets.		
Location:	Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$0	$0	$0
Design	10/13/2008	6/30/2018	$222,444	$0	$42,558	$120,000	$40,000	$425,002
Construction			$0	$0	$0	$0	$0	$0
FY Total			$222,444	$0	$42,558	$120,000	$40,000	$425,002

GDI-SMMS Replacement

Project Name	GDI-SMMS Replacement	Project No.	8232
Program	General Improvements Program	Phase	D
Sub-Program	Management Information Systems	Priority Rank	Critical
Project Manager	Carolyn Knight	Ranking Score	65
Dept/Division	Engineering/Planning and Development Services	Concord %	50%

Purpose:

Support the asset management program by implementing a new geographic information system to efficiently integrate data to improve productivity and provide a standardized data structure resulting in improved spatial data management.

History:

The District's GDI was developed to minimize duplicate databases and present valuable information to staff for evaluating assets. GDI was built using various software platforms to integrate information from disparate data sources. Some of the software that is used for GDI's functionality is no longer supported by the vendors.

ESRI software was chosen to replace the existing software because it is the mapping industry leader and a versatile, expandable solution. Using ESRI software will decrease the need to develop customized code because it integrates easily with other software and provides a variety of software tools to disseminate information.

Description:

GDI will be updated by migrating existing datasets into the new ESRI software platform. Spatial database information will be evaluated to standardize and consolidate data in order to minimize duplication across workgroups. Work flow processes and procedures will be documented to develop clear roles and responsibilities. Detailed specifications will be developed for hardware requirements, as well as any necessary customization for software functionality and maintenance.

Evaluation of web interface tools will be completed to define the optimal solution(s) for presenting information to District staff. Following the evaluation, appropriate tools will be procured and implemented.

Location: District-wide

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			-	$0	$0	$0	$0	$0
Design	6/27/2011	6/30/2016	$444,919	$136,000	$271,000	$0	$0	$851,919
Construction			$0	$0	$0	$0	$0	$0
FY Total			$444,919	$136,000	$271,000	$0	$0	$851,919

Information Technology Development

Project Name	Information Technology Development	Project No.	8240
Program	General Improvements Program	Phase	C
Sub-Program	Management Information Systems	Priority Rank	Critical
Project Manager	David Heath	Ranking Score	70
Dept/Division	Administration	Concord %	50%
Purpose:	To replace and upgrade IT infrastructure and software as needed.		
History:	An Information Technology Development Plan was developed to centralize efforts and funding in the development of computer and telecommunication technology within the District. The District budgets IT on a yearly basis. The IT Master plan was approved in 2015 and its implementation is within the CIB and 10 year plan.		
Description:	This project is the implementation of the IT Master Plan, please see the following document for specific work planned this fiscal year.		
Location:	District-wide		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$300,000	$0	$0	$300,000
Planning			$0	$0	$0	$0	$0	$0
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$700,000	$1,000,000	$1,300,000	$6,500,000	$9,500,000
FY Total			$0	$700,000	$1,300,000	$1,300,000	$6,500,000	$9,800,000

CMMS Replacement

Project Name	CMMS Replacement	Project No.	8242
Program	General Improvements Program	Phase	C
Sub-Program	Management Information Systems	Priority Rank	Critical
Project Manager	Dana Lawson	Ranking Score	65
Dept/Division	Engineering/Planning and Development Services	Concord %	50%
Purpose:	Support the asset management program by replacing the computerized maintenance management system (CMMS) for both the collection system and treatment plant.		
History:	District Project 8232, GDI-SMMS Replacement, replaced the unsupported GIS software versions with a new fully-supported ESRI platform. The migration to ESRI will be completed by June 2015. The current CMMS for the collection system is no longer vendor-supported. Additionally, consolidating all assets into one state-of-the-art, supported system will more effectively manage the lifecycle cost of owning and operating these assets in support of the District's mission. This project also supports Strategic Goal No. 6, Strategy 1, through a specific key performance indicator in the Plan.		
Description:	This project will continue consolidating software systems by procuring, migrating data, configuring and implementing an effective CMMS solution that encompasses all District assets (collection, distribution, treatment, pump station, fleet, etc.) and efficiently integrates with the GIS. The collection system will be migrated and configured first, followed by the treatment plant and pumping station assets.		
Location:	District-wide		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$148,000	$0	$0	$148,000
Planning			-	$0	$0	$0	$0	$0
Design	11/19/2014	6/30/2015	$0	$50,000	$0	$0	$0	$50,000
Construction	7/1/2015	6/30/2017	$0	$0	$360,000	$117,000	$0	$477,000
FY Total			$0	$50,000	$508,000	$117,000	$0	$675,000

Central Contra Costa Sanitary District

INFORMATION TECHNOLOGY DEVELOPMENT

CAPITAL IMPROVEMENT BUDGET PLAN
2015-2016

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Information Technology Development CIB Plan provides direction and flexibility to meet the District's future information technology needs. Each year, District staff submits project recommendations, requests and write-ups to the Information Technology Administrator. The Management team gives their final review of the proposed CIB and IT projects, providing revisions and recommendations prior to appearing before the Capital Projects Committee for review and the Board of Directors for final approval.

The Information Technology Development CIB Plan is developed to provide funding for IT projects in one or more of the following areas:

- PC hardware and software
- District and specialized networks, systems and software applications
- Network infrastructure, security and reliability
- Data storage, backups and disaster recovery
- Internet and Intranet development
- Wireless access
- Telecommunications improvements
- Information Technology customer service and support
- Cost savings, power conservation & green alternatives

The District's Information Technology (IT) Master Plan centralizes efforts in the development of technology within the District. Input for the Master Plan was gathered through survey results, management business needs, project lists, and interviews with IT staff, along with management and departments' focus groups. The Information Technology Development CIB was created to provide funding for these projects.

PROPOSED 2015-2016 IT CIB BUDGET SUMMARY

Project Description	In Thousands
1. IT Infrastructure Replacement: End User - Replace approx. 40 PCs and Laptops	$80
2. IT Infrastructure Replacement: Data Center - Replace approx. 3 switches and other core IT infrastructure	$20
3. IT Infrastructure Replacement: Other – Purchase approx. 12 tablets for CSO	$36
4. IT Infrastructure Replacement: Other – Purchase approx. 9 Laptops for EOC	$18
5. IT Infrastructure Replacement: Other – Upgrade Plant security cameras, hardware, software, installation	$25
6. IT Division Move and New Personnel Additions: Office Furniture, Wiring, and new personnel needs	$70
7. District Server Backup: Enable Cloud Storage capability for District data (3rd leg of “stool”)	$50
8. Technical Infrastructure Room Upgrades: Board Room, Conference and Training Rooms	$60
9. Email Archiving Solution: Preservation and detailed search capabilities re: email	$15
10. Consultant Services and IT Infrastructure: Records Management Project	$200
11. Consultant Services and IT Infrastructure: Time and Attendance Project	$175
12. Consultant Services and IT Infrastructure: Collaboration Software Project	$150
13. Consultant Services and IT Infrastructure: Dental Permits Project	$50
14. Consultant Services and IT Infrastructure: Desktop Virtualization	$70
15. Consultant Services and IT Infrastructure: Telecommunications Audit	$15
Total Proposed IT CIB Budget	**$1,034**

PROPOSED 2015-2016 IT CIB BUDGET NARRATIVE

1. IT Infrastructure Replacement: End User - Replace approx. 40 PCs and Laptops
    i. Standard desktops: $1.5k * (30) = $45k
    ii. Enhanced desktops:$6.4k * (3) = 19
    iii. Laptops: $2k * (8) = 16
    $80k
    - This budget item will replace end-of-life personal computers and laptops.

2. IT Infrastructure Replacement: Data Center - Replace approx. 3 switches and other core IT infrastructure:
    i. Switches: $6.5k * (3) = $20k

    - This budget item will replace end-of-life data center infrastructure.

3. IT Infrastructure Replacement: Other – Purchase approx. 12 tablets for CMMS + other users:
    i. Tablets: $3k * (12) = $36k

    - A tablet task force is anticipated to be established by the IT Steering Committee to help determine the best tablet(s) for use and support at the District. A determination will need to be made as to whether ruggedized tablets, a standard tablet encased in a ruggedized case, or a standard tablet will meet end-user needs. Costs for different solutions, especially the ruggedized version, may significantly change budgeting projections. Additionally, minimizing the different vendor products supported should also be a consideration as it will have a direct impact on maintenance and support time and effort.

4. IT Infrastructure Replacement: Other – Purchase approx. 9 laptops for EOC:
    i. Laptops: $2k * (9) = $18k

    - This budget item will replace end-of-life laptops. These laptops are deployed solely at and for EOC use.

5. IT Infrastructure Replacement: Other – Upgrade Plant security camera hardware and software
    i. New security surveillance system: $25k * (1) = $25k

    - The project will deploy and integrate a new security system at key Plant locations.

6. IT Division Move and New Personnel Additions: Office Furniture, Wiring, and new personnel needs:
    i. New IT personnel infrastructure: $70k * (1) = $70k

- Accommodate 5 newly hired IT positions in a centralized location and their specific needs. Examples include furniture, wiring, racks, window black-out capabilities, etc.

7. District Server Backup: Enable Cloud Storage capability for District data (3rd leg of "stool")
    i. Cloud-based data backup: $1.5k/Tb * (30) = $45k
    ii. Other misc. costs: $5k * (1) = $5
    $50k

- This capability will provide the District its 3rd layer of data recovery. It will also provide an out of the area, independent recovery option, if a worst case scenario affects the Bay Area and the District specifically. Some data may continue to be storage in an offsite facility, e.g. Recall.
- Cost will be a variable based on overall storage requirements and throughput requirements. Network storage costs vary widely from $1k/Tb to thousands of dollars per Tb.

8. Technical Infrastructure Room Upgrades: Board Room, Conference, and Training Rooms
    i. Upgrade/Standardize Conference Room Capabilities: $7.5k * (4) = $30k
    ii. Upgrade Board Conference Room: $25k * (1) = 25
    iii. Misc.: $1k * (5) = $5
    $60k

- These upgrades will provide primary District conference rooms with standardized capabilities:
    i. Projector and screen
    ii. Conference room phone with extra microphones, if applicable
- The Board Room will also have additional work done:
    i. Video recording
    ii. Indexing of minutes to video recording
    iii. Upgrading of audio equipment
    iv. Computer replacement and other misc. items.

9. Email Archiving Solution: Ability to efficiently preserve and search email
    i. Email Archiving Appliance and Deployment: $15k * (1) = $15k

- An email archiving solution will allow the District better control of the growth of the current email database and allow the database(s) to be searched more granularly, e.g. by topic, user, etc.
- It also will provide the District the ability to produce emails in a more efficient manner in the event of an e-discovery process.
- Email archiving can also provide an additional option in the need to recover email.

10. IT Consultant Services and IT Infrastructure: Records Project Management
    i. Records Management Project Consulting Services: $150k * (1) = $150k
    ii. IT Infrastructure: e.g. WORM drive 50k * (1) = 50
    $200k

- The Records Management project is being led by the Secretary of the District and the consultant firm ECS Imaging.
- It will allow the District to meet legal requirements and provide a single trusted source document for the District to rely on. It will also provide a more efficient process to manage documents and by utilizing the capabilities of more sophisticated software in the form of workflow.
- Quotes for different services have been received.

11. IT Consultant Services and IT Infrastructure: Time and Attendance Software
    i. Time and Attendance Consulting Services: $125k * (1) = $125k
    ii. IT Infrastructure: Software Module(s) 50k * (1) = 50
    $175k

- Time and Attendance software will allow the District to eliminate much of the labor and manual paper processes associated with the time keeping process. Many employees have identified these capabilities as a key time saver.
- The ability for employees to directly change information, see balances and receive information electronically will be a significant enhancement to the District's technical capabilities.
- Additional functionality may be added for HRIS capabilities and Purchasing.
- Initial contact has been made with vendors to understand the current technical functionality of Time Keeping and HRIS functionality and how these systems would interact with the District's current ERP.

12. IT Consultant Services and IT Infrastructure: Collaboration Software Project
    i. Consultant Services: $115k * (1) = $115k
    ii. IT Infrastructure: $35k * (1) = 35
    $ 150k

- A new collaboration solution for the District will allow more information to be shared easier. The District can start with one area it wants to automate, or automate better, e.g. its Intranet, and then add additional functionality in the future.
- The cost of the solution will be determined to a large degree upon what and how much the District decides to automate and how many people are going to use it.

13. IT Consultant Services and IT Infrastructure: Dental Permits Project
    i. Consultant Services: $40k * (1) = $40k
    ii. IT Infrastructure: $10k * (1) = 10k
    $50k

- The Dental Permits project will allow the District to more easily meet a new Federal Requirement for capturing relevant information from Dental offices.
- It requires more information to be gathered which necessitates a technical solution to more efficiently meet this requirement.
- The Project is being led by the Engineering and Technical Services Department.
- This project may also provide an on-line payment option.

14. IT Consultant Services and IT Infrastructure: Desktop Virtualization
    i. Consultant Services: $45k * (1) = $45k
    ii. IT Infrastructure: $25k * (1) = 25k
    $70k

- This project will begin to transition the District away from personnel computers on their desks to a “virtual” desktop running on a centralized server.
- It will help enable the District to streamline computer management and costs while allowing end-users the mobility and freedom to access their desktops’ anywhere, from any device.
    i. Depending on the type of client chosen, savings may range from ½ to 1/3 of a typical desktop.

15. IT Consultant Services and IT Infrastructure: Telecommunications Audit
    i. Telecom Audit: $15k * (1) = $15k

- The Telecommunications Audit by an external entity will provide the District assurance that all circuits currently being paid for are in use and necessary as well as identify areas for future cost savings.

District Easement Acquisition

Project Name	District Easement Acquisition	Project No.	8236
Program	General Improvements Program	Phase	P
Sub-Program	Projects	Priority Rank	Critical
Project Manager	Thomas Brightbill	Ranking Score	65
Dept/Division	Engineering/Planning and Development Services	Concord %	TBD
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.		
History:	As capital projects are designed, sanitary sewer easements may have to be acquired through budgets for those specific projects. This project provides funds for the acquisition of easements for projects where specific funds are not identified in the Capital Improvement Budget.		
Description:	Easements that may be acquired through this project are: • Locations where easements need to be purchased for existing sewers • Sewers that need upgraded easement rights or access rights • Sewers relocated through other public agency projects • Outfall Easement Upgrade Project • Recycled Water Program		
Location:			

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$11,000	$0	$0	$11,000
Planning			$58,894	$70,000	$1,000	$50,000	50,000	$229,894
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$58,894	$70,000	$12,000	$50,000	$50,000	$240,894

Buffer and Rental Property Improvements

Project Name	Buffer and Rental Property Improvements	Project No.	8237
Program	General Improvements Program	Phase	C
Sub-Program	Projects	Priority Rank	Critical
Project Manager	Thomas Brightbill	Ranking Score	65
Dept/Division	Engineering/Planning and Development Services	Concord %	0%
Purpose:	Protect and enhance the District's property through additions, improvements, replacements, and extraordinary repairs.		
History:	The District owns various properties surrounding the Treatment Plant, including the Imhoff Triangle, the Kiewit parcel, 4849 Imhoff and 4737 Imhoff, and others. The Kiewit parcel has served as a buffer zone for the Treatment Plant and has been the site of a clean fill operation for several years. The Imhoff properties also serve as a buffer between the Treatment Plant and nearby neighborhoods, and are used as rental property and to house some District work groups and equipment.		
Description:	This project will fund needed improvements to the buffer and rental properties, and the surrounding parking lots and grounds, relating to Safety items.		
Location:	Martinez		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$212,000	$0	$0	$212,000
Planning			-	$0	$0	$0	$0	$0
Design			-	$0	$0	$0	$0	$0
Construction			$27,048	$0	$0	$0	$0	$27,048
FY Total			$27,048	$0	$212,000	$0	$0	$239,048

POD Office Improvements

Project Name	POD Office Improvements	Project No.	8239
Program	General Improvements Program	Phase	D
Sub-Program	Projects	Priority Rank	Critical
Project Manager	Brad Leidecker	Ranking Score	65
Dept/Division	Engineering/ Capital Projects	Concord %	100%
Purpose:	The project purpose is to make improvements to the interior and exterior of the Plant Operations Department Administration building.		
History:	The building is over 30 years old. There is an ongoing need to renovate or reconfigure office and workstation space to match employee needs and duties, to replace outdated or worn out furniture, meet ADA requirements, and to incorporate new office technologies. Replacement of carpeting and repainting has been completed. Modular furniture has been replaced in several cubicles.		
Description:	This multi-year project will provide an allowance to renovate and upgrade the interior and exterior of the POD Administration offices and the Emergency Operations Center (EOC) located in the Multi-Purpose Room. Anticipated projects include installation of cabinetry for storage of EOC equipment and sidewalk modifications for ADA access.		
Location:			

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover				$0	$240,000	$0	$0	$240,000
Planning			-	$0	$0	$0	$0	$0
Design			-	$0	$0	$0	$0	$0
Construction			-	$90,000	$0	$0	$0	$90,000
FY Total			$0	$90,000	$240,000	$0	$0	$330,000

Server Room Relocation

Project Name	Server Room Relocation	Project No.	8243
Program	General Improvements	Phase	P
Sub-Program	Projects	Priority Rank	Critical
Project Manager	Jason DeGroot	Ranking Score	65
Dept/Division	Engineering/Capital Projects	Concord %	50%
Purpose:	Relocate all computer/server/network equipment and related equipment from its current location in the POD basement to a suitable location.		
History:	In FY 2014-15, the project was initiated after a major IT server failure at the main network facility. The existing room is a decommissioned laboratory facility which is vulnerable to several process and other water pipelines.		
Description:	At this time, this project will evaluate alternatives and possible locations to relocate the District's main server equipment and consider future IT requirements. Upon the results of this evaluation, staff will prioritize and update the costs and future schedule for any capital improvements recommended.		
Location:	Treatment Plant		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$43,000	$0	$0	$43,000
Planning			$0	$57,000	$0	$0	$0	$57,000
Design			$0	$0	$50,000	$50,000	$0	$100,000
Construction			$0	$0	$0	$1,000,000	$0	$1,000,000
FY Total			$0	$57,000	$93,000	$1,050,000	$0	$1,200,000

General Security and Access

Project Name	General Security and Access	Project No.	8207
Program	General Improvements Program	Phase	P
Sub-Program	Projects	Priority Rank	Very High
Project Manager	Thomas Brightbill	Ranking Score	50
Dept/Division	Engineering/Planning and Development Services	Concord %	TBD
Purpose:	Improve safety for employees and the general public; meet safety standards; reduce the District's exposure to liability; reduce loss of District's property; and reduce Operations and Maintenance expenses.		
History:	The District has experienced property losses in the past. Improvements to the security system are continually identified and refined. It is possible that additional security measures for essential public service facilities may be required at some point.		
Description:	This project potentially includes upgrading alarm systems, adding card readers, adding gates in the perimeter fencing, adding security cameras, improving lighting, fencing and or signage.		
Location:			

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$12,000	$0	$0	$12,000
Planning			$47,616	$0	$0	$0	$0	$47,616
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$38,000	$100,000	$50,000	$188,000
FY Total			$47,616	$0	$50,000	$100,000	$50,000	$247,616

CSOD Facility Improvements

Project Name	CSOD Facility Improvements	Project No.	8233
Program	General Improvements Program	Phase	C
Sub-Program	Projects	Priority Rank	Very High
Project Manager	Alex Rozul	Ranking Score	55
Dept/Division	Operations/ Collection System Operations Division	Concord %	0%
Purpose:	Improve the safety, reliability, and maintainability of the Collection System Operations Department facilities in Walnut Creek, including the vehicle maintenance shop.		
History:	This is a multi-year program to construct capital improvements to the CSOD site in Walnut Creek. Projects will include improvements to the vehicle maintenance shop, which was not included in the CSOD Administration, Crew and Warehouse Facility project.		
Description:	Minor improvements are budgeted for FY 2015-16. Work includes improving drainage at Materials Loading Facility.		
Location:	1250 Springbrook Road, Walnut Creek.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$13,000	$5,500	$0	$18,500
Planning			-	$0	$0	$0	$0	-
Design			-	$0	$0	$0	$0	-
Construction			$161,103	$20,000	$0	$46,000	$50,000	$277,103
FY Total			$161,103	$20,000	$13,000	$51,500	$50,000	$295,603

HOB Improvements

Project Name	HOB Improvements	Project No.	8234
Program	General Improvements Program	Phase	C
Sub-Program	Projects	Priority Rank	Very High
Project Manager	Edgar Lopez	Ranking Score	50
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	Improve the safety, serviceability, maintainability, usability, and appearance of the interior and exterior of the Headquarters Office Building (HOB).		
History:	The HOB was originally built by 1983 and seismically retrofitted in 2014. Although several interior improvements have been recently completed, this project provides for necessary improvements and for future modifications to the building.		
Description:	This project will provide for office space improvements in the lower level and for the third floor of the building to accommodate relocating the IT division and newly adopted positions. Work will include new partitions, modifying existing partitions, and offices as needed. Security improvements will be coordinated with this project and be added to the scope.		
Location:	Headquarters Office Building.		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$10,000	$27,500	$0	$37,500
Planning			-	$0	$0	$0	$0	$0
Design			-	$0	$0	$0	$0	$0
Construction			$236,244	$60,000	$100,000	$0	$0	$396,244
FY Total			$236,244	$60,000	$110,000	$27,500	$0	$433,744

Seismic Improvements for HOB

Project Name	Seismic Improvements for HOB	Project No.	8226
Program	General Improvements Program	Phase	C
Sub-Program	Projects	Priority Rank	Critical
Project Manager	Edgar Lopez	Ranking Score	80
Dept/Division	Engineering/Capital Projects	Concord %	0%
Purpose:	Upgrade the Headquarters Office Building (HOB) to current seismic safety standards.		
History:	Since the construction of the HOB in the mid-1980s, a great deal has been learned from the Loma Prieta and Northridge earthquakes and earthquake code requirements have changed. In 2008 Complete Project Solutions, Inc. (CPS) completed an analysis of HOB identifying significant seismic deficiencies based on current design standards. CPS' analysis of HOB revealed issues with the building columns and the steel moment frames. While no building constructed with steel moment frames has collapsed in the United States, there are unique aspects to the HOB that warrant additional concern. Combining the unique aspects of the HOB and the lack of meeting current design standards indicate that HOB may not provide basic life safety to occupants.		
Description:	Seismically retrofit HOB to provide up to an enhanced life safety level of structural performance. Work will be coordinated with HOB Improvements for carpeting, painting, and other office space enhancements. This project has been accepted and be closing in FY 15-16.		
Location:			

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$1,000	$0	$0	$1,000
Planning			-	$0	$0	$0	$0	$0
Design			-	$0	$0	$0	$0	$0
Construction			-	$92,000	$0	$0	$0	$0
FY Total			$5,847,587	$92,000	$0	$0	$0	$5,939,587

Capital Legal Services

Project Name	Capital Legal Services	Project No.	8230
Program	General Improvements Program	Phase	P
Sub-Program	Projects	Priority Rank	N/A
Project Manager	Russell Leavitt	Ranking Score	N/A
Dept/Division	Engineering/Planning and Development Services	Concord %	TBD
Purpose:	Streamline the processing of legal bills.		
History:	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.		
Description:	Capital legal service expenses are no longer charged to individual capital projects. Instead, legal expenses are charged 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.		
Location:	District-wide		

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$33,000	$67,500	$0	$100,500
Planning			$79,285	$30,000	$0	$0	$0	$109,285
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$79,285	$30,000	$33,000	$67,500	$0	$209,785

Asset Management Program Development

Project Name	Asset Management Program Development	Project No.	8238
Program	General Improvements Program	Phase	P
Sub-Program	Asset Management Plan	Priority Rank	Critical
Project Manager	Dana Lawson	Ranking Score	70
Dept/Division	Engineering/Planning and Development Services	Concord %	50%

Purpose:

Develop a comprehensive asset management program to optimize the lifecycle of the District's assets to deliver high quality and reliable services in a sustainable manner for customers with an acceptable level of risk.

History:

This project builds on the previous Treatment Plant Asset Management Plan, Force Main Assessment, various master plans and the sewer renovation program.

In FY 14-15, a consultant was contracted to develop a multi-year implementation plan; Board Policy 15 was adopted regarding asset management; began standardizing codes and cleaning the plant's asset registrar, assisted with the version upgrade to the plant's CMMS as well as improving its functionality, updated the pumping station assets; began drafting procedures and data standards; and coordinated access to O&M manuals, shop drawings, reports, etc. through TP GDI.

Description:

The final version of 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 efforts, and the remaining elements will be completed in this project.

Implementation will require District staff time over the next three years to accomplish such tasks as standardizing and completing the asset register, drafting to consolidate treatment plant As-Builts, consolidating CCTV databases, and updating the asset management plan. Specialty tasks that will be managed by District staff but also require outside assistance include utility locating, developing the reliability centered maintenance program, conducting condition assessment of critical TP piping, and may also include integrating failure-based maintenance strategies, developing program management standards or software/tools, and reviewing the asset management plan.

Location: District-wide

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$100,000	$0	$0	$100,000
Planning	8/1/2014	6/30/2018	$0	$600,000	$500,000	$900,000	$600,000	$2,600,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$0	$600,000	$600,000	$900,000	$600,000	$2,700,000

Central Contra Costa Sanitary District

April 6, 2015
File: 8238.25.5.1

TO: ROGER S. BAILEY, GENERAL MANAGER
ANN SASAKI, DEPUTY GENERAL MANAGER
JEAN-MARC PETIT, DEPARTMENT DIRECTOR OFENGINEERING AND TECHNICAL SERVICES

FROM: DANA LAWSON, SENIOR ENGINEER

SUBJECT: ASSET MANAGEMENT IMPLEMENTATION PLAN (AMIP)

The final version of the *Asset Management Implementation Plan Summary Report* was published in March 2015; a copy is attached. The objective of the first phase of the District's asset management program was to develop a comprehensive implementation plan by evaluating the current asset management practices, assisting the District in developing Board Policy 015 to set the District's asset management goal, and then developing elements to close the gaps between current practices and the goal. The goal stated in that policy is to optimize the lifecycle of our assets in order to deliver high quality, reliable services in a sustainable manner with an acceptable level of risk.

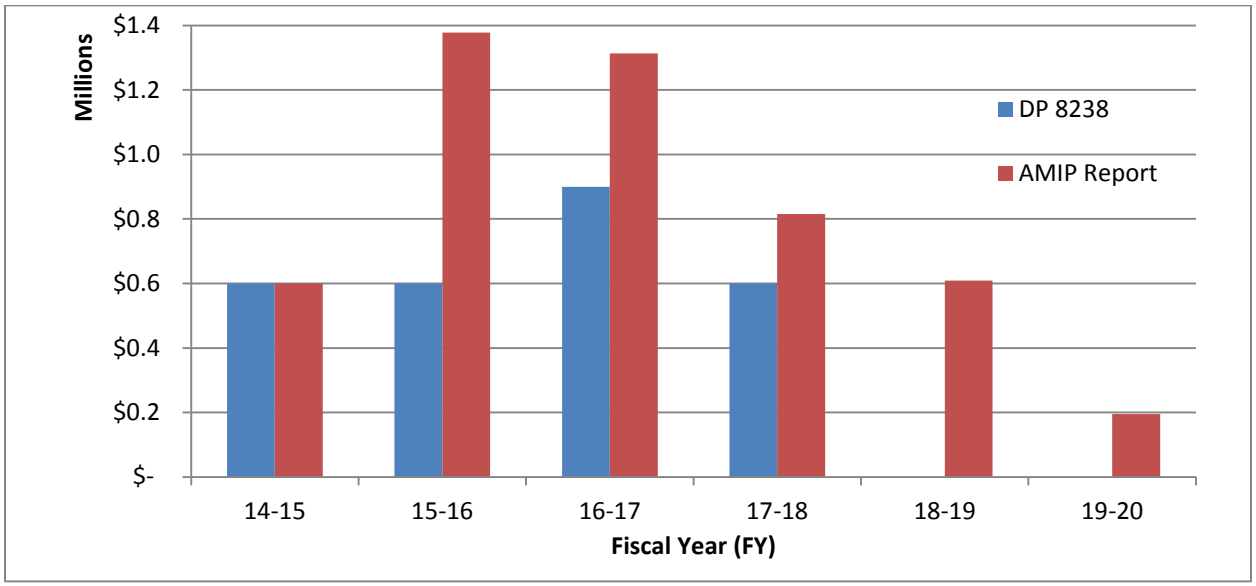
This memo describes which of the AMIP elements listed in the report are assigned to District Project (DP) 8238, "Asset Management Program Development". The remaining AMIP elements are currently being performed by maintenance staff as continuous improvement objectives and through other capital projects such as the Comprehensive Wastewater Master Plan (i.e., condition assessment).

The implementation of the AMIP will be accomplished over the next three years, instead of the five years suggested in the summary report. Implementation will require District staff time to accomplish such tasks as standardizing and completing the asset register, drafting to consolidate treatment plant As-Builts, consolidating CCTV databases, and updating the asset management plan.

Specialty tasks that will be managed by District staff but also require outside assistance include utility locating, developing the reliability centered maintenance program, conducting condition assessment of critical treatment plant piping, and may also include integrating failure-based maintenance strategies, developing program management standards or software/tools, and reviewing the asset management plan.

Based on this updated approach, with a compressed schedule and assignment of AMIP elements as discussed above, the report's original estimate of $4.6M has been revised

to $2.1M. The chart below compares the AMIP report's budget and schedule to the revised budget and compressed schedule for DP 8238.



A more detailed breakdown of the remaining budget for DP 8238 over the next three fiscal years is shown below with a description of outside services. Maintenance staff time is not reflected in this table as the work related to Asset Management would be part of their day to day routine task.

FY	Total	Engineering Staff Time	Outside Services	Description of Outside Services
15-16	**$ 600,000**	$ 350,000	$ 250,000	Utility locating, reliability centered maintenance pilot
16-17	**$ 900,000**	$ 600,000	$ 300,000	Condition assessment of critical TP piping
17-18	**$ 600,000**	$ 400,000	$ 200,000	Failure-based maintenance strategies, program management standards or software/tools, review of asset management plan
Totals	**$2,100,000**	**$1,350,000**	**$ 750,000**	

As a result, staff has amended several of the tables and figures to reflect the assignment of plan elements to DP 8238 and compressed schedule.

1. Amended Table 1 Recommended AMIP Plan Elements: The amended table shows the assignment of plan elements to other projects and to the Asset Management Program Development.

2. Amended Figure 5 Three-Year Schedule: The amended figure shows the revised schedule, now compressed from a five-year schedule to a three-year schedule.

3. Amended Table 2 Estimated Labor Costs by Plan Element and Calendar Quarter: The amended table shows the cost to the Asset Management Program

Development to reflect the revised schedule. In addition, after assigning various plan elements to other appropriate projects and operating budgets, DP 8238 has an estimated total budget of $2.7M covering Fiscal Years 2014/15 through 2017/18.

4. Amended Table 3 Estimated Labor Hours and Costs by Plan Element and Fiscal Year: The amended table shows the revised hours and cost to the Asset Management Program Development to reflect the revised schedule for the three fiscal years estimated to complete the project.

5. Amended Figure 6 Estimated Level of Effort: This amended figure depicts the level of effort by quarter over the next three fiscal years.

DL/sdh

ecc: D. Gemmell, D. Heath, N. Meyer, P. Seitz, A. Weer, E. Lopez, S. Mestetsky, C. Mizutani, N. Hodges, T. Brightbill, T. Godsey

Attachments

Attachment

Amended Table 1 Recommended AMIP Plan Elements
Asset Management Implementation Plan
Central Contra Costa Sanitary District

ID	Element Name	Planned Start	Duration (months)
Related Projects Already Underway			
A	Cost of Service and Staffing Needs Assessment	Active	12
B	CMMS Replacement, District Project 8242	Active	18-24
2a	*Asset Hierarchy and Data Standards*		
4	*Business Process Mapping**		
5	*Knowledge Management Strategy*		
C1	IT Master Plan, District Project 8195	Active	12
C2	Financial ERP Replacement, District Project 8240	2015-Q3	24-36
4	*Business Process Mapping**		
C3	Electronic Content Management Evaluation, District Project 8240	Active	12-18
5	*Knowledge Management Strategy*		
D	Comprehensive Wastewater Master Plan, District Project 7315	2015-Q3	24
6a	*Failure Modes and Condition Assessment Protocol*		
6b	*Condition Assessment of Pump Station / Treatment Plant Assets*		
7	*Business Risk Exposure*		
7a	*Develop Consequence of Failure Criteria and Apply to Assets*		
7b	*Risk Assessment*		
9	*Asset Valuations*		
12	*Strategic Forecasting*		
13	*Capital Improvement Program Business Case Evaluations*		
Asset Management Plan Elements (DP 8238)			
1	AM Organization, Policies and Key Strategies	2015-Q1	9(1)
2	Asset Register		
2a	Asset Hierarchy and Data Standards	2015-Q1	3
2b	Complete Asset Register - Pump Station & Treatment Plant Assets	2015-Q1	3
2c	Complete Utility Locating and Drafting to Consolidate Treatment Plant Piping As-Builts	2015-Q3	18
2d	Complete Asset Register for Treatment Plant Piping	2016-Q3	6
3	Plant Maintenance Strategy		
3a	Reliability Centered Maintenance Pilot Program	2015-Q3	24
3b	Expand Reliability Centered Maintenance Program (pending 3a)*	optional, in-house	
6	Condition Assessments		
6c	Condition Assessment of Critical Treatment Plant Piping	2017-Q1	6
6d	Consolidate CCTV Databases	2016-Q1	3
8	Failure-Based Maintenance Strategies*	2017-Q3	6
10	Program and Project Management Standards*	2017-Q1	6
11	Asset Commissioning and Handover*	2017-Q1	6
14	Update Asset Management Plan	2017-Q3	9

Notes:
(1) Element 1 is estimated to last nine months for the initial effort, followed by quarterly meetings and some activity by the asset management steering committee for the duration of the AMIP.
(2) *optional, as-needed

Attachment

No.	Plan Element	Planned Start	Duration (mos)	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2	2018 Q3	2018 Q4
Related Projects - Underway and/or Prerequisite to the Asset Management Implementation Plan																			
A	Cost of Service & Staffing Needs Assessment	Active	12																
B	CMMS Replacement, DP 8242	2015-Q1	21																
2a	Asset Hierarchy and Data Standards																		
4	Business Process Mapping																		
5	Knowledge Management Strategy																		
C1	IT Master Plan, DP 7195	Active	12																
C2	ERP Replacement, DP 8240	2016-Q1	30																
4	Business Process Mapping																		
C3	Electronic Content Management, DP 8240	Active	24																
5	Knowledge Management Strategy																		
D	Comprehensive TP & CS Master Plan	2015-Q3	24																
6a	Failure Modes & Condition Asmt Protocol																		
6b	Condition Asmt of TP & PS Assets																		
7	Business Risk Exposure																		
7a	Develop Consequence of Failure Criteria and Apply to Assets																		
7b	Risk Assessment																		
9	Asset Valuations																		
12	Strategic Forecasting																		
13	Capital Improvement Program Business Case Evaluations																		
Asset Management Plan Elements																			
1	AM Org, Policies and Key Strategies	2015-Q1	9																
2	Asset Register																		
2a	Asset Hierarchy and Data Standards	incorporated in B																	
2b	Complete Asset Register for Pump Station and Treatment Plant Assets	2015-Q1	9																
2c	Complete Utility Locating, Drafting to Consolidate Plant Piping As-Builts	2015-Q3	18																
2d	Complete Asset Register for Plant Piping	2016-Q3	6																
3	Plant Maint Strategy																		
3a	Reliability Centered Maintenance Pilot	2015-Q3	24																
3b	Expand RCM Program (pending 3a)*	optional, in-house																	
6	Condition Assessments																		
6c	Condition Asmt of Critical Treatment Plant Piping	2017-Q1	12																
6d	Consolidate CCTV Databases	2016-Q1	6																
8	Failure-Based Maintenance Strategies*	2017-Q3	6																
10	Program and Project Management Standards*	2017-Q1	6																
11	Asset Commissioning and Handover*	2017-Q1	6																
14	Update Asset Management Plan	2017-Q3	9																
	Number of Active Elements by Quarter >>			**3**	**2**	**4**	**2**	**3**	**3**	**3**	**3**	**4**	**4**	**3**	**3**	**1**			

*optional, as-needed

ASSET MANAGEMENT IMPLEMENTATION PLAN
THREE-YEAR SCHEDULE

AMENDED FIGURE 5

AMENDED TABLE 2 **Estimated Labor Costs by Plan Element and Calendar Quarter**
Asset Management Implementation Plan
Central Contra Costa Sanitary District

No.	Plan Element	Planned Start	Duration (mos)	Total Hours (est)	Total Cost (est)	2015				2016				2017				2018	
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1	AM Org, Policies and Key Strategies	2015-Q1	9	1,200	$212,700	$73,500	$73,500	$65,700											
2	Asset Register																		
2a	Asset Hierarchy and Data Standards	incorporated in B		50	$8,750	$8,750													
2b	Complete Asset Register for Pump Station and Treatment Plant Assets	2015-Q1	9	424	$74,380	$35,000	$35,000	$4,380											
2c	Complete Utility Locating, Drafting to Consolidate Plant Piping As-Builts	2015-Q3	18	2,240	$408,800			$61,320	$61,320	$61,320	$102,200	$61,320	$61,320						
2d	Complete Asset Register for Plant Piping	2016-Q3	6	808	$147,460							$66,430	$81,030						
3	Plant Maint Strategy																		
3a	Reliability Centered Maintenance Pilot	2015-Q3	24	1,850	$337,250		$8,750	$36,500	$45,625	$45,625	$45,625	$45,625	$36,500	$36,500	$36,500				
3b	Expand RCM Program (pending 3a)*	optional, in-house																	
4	Business Process Mapping	incorporated in B, C2, as needed																	
5	Knowledge Management Strategy	incorporated in B, C3																	
6	Condition Assessments																		
6a	Failure Modes & Condition Asmt Protocol	incorporated in D																	
6b	Condition Asmt of TP & PS Assets	incorporated in D																	
6c	Condition Asmt of Critical Treatment Plant Piping	2017-Q1	12	1,280	$233,600									$58,400	$58,400	$58,400	$58,400		
6d	Consolidate CCTV Databases	2016-Q1	6	320	$58,400					$29,200	$29,200								
7	Business Risk Exposure																		
7a	Develop Consequence of Failure Criteria and Apply to Assets	incorporated in D																	
7b	Risk Assessment	incorporated in D																	
8	Failure-Based Maintenance Strategies*	2017-Q3	6	1,160	$211,700											$95,265	$116,435		
9	Asset Valuations	incorporated in D																	
10	Program and Project Management Standards*	2017-Q1	6	992	$181,041									$81,578	$99,463				
11	Asset Commissioning and Handover*	2017-Q1	6	896	$163,521									$73,548	$89,973				
12	Strategic Forecasting	incorporated in D																	
13	Capital Improvement Program Business Case Evaluations	incorporated in D																	
14	Update Asset Management Plan	2017-Q3	9	1,528	$278,861											$83,585	$97,638	$97,638	$0
*optional, as-needed			Totals	12,748	$2,316,463	$117,250	$117,250	$167,900	$106,945	$136,145	$177,025	$173,375	$178,850	$250,026	$284,336	$237,250	$272,473	$97,638	$0
Future Fiscal Year Budget Estimates (rounded to $100k)								**$600,000**				**$900,000**				**$600,000**			

Attachment

AMENDED TABLE 3 **Estimated Labor Hours and Costs by Plan Element and Fiscal Year**
Asset Management Implementation Plan
Central Contra Costa Sanitary District

No.	Plan Element	Total Hours (est)	Total Cost (est)	FY 2014/15		FY 2015/16		FY 2016/17		FY 2017/18	
				Est Hours	Est Cost	Est Hours	Est Cost	Est Hours	Est Cost	Est Hours	Est Cost
1	AM Org, Policies and Key Strategies	1,200	$212,700	840	$147,000	360	$65,700				
2	Asset Register										
2a	Asset Hierarchy and Data Standards	incorporated in B		50	$8,750						
2b	Complete Asset Register for Pump Station and Treatment Plant Assets	424	$74,380	400	$70,000	24	$4,380				
2c	Complete Utility Locating, Drafting to Consolidate Plant Piping As-Builts	2,240	$408,800			1,568	$286,160	672	$122,640		
2d	Complete Asset Register for Plant Piping	808	$147,460					808	$147,460		
3	Plant Maint Strategy										
3a	Reliability Centered Maintenance Pilot	1,850	$337,250	50	$8,750	950	$173,375	850	$155,125		
3b	Expand RCM Program (pending 3a)	optional, in-house									
4	Business Process Mapping	incorporated in B, C2, as needed									
5	Knowledge Management Strategy	incorporated in B, C3									
6	Condition Assessments										
6a	Failure Modes & Condition Asmt Protocol	incorporated in D									
6b	Condition Asmt of TP & PS Assets	incorporated in D									
6c	Condition Asmt of Critical Treatment Plant Piping	1,280	$233,600					640	$116,800	640	$116,800
6d	Consolidate CCTV Databases	320	$58,400			320	$58,400				
7	Business Risk Exposure										
7a	Develop Consequence of Failure Criteria and Apply to Assets	incorporated in D									
7b	Risk Assessment	incorporated in D									
8	Failure-Based Maintenance Strategies	1,160	$211,700							1,160	$211,700
9	Asset Valuations	incorporated in D									
10	Program/Project Management Stds	992	$181,041					992	$181,041		
11	Asset Commissioning and Handover	896	$163,521					896	$163,521		
12	Strategic Forecasting	incorporated in D									
13	Capital Improvement Program Business Case Evaluations	incorporated in D									
14	Update Asset Management Plan	1,528	$278,861							1,528	$278,861
	Totals (rounded to $100k)	12,748	$2,316,463	--	**$600,000*** **	**3,222**	**$600,000**	**4,858**	**$900,000**	**3,328**	**$600,000**

*optional, as-needed
**Plant Maintenance Staff time will be charged to O&M, only consultant and PM cost shown
***Includes work already completed this Fiscal Year but not included in the Carollo estimates

RECYCLED WATER PROGRAM

OVERVIEW

The District currently delivers about 200 million gallons per year of recycled water to 35 customers located within the Zone 1 service area for landscape irrigation and commercial uses. These customers are located along the Interstate 680 corridor in Pleasant Hill, Concord, and Martinez. The District also uses about 400 million gallons per year at the treatment plant for process water and District property landscape irrigation. The Regional Water Quality Control Board (RWQCB) encourages the District to expand its recycled water program, and activities must be reported annually to the RWQCB. The District continues to pursue a number of projects as described in the following pages.

The major emphasis of the Recycled Water Program for the next fiscal year will be supporting the recycled water elements included in the Comprehensive Wastewater Master Plan Project and connecting individual customer sites within the Concord Landscape Project. The District will also continue efforts to add new cost- effective customers in the District's Zone 1 service area, pursue outside funding assistance (such as federal and state grants for all District recycled water projects), and work with water supply agencies to develop recycled water supply alternatives. An alternative supply opportunity may include a small-scale refinery project to serve 0.5 MGD to Shell Refinery out of our existing treatment facilities. Expansion of the District's residential customer recycle water fill station as well as adding hydrants to distribute recycled water for commercial use are also potential components.

Concord Landscape Project

Project Name	Concord Landscape Project	Project No.	7299
Program	Recycled Water Program	Phase	C
Sub-Program	Urban Landscaping	Priority Rank	Critical
Project Manager	Nathan Hodges	Ranking Score	65
Dept/Division	Engineering/Planning and Development Services	Concord %	100%
Purpose:	Extend the recycled water distribution system from the Buchanan Fields Golf Course to the Diamond/Meridian Park Boulevard area of Concord and connect the landscape irrigation demand at businesses and roadway medians. Completion of this project will provide up to 190 acre-feet per year (AFY) of recycled water for landscape irrigation customers.		
History:	Construction of the distribution system was completed in early 2014. Work included installation of the mainline pipe and service laterals to each property that agreed to accept recycled water. Because of substantial coordination issues between various agencies with jurisdiction and property owners, the connection phase was planned to be done as a separate capital project. Chevron, the single largest user, was connected during FY 2014/2015.		
Description:	The customer connection phase began in FY 2014/2015. While there are as many as 34 potential connections to be made there are various technical and regulatory challenges preventing the connection of all potential customers. The current connection project was bid and awarded as DP 7299A and includes approximately 14 connections. As for the remaining customer connections, staff will work with applicable regulatory agencies to determine the feasibility of future customer connections.		
Location:			

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			-	$0	$0	$0	$0	-
Design			-	$0	$0	$0	$0	-
Construction			-	$130,000	$87,000	$0	$0	-
FY Total			$3,697,629	$130,000	$87,000	$0	$0	$3,914,629

Concord Naval Weapons Station Recycled Water Planning

Project Name	Concord Naval Weapons Station Recycled Water Planning	Project No.	7279
Program	Recycled Water Program	Phase	P
Sub-Program	Urban Landscaping	Priority Rank	Very H
Project Manager	Nathan Hodges	Ranking Score	50
Dept/Division	Engineering/Planning & Development Services	Concord %	100%
Purpose:	Identify recycled water infrastructure necessary to serve the proposed development being planned at the Concord Naval Weapons Station (CNWS) site as part of the Concord Community Reuse Project.		
History:	The planned redevelopment of the CNWS property provides an excellent opportunity to expand recycled water use in the District's service area. In 2009, the City of Concord selected a preferred development plan and in 2010, the Final Environmental Impact Report (EIR) was completed. It includes recycled water demand scenarios of up to 2,749 AFY for landscape irrigation. In 2012, the District completed a Recycled Water Facilities plan for the CNWS Redevelopment that identified the conceptual recycled water infrastructure necessary to serve the irrigation demands identified in the EIR. Additionally, a will-service letter was submitted to the developers indicating the District's willingness to provide recycled water.		
Description:	As CNWS redevelopment plans move forward, the Recycled Water Facilities Plan will form the basis of future work, and will be validated against recommendations from the Comprehensive Wastewater Master Plan. Staff will work with CNWS Project proponents and other agencies to confirm required facilities, recycled water usage, and how the costs will be apportioned to the appropriate parties.		
Location:			

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$5,000	$0	$5,000
Planning			$264,855	$1,100	$0	$0	$0	$265,955
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$264,855	$1,100	$0	$5,000	$0	$270,955

Refinery Recycled Water Project

Project Name	Refinery Recycled Water Project	Project No.	7300
Program	Recycled Water Program	Phase	P
Sub-Program	Urban Landscaping	Priority Rank	Very High
Project Manager	Nathan Hodges	Ranking Score	50
Dept/Division	Engineering/Planning and Development Services	Concord %	100%
Purpose:	Determine the feasibility of providing recycled water to the Shell and/or Tesoro refineries in Martinez.		
History:	Staff has worked with Contra Costa Water District (CCWD) and refinery staff to determine if and how recycled water might fit into future water supply scenarios. The two refineries use a combined total of approximately 22,500 acre feet per year (AFY) of Delta water of which some portion could be replaced with recycled water. In 2011, CCCSD was awarded a grant from the U.S. Bureau of Reclamation to prepare a feasibility study and environmental documentation. The feasibility study closeout report was submitted March 2014. Staff has pursued a variety of federal and state funding sources in an effort to improve the economics of a potential project. Some infrastructure required for this project already exists, but new treatment facilities are needed to meet refinery water quality requirements.		
Description:	Work with CCWD to develop a project to serve the refineries. Such a project could range from 0.5 MGD to complete replacement of the refineries' Delta water. Continue pursuit of funding options in coordination with CCWD for the development of a larger-scale refinery project that may include the construction of new recycled water treatment facilities including nitrification, filtration, and disinfection facilities and possibly denitrification facilities. Depending on the volume of recycled water served, the total estimated project cost can range from $31 to $100 million. At this time, budget is only included for project planning activities and to pursue funding and project partners.		
Location:			

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$283,727	$50,000	$4,000	$47,500	$0	$385,227
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$283,727	$50,000	$4,000	$47,500	$0	$385,227

Zone 1 Recycled Water – Phase 1C

Project Name	Zone 1 Recycled Water – Phase 1C	Project No.	7306
Program	Recycled Water Program	Phase	C
Sub-Program	Urban Landscaping	Priority Rank	Very H
Project Manager	Nathan Hodges	Ranking Score	50
Dept/Division	Engineering/Planning and Development Services	Concord %	100%
Purpose:	Provide recycled water for landscape irrigation and other identified uses in the Zone 1 Project area, which includes Pleasant Hill and portions of Concord and Martinez.		
History:	In 2001, the District completed the Zone 1 Implementation Plan that provided estimated connection costs and revenues for customers identified in the CCWD Zone 1 Project Agreement. 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. New customers will continue to be added to the system where technically and economically feasible. The District is focusing on connecting cost-effective landscape irrigation sites near existing recycled water distribution pipelines.		
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. Subsequent phases of this project continue in future fiscal years.		
Location:			

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$35,061	$0	$0	$0	$0	$35,061
Design			$0	$50,000	$0	$0	$0	$50,000
Construction			$0	$0	$29,000	$46,000	$500,000	$575,000
FY Total			$35,061	$50,000	$29,000	$46,000	$500,000	$660,061

Recycled Water Planning

Project Name	Recycled Water Planning	Project No.	7344
Program	Recycled Water Program	Phase	P
Sub-Program	Urban Landscaping	Priority Rank	Critical
Project Manager	Nathan Hodges	Ranking Score	65
Dept/Division	Engineering/Planning and Development Services	Concord %	100%
Purpose:	Develop and implement a comprehensive long-term Recycled Water Program that provides recycled water for landscape irrigation, industrial reuse, and other applications.		
History:	The District has worked with local water purveyors over the years to develop partnerships and identify opportunities to expand recycled water use. Recent planning efforts have focused on the refinery recycled water project; the use of recycled water on buffer properties near the treatment plant; the use of satellite treatment facilities to provide recycled water to landscape irrigation customers in remote areas; other recycled water projects outside the District's existing Zone 1 Project Area; and work to comply with State Water Resources Control Board requirements for salt and nutrient management plans.		
Description:	This project will continue efforts to increase the demand for recycled water. Perform planning studies for the District's recycled water program to address implementation issues such as funding, regulations, treatment technologies, developing policies (i.e. satellite recycled water facilities), public education, and gaining political support from public agencies.		
Location:			

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$100,000	$150,000	$0	$250,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$0	$0	$100,000	$150,000	$0	$250,000

Filter Plant

Project Name	Filter Plant	Project No.	7345
Program	Recycled Water Planning	Phase	P
Sub-Program	Urban Landscaping	Priority Rank	Critical
Project Manager	Nathan Hodges	Ranking Score	65
Dept/Division	Engineering/Planning and Development Services	Concord %	100%
Purpose:	This project will evaluate existing recycled water facilities at the treatment plant, and evaluate alternatives related to zero-discharge.		
History:	The Comprehensive Wastewater Master Plan will provide a framework for the future management of the District's collection system and treatment plant. Included in this effort is an evaluation of the recycled water facilities.		
Description:	This project provides the funding for the Comprehensive Wastewater Master Plan consultant to conduct the evaluations and other work related to recycled water facilities.		
Location:			

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$200,000	$0	$0	$200,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$150,000	$0	$150,000
FY Total			$0	$0	$200,000	$150,000	$0	$350,000

Surge Analysis

Project Name	Surge Analysis	Project No.	7346
Program	Recycled Water Planning	Phase	P
Sub-Program	Urban Landscaping	Priority Rank	Critical
Project Manager	Nathan Hodges	Ranking Score	65
Dept/Division	Engineering/Planning and Development Services	Concord %	100%
Purpose:	Conduct a surge analysis of the recycled water distribution system.		
History:	The distribution system has experienced a number of pipeline breaks over the last few years. Analysis of the circumstances surrounding many of these issues has been a concern with pressure fluctuations.		
Description:	This project will analyze the distribution system including pumping to determine if any improvements are needed to ensure the long-term integrity of the recycled water pipeline system.		
Location:			

Schedule & Budget

Phase:	Start Q/FY	End Q/FY	Prior FY's	FY 14-15	FY 15-16	FY 16-17	Future FY's	Total
Carryover			$0	$0	$0	$0	$0	$0
Planning			$0	$0	$0	$65,000	$0	$65,000
Design			$0	$0	$0	$0	$0	$0
Construction			$0	$0	$0	$0	$0	$0
FY Total			$0	$0	$0	$65,000	$0	$65,000

2015 CAPITAL IMPROVEMENT PLAN
TEN YEARS ENDING JUNE 30, 2025

TABLE OF CONTENTS

2015 CAPITAL IMPROVEMENT PLAN
TEN YEARS ENDING JUNE 30, 2025

PURPOSE

The Central Contra Costa Sanitary District (District) is responsible for the collection, treatment, and disposal of wastewater for a population of approximately 471,000 in central Contra Costa County. The District has developed a ten-year Capital Improvement Plan (CIP) for the District's capital facilities and financing needs. The CIP is updated every year. Specifically, the plan identifies and prioritizes capital projects needed to accomplish the District's mission. It also includes cost estimates for proposed project work and projections for the various sources of revenue needed to meet the cash flow requirements of the CIP.

The principal purpose of the CIP is to provide the District's Board of Directors with the information needed to formulate long-range policy regarding:

- Priority and Schedule – identify, prioritize, and schedule the projects necessary to accomplish the District's mission.
- Financing – plan sufficient financial resources for completion of the projects proposed in the CIP.

The following discussion provides: 1) a general description of the plan; and 2) a discussion of potential, unbudgeted future projects.

Capital Improvement Program Objectives

The District has identified four principal objectives for its Capital Improvement Program:

1. Support the District's mission to protect public health and the environment by:
   - Collecting and treating wastewater
   - Embracing a policy of sustainability for the responsible use of existing resources
   - Promoting environmental stewardship

2. Accommodate future growth in the service area as approved by the city and county planning agencies responsible for land use policy decisions.

3. Respond to issues of community concern by:
   - Managing the cost of operating and maintaining facilities
   - Reducing objectionable odors
   - Cooperating with other public agencies to avoid duplication of effort and improve service delivery
   - Reducing power consumption through energy management

4. Asset Management

Drivers

Capital improvement projects are identified by four major drivers: Replacement and Rehabilitation, Regulatory, Sustainability/Energy/Optimization, and Capacity Expansion. Below is a brief discussion of each driver.

Replacement and Rehabilitation

This category focuses on projects related to aging infrastructure and the replacement requirements of the District. The District operates and maintains approximately $3.5 billion of assets, and several projects in each program have been initiated or in progress to meet the replacement or rehabilitation of the District's infrastructure.

Regulatory

This category focuses on projects that aim to ensure that the District remains in full regulatory and safety compliance with all applicable regulations.

Sustainability/Energy/Optimization

This category focuses on projects that optimize existing processes, or energy efficiency, and sustainability of the treatment plant or collection system and other facilities.

Capacity Expansion

The capacity expansion projects are developed to upgrade and improve existing facilities to meet increasing flow due to in-fill, new development, and wet weather.

SPECIFIC PROJECTS IN THE TEN-YEAR PLAN

The CIP is broken down into four categories: 1) Replacement and Rehabilitation, 2) Regulatory, 3) Sustainability/Energy/Optimization, and 4) Capacity Expansion. As projects develop and are prioritized, they are grouped into the four programs as shown in the CIB: Treatment Plant, Collection System, General Improvements, and Recycled Water. A brief description of each program and a list of projects for the ten years of this plan are provided in the Capital Plan sections for each of the four programs.

SUMMARY

This CIP assumes that funds will be available to support the plan. These funds come from all the sources of revenue as discussed in the Finance and Revenue section. The only two discretionary sources of revenue are the sale of bonds or adjustment of the capital component of the Sewer Service Charge. This document is for planning purposes only. The District Board has not voted to sell bonds to fund this planned program. The plan is funded on a year-by-year basis when the Capital Improvement Budget (CIB) for the upcoming fiscal year (FY) 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 plan.

TREATMENT PLANT PROGRAM

The Treatment Plant Program includes projects that will meet changing regulatory mandates, address recurring renovation needs, and upgrade the wastewater treatment plant in areas such as hydraulic/process and solids handling. The emphasis of the Treatment Plant Program will be on the renovation needs of the aging infrastructure of our complex treatment facility and on meeting increasingly stringent regulatory requirements. The Comprehensive Wastewater Master Plan will be started in FY 2015-16 and continue up to two years. This master plan effort will help the District coordinate and evaluate past studies and planning work and provide new condition assessments to produce a future CIP. The information presented in the FY 2015 CIP will be coordinated with the Master Plan effort and revised for future projects.

Capacity improvements will be primarily focused on those projects needed for the solids handling processes and to handle wet weather flows. One large potential regulatory project facing the District in the next ten to twenty years: the Nutrient Removal project. Staff will continue to evaluate treatment alternatives and pilot programs in anticipation of possible regulatory changes and to help identify improvements and process capabilities. These projects will include Zeolite-Anammox, screening removal, and solids handling/dewatering.

This section is a listing of the projects in the ten-year CIP that pertain to the District's wastewater treatment plant. The CIP is based on the recognition that plant facilities require ongoing renovations and replacement. Environmental regulations will become more stringent, and the District is on a gradual but steady pace towards build-out over the next 20 years. Major emphasis is on maintaining existing assets, improving processes when cost effective, and ensuring regulatory compliance.

Replacement and Rehabilitation

The goals of this category are to provide for ongoing or future renovation activities. This category provides capital funds for replacement or rehabilitation of aging treatment plant infrastructure. The projects in this category include Equipment Replacement, Piping Renovations and Replacement, Electrical and Instrumentation Replacement, and Electrical Switchgear Project.

Regulatory

The goals of the Regulatory and Safety projects are to ensure that existing and future facilities meet safety and regulatory requirements. These projects cover a wide variety of subjects to improve facilities for safety reasons, to reduce emissions of pollutants to the environment, and to meet future regulatory requirements. Budgeted projects to address regulatory requirements include such projects as the Wet and Dry Scrubber Replacement, Headworks Screening Removal, Multiple Hearth Furnaces (MHF) Improvements (emissions requirements), Outfall Improvements, and Soil Remediation.

Sustainability/Energy/Optimization

The goals of the Sustainability/Energy/Optimization projects are to continue upgrading and improving the treatment plant’s existing infrastructure and systems to optimize for

energy use, lower maintenance costs, and prevent major failures. Projects in this category include Seismic Improvements, Centrifuge and Cake Pump Upgrades, Plant Energy Optimization, and Aeration System Improvements.

Capacity Expansion

The goals of the expansion projects are to upgrade and improve existing facilities to meet increasing flow due to in-fill, new development, and wet weather. Two wet weather capacity issues will be addressed: increased primary treatment capacity and the installation of new bar screens.

Treatment Plant Replacement and Rehabilitation Projects - 2015 Capital Improvement Plan:			
Project Title	**Year**	**Location**	**Description**
Piping Renovations and Replacement Program	2015 through 2025	Entire Treatment Plant	This project will improve the reliability of treatment plant piping systems above and below ground by inspection, renovation, and replacement where required. The Asset Management Plan will ultimately be used to provide recommendations for additional renewal and replacement needs of other major piping systems.
Treatment Plant Equipment Replacement	2015 through 2025	Entire Treatment Plant	Investigate and replace plant equipment to reduce maintenance costs, increase reliability, and improve treatment operations through replacement or reconditioning of technologically obsolete, worn out, maintenance-intensive equipment, or equipment that is no longer supported by its manufacturer.
Plant Electrical and Instrumentation Replacement	2015 through 2025	Entire Treatment Plant	The project will identify and correct deficiencies in the electrical, control and instrumentation systems in the Treatment Plant.
Treatment Plant Protective Coating Renovation	2017 through 2025	Entire Treatment Plant	The Asset Management Plan Project documented the condition of District facilities and equipment and will be used to recommend needed coating projects.

Treatment Plant Regulatory and Safety Projects - 2015 Capital Improvement Plan:			
Project Title	**Year**	**Location**	**Description**
Nitrification	2023	Aeration Basins and Clarifiers	The District may be required to remove ammonia from effluent flow in the future. This will require either an expansion of the aeration tanks and clarifiers or use of other technologies and significant capital expenditures.
Disinfection	2024	Ultraviolet Disinfection	Depending on future regulatory requirements and necessary modifications to the treatment plant, an alternative disinfection method may be required.

New Solids Handling Facilities (MHF/Digesters)	2023	Entire Treatment Plant	There are a number of potential regulatory changes that may be implemented within the next ten years. These changes may include requirements that will necessitate replacement of the existing multiple hearth furnaces with fluidized bed incinerators, or construction of anaerobic digesters or use of other available technology for treatment and disposal of sludge. These anticipated changes in solids handling will require significant capital expenditures in the next fifteen years.
TP Safety Improvements Program	ongoing	Entire Treatment Plant	Improvements will be made to enhance and provide a safe working environment throughout the treatment plant.
Future Regulatory Projects	2021	Entire Treatment Plant	Potential new regulations that impact operation of the treatment plant will emerge in the future. Studies will be undertaken and projects constructed to address these issues.
Primary Treatment Covers	2022	Primary Sed Basins	Primary tanks may need to be covered to meet regulations and reduce odors.
Treatment Plant Hazard Identification and Remediation, Phase 2	2020	Entire Treatment Plant	This project will identify and remediate hazardous materials within the treatment plant. This will minimize the exposure of the District's employees to hazardous materials during the course of their work.
Treatment Plant Soil Remediation, Phase 2	2023	Area east of existing aeration tanks	The soil east of the existing aeration tanks is contaminated. To expand the aeration tanks in preparation for plant conversion for nitrification, the contaminated soil will have to be either treated on site or removed and disposed at an appropriate-class landfill.

Treatment Plant Sustainability/Energy/Optimization Projects - 2015 Capital Improvement Plan:			
Project Title	**Year**	**Location**	**Description**
SCB Seismic Improvements	2022	Solids Conditioning Building	Design and construct seismic improvements based upon the recommendations provided in work done under the Treatment Plant Seismic Evaluation Project. The improvements will meet requirements of the latest building codes. Timing/need for this project will be coordinated with the recommendations from the New Solids Handling project.
Furnace Burner	2019	Solids Conditioning Building	Modifications will be made to ensure compliance with emerging regulations. This project will improve operational flexibility of the multiple hearth furnaces by adding auxiliary fuel delivery, piping and burners, and the ability to co-fire natural and landfill gases.
Warehouse Seismic Upgrade	2019	Warehouse/ Mechanical Shop	This project will design and construct seismic improvements based on the recommendations in the Treatment Plant Seismic Evaluation Project. The improvements will meet requirements of the latest building codes.
Alternative Energy Facilities, Phase 2	2022	Entire Treatment Plant	This project includes evaluation and replacement of the District's cogeneration unit with a new, more efficient power generation unit or use of an alternative energy source.
Aeration System Renovation, Phase 2	2019	Pump and Blower Building and Primary Tanks area	This project will design and construct small electric blowers for the grit chambers and will optimize use of existing steam blowers and modify the existing electric blower. Adding nitrification and/or nutrient removal to the treatment process will have a major impact on the aeration system and will need to be evaluated.
Secondary Process Improvements, Phase 2	2020	Aeration Basins and Clarifiers	This project will replace and modify existing piping and components of the secondary process to extend the life of the system and add flexibility to the selector channel.

Treatment Plant Sustainability/Energy/Optimization Projects - 2015 Capital Improvement Plan:			
Project Title	**Year**	**Location**	**Description**
Laboratory Seismic Upgrade	2024	Laboratory	This project will design and construct seismic improvements based on the recommendations from the Treatment Plant Seismic Evaluation Project. The improvements will meet requirements of the latest building codes.

Treatment Plant Capacity Expansion Projects - 2015 Capital Improvement Plan:			
Project Title	**Year**	**Location**	**Description**
Bar Screen for Third Wet Well	2025	Headworks	This project will install new bar screens on the third wet well in the headworks facilities. Installing new automatic bar screens on the third wet well will protect plant treatment facilities, in addition to providing plant operators additional flexibility in routing incoming plant flows.

COLLECTION SYSTEM PROGRAM

The Collection System Program includes projects needed to renovate aging sewers and to serve new development in the District's service area. Specific near-term and long-term goals include addressing capacity needs, improving the reliability of the District's pumping stations, and implementing projects to address renovation needs. The Collection System Master Plan and hydraulic model analysis have been used to identify and prioritize the collection system projects.

Since its inception in FY 2002-03, the District-Wide TV Inspection program has been used to identify line segments in need of renovation. The TV inspection results, coupled with CSO maintenance records and hydraulic analysis, are used to prioritize lines in need of renovation. The areas of concern are then grouped geographically and bid as District projects. The TV inspection program helps CSO to better prioritize and plan maintenance activities and has been moved to the Operations and Maintenance budget to reflect the ongoing and District-wide nature of the program.

The Collection System Master Plan is updated periodically District-wide and is revisited on a routine basis when changes in development patterns occur. This plan documents the sewers which will need to be upsized to increase capacity over approximately the next 30 years. As this capacity is needed, these lines are added to the capital program. The Collection System Program also provides for pumping station and force main improvements to increase station capacity, provide emergency power, and upgrade old equipment to increase capacity and improve reliability.

The Collection System Program includes projects to provide renovation of the collection system infrastructure and to serve new development in the District’s service area. Projects also provide improvements to pumping stations and force mains. These improvements provide capacity and renovation to reduce the likelihood of sewage overflows during dry and wet weather.

Renovation

The renovation subprogram goal is to address recurring renovation needs. In prior years, renovation needs were identified by CSOD through their critical line segments list. This information is now augmented by a comprehensive TV inspection program of the entire collection system that is now funded through the District’s Operations and Maintenance budget. This information is used to develop improved estimates of the short- and long-term renovation needs. The District’s collection system contains pipe reaches of many material types, sizes, ages, and other installation conditions that must be evaluated and replaced on an appropriate cycle. This cycle is determined by the condition of the pipe and overall risk to the District.

Regulatory Compliance/Planning/Safety

For the past few years, the District has anticipated more stringent regulations with respect to the operation and maintenance of the collection system to reduce overflows. The local Regional Water Quality Control Board staff implemented such a program in 2005, and the State Board implemented a similar requirement in 2006. Both regulatory

bodies require each collection system agency to have prepared a Sewer System Management Plan (SSMP). They require careful review and documentation of the District's continuing evaluation and planning for the collection system in the areas of capacity management, operation, and maintenance.

Deteriorating private sewer laterals are known to be a significant source of inflow and infiltration (I/I) throughout the wastewater industry. Addressing this issue will require substantial capital and extensive coordination. The District has been actively participating in discussions related to the reduction of private property I/I on the local and state levels. It is anticipated that more stringent regulations to address deteriorated private sewer laterals will be imposed in the not-too-distant future.

Expansion

As part of the upcoming Collection System Master Plan Update, the District's sewer system hydraulic model will be updated; capacity deficiencies will be identified and prioritized. Large-capacity projects that are currently planned over the next ten years include trunk sewer improvements in locations in Pleasant Hill, along Lancaster Road and the Walnut Boulevard corridor in Walnut Creek, Moraga Way in Orinda, in San Ramon (Schedule C Interceptor), and trunk sewers along Alhambra Avenue in Martinez. Developer sewers and other projects throughout the District relieve and expand capacity-limited pipe sections.

Pumping Stations

Significant funds have been invested in the pumping stations over the last several years, and by now all major pumping stations in the service area have been improved and/or renovated.

Collection System Renovation Projects - 2015 Capital Improvement Plan:			
Project Title	**Year**	**Location**	**Description**
Mt. Diablo Boulevard Main Improvements	2022	Mt. Diablo Blvd.	Rehabilitate or replace sewers within the Mt. Diablo Blvd. corridor in Walnut Creek, as identified in the Downtown Walnut Creek Facilities Plan.
Collection System Renovation Program	ongoing	Throughout the collection system	Systematically replace or renovate small-diameter sewers to minimize overflows, limit the quantity of rainfall entering the collection system, control future maintenance requirements and costs, and improve the level of service provided (as measured by stoppages, private property damage, impacted traffic, entry onto private property) to the residents/ratepayers. The ongoing TV inspection program will be the major source of these future projects.
Concrete Pipe Renovation	ongoing	Throughout the collection system	Identify, evaluate, and schedule remediation for concrete pipes.
Collection System Urgent Projects	ongoing	Throughout the collection system	Identify and restore sewers damaged or threatened by storms or found to be structurally deficient by CSO.
North Main Trunk Improvements	2019	N. Main from Civic Dr. and Carlback Ave.	Rehabilitate or replace sewers along North Main between Civic Drive and Carlback Avenue in Walnut Creek, as identified in the Downtown Walnut Creek Facilities Plan.
Locust Street Improvements	2019	Locust Street in Walnut Creek	Rehabilitate or replace sewers within the Locust Street corridor in Walnut Creek, as identified in the Downtown Walnut Creek Facilities Plan.
A-line Relief - 39-Inch Rehab	2021	A-line near Treatment Plant	Twenty million gallons of relief capacity for the existing A-Line near the treatment plant could be achieved by rehabilitating the old 39-inch Trunk No. 1.

Collection System Regulatory Compliance/Planning/Safety Projects - 2015 Capital Improvement Plan:			
Project Title	**Year**	**Location**	**Description**
Manhole Remote Level Monitoring	ongoing	Throughout the collection system	Identification and modification of manholes with the installation of remote level monitoring products to alert dispatch or on-call crew members via cell phone of a potential overflow or stoppage.
Collection System Planning	ongoing	Throughout the collection system	Identifies, evaluates, and schedules short- and long-term sewer capacity projects and provides design-flow rates for major facility. plans.

The Collection System Master Plan Update (2010) identified capacity deficiencies in the following trunk sewers. The expansion projects to correct these deficiencies are defined below. However, this Plan will be reevaluated under the Comprehensive Wastewater Master Plan in the Collection Systems.

Collection System Expansion Projects - 2015 Capital Improvement Plan:			
Project Title	**Year**	**Location**	**Description**
Contractual Assessment Districts	ongoing	Throughout the service area.	Provides a financing mechanism for the extension of public sewers into areas which are currently served by septic tanks.
Trunk Sewer Expansion Program	ongoing	Throughout the collection system	Systematically upsize and increase the capacity of trunk sewers to prevent sewer overflows and accommodate planned growth as identified in the Collection System Master Plan.
Lancaster Road, Walnut Creek, TR 13-600	2019	Lancaster Road and Meadow Road	Replace approximately 5,100 feet of the existing trunk sewer with 15- to 18-inch lines.
Moraga Way, Orinda TR10-200/300	2022	In El Camino Moraga, Del Rey School, Moraga Way, Orinda	Replace approximately 3,400 feet of existing main and trunk sewers with 12- to 18-inch lines.

Pleasant Hill Road Corridor	2017-	Pleasant Hill Road between Mercury Way and near Virginia Hills Drive	Replace approximately 2,800 feet of the existing trunk sewer with an 18-inch line.
Walnut Boulevard, Walnut Creek, TR 29-200, Phase 1	2023	In Walnut Blvd. from Homestead Ave. to Norlyn Drive	Replace approximately 7,000 feet of the existing trunk sewer with 18- to 24-inch lines.
Martinez Alhambra Avenue Trunks	2018	In Alhambra Ave. from Highway 4 to C St.	Replace approximately 5,700 feet of the existing trunk sewer with 18- to 24-inch lines.
Lafayette – Happy Valley Road	2020	In Happy Valley Rd. from Baker to Franklin	Replace approximately 3,200 feet of the existing trunk sewer with 15- to 18-inch lines.
Walnut Creek – Palmer Road	2023	In Palmer Rd. between Sylvan Rd. and Hawthorne Dr.	Replace approximately 1,000 feet of the existing trunk sewer with 15-inch line.
A-line Relief Interceptor, Phase 2B	2024	From Galaxy Way to Willow Pass Rd. along the bank of Walnut Creek	Approximately 4,000 feet of new 72-inch line.
Development Sewerage	ongoing	Throughout the collection system	Provides for capitalization of District labor and other expenses for planning, design, and construction of developer-installed and contributed main sewer facilities.
Diablo Road, Danville, Trunk 35-400, Phase 1	2024	Easement south of Highbridge Ln. to north of Green Valley	Replace approximately 600 feet of existing trunk sewer with 33-inch line.

Lafayette Lower Pleasant Hill Road Trunk	2024	Pleasant Hill Rd. from Old Tunnel Road to north of Olympic Blvd.	Replace approximately 3,500 feet of existing trunk sewer with 21-inch line.
Nelson Avenue Sewer Replacement	2024	Easement from Bates Ave. to Nelson Ave. in Concord	Replace approximately 1,700 feet of existing trunk sewer with 18-inch line.
San Ramon Schedule C Interceptor, Phase 2	2024	San Ramon between Norris Canyon Dr. and St. John Court	Replace approximately two miles of 36-inch gravity sewer.

Collection System Pumping Stations Projects - 2015 Capital Improvement Plan:		
Project Title	**Year**	**Description**
Lower Orinda Pumping Station Force Mains	2018	Evaluate the condition of the existing force mains, implement any needed rehabilitation, and install a third force main for reliability.
Orinda Crossroads Pumping Station Force Mains	2019	Evaluate the condition of the existing force mains and implement any needed rehabilitation.
Moraga Pumping Station Force Mains	2022	Evaluate the condition of the existing force mains and implement any needed rehabilitation.
Concord Industrial Pumping Station Replacement	2022	Evaluate the flows from the North Concord service area and additional flows that may come from the development of the Concord Naval Weapons Station. This information will be utilized to install a new station in the same or different location. Evaluate elimination of the Clyde and Bates Avenue Pumping Stations.
Clyde Parallel Force Main	2023	Evaluate the potential to eliminate the Clyde Pumping Station as the Concord Naval Weapons Station is developed. If the station cannot be eliminated, a new parallel force main will be constructed to ensure reliable operation of the pumping station.
PS Equipment and Piping Replacement	ongoing	Replace or recondition failed and obsolete pumps, piping, valves, electrical, instrumentation, and other support equipment.

Pump Station Safety Improvements Program	ongoing	Investigate the presence of hazardous materials requiring abatement and perform remediation efforts to reduce the potential for exposure.
Buchanan North Pumping Station Upgrades	2020	In case the Buchanan North PS is not replaced by a gravity sewer, it will need to be renovated.
Bates Boulevard Pumping Station Upgrades	2021	Evaluate and implement needed improvements.
Moraga Pumping Station Grinder	2017	Evaluate and install a grinder to eliminate rag and disposable wipe clogging issues.
Moraga Diesel Replacement	2024	Evaluate condition and complete rehabilitation or replacement of the existing diesel engine in order to allow adequate runtime and comply with emission requirements.

GENERAL IMPROVEMENTS PROGRAM

This program addresses the property and equipment needs of the District. Specific projects include property acquisition, improvements to the District's buildings and other District properties, information system and data management upgrades (computer hardware and software), and other miscellaneous equipment, including vehicles. This program also includes an Asset Management Program subprogram.

This General Improvements Program is dedicated to funding the property, equipment, office and corporation yard improvements, map production, and information technology needs of the District. The General Improvements Program also provides funding for activities associated with the capital program, such as capital project legal expenses and preparation of the CIB/CIP each year.

The focus of the General Improvements Program over the next ten years will be the equipment budget, improvements in the District's management information systems, seismic upgrades to various District buildings, and the continued development of an Asset Management Program. While consistent investment in our treatment and collection systems has occurred over the last 30 years, the District office and other buildings have not had consistent capital improvements. With most of these buildings over 25 years of age, the CIP includes more projects for renovations of the interiors and exteriors of the buildings, such as upgrading kitchen and lunch rooms, painting or sealing walls, replacing ceiling tiles, upgrading lighting fixtures, and replacing worn or outdated flooring and furniture, as well as bringing the buildings up to current seismic standards.

General Improvements Projects - 2015 Capital Improvement Plan		
Project Title	**Year**	**Description**
CSO Vehicle Maintenance Building	2018	Improvements to the CSO Vehicle Maintenance Building and the attached office structure were not included in the new CSOD Facility Project and will be undertaken separately. This project will evaluate alternatives for repair or replacement of the office building structure attached to the vehicle maintenance structure. Originally built in 1972, the office building has experienced significant differential settlement in the floor slab in recent years that needs to be addressed.
HOB Improvements – Long Term	ongoing	Provide capital improvements to the HOB facilities (interior and exterior) in Martinez.
General Security and Access	ongoing	This project includes installing alarm systems, adding gates in the perimeter security fencing, upgrading security cameras, improving general area lighting, installing fencing and signage.
Asset Management Plan	ongoing	This project is developing a comprehensive asset management program to optimize the lifecycle of the District's assets to deliver high quality and reliable services in a sustainable manner with an acceptable level of risk.
Information Technology Development	ongoing	This project centralizes the District's effort and funding in the development of computer and telecommunication technology within the District.

RECYCLED WATER PROGRAM

The District will continue to expand its urban landscaping projects in a cost-effective way by linking recycled water pipeline projects with sewer construction projects. Major projects include identifying the infrastructure needed to supply recycled water to the Concord Naval Weapons Station and construction of the Concord Landscape project. This project is not currently budgeted except for small expenditures to cover planning activities.

The Recycled Water Program includes projects to meet the District's goal of developing additional cost-effective recycled water customers.

Capital expenditures over the next ten years are primarily focused on planning to develop a large-scale industrial reuse project (such as the refineries or power plant use) and construction of the Concord Landscape Project, which was awarded state and federal grant funding. Budget is also included for completing the remaining connections to landscape irrigation customers in the Zone 1 Project Area located in Pleasant Hill, Concord, and Martinez near the I-680 freeway, and for planning work associated with providing recycled water to the proposed development at the Concord Naval Weapons Station site. No budget is currently provided for implementation of a large-scale industrial reuse project; however, budget is included for planning work and for continuing efforts to obtain outside funding assistance.

Recycled Water Projects - 2015 Capital Improvement Plan		
Project Title	**Year**	**Description**
Recycled Water Treatment Facilities Improvements	2015	This project will investigate and implement improvements to the District's Recycled Water Treatment Facilities.

CAPITAL IMPROVEMENT EXPENDITURES

This plan covers the ten-year period from FY 2015-16 through FY 2024-25. The plan includes projected expenditures totaling $ 413,398,950 (2015 dollars).

In addition to providing the basis for policy decisions concerning the District's long-range Capital Improvement Program and management of the Sewer Construction Fund, the CIP also serves as the framework for fee analysis and is the basis for the FY 2015-16 CIB (the first year of the CIP).

A summary of the ten years of planned expenditures by program, without inflation, is contained in Table 1.

Table 1: Ten-year Program Estimated Expenditures

Summary by Program (In 2015 Dollars)

	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	Total Project Cost
	1	2	3	4	5	6	7	8	9	10	Unescalated
Liquids Treatment Process	$ 2,063,000	$ 5,250,000	$ 7,170,000	$ 4,140,000	$ 6,090,000	$ 2,000,550	$ 700,000	$ 2,700,000	$ 15,730,000	$ 26,844,500	$ 72,688,050
Solids Handling Process Treatment	$ 1,000,000	$ 2,230,000	$ 6,700,000	$ 5,500,000	$ 400,000	$ -	$ 100,000	$ 4,575,000	$ 9,275,000	$ 17,175,500	$ 46,955,500
General Treatment Plant Improvements and Planning	$ 7,347,000	$ 5,340,000	$ 4,880,000	$ 8,075,000	$ 7,813,400	$ 8,166,000	$ 7,789,000	$ 6,085,000	$ 4,890,000	$ 9,890,000	$ 70,275,400
Total 10-Year for Treatment Plant Program	**$ 10,410,000**	**$ 12,820,000**	**$ 18,750,000**	**$ 17,715,000**	**$ 14,303,400**	**$ 10,166,550**	**$ 8,589,000**	**$ 13,360,000**	**$ 29,895,000**	**$ 53,910,000**	**$ 189,918,950**
Collection System R&R	$ 10,550,000	$ 9,075,000	$ 12,150,000	$ 14,625,000	$ 13,200,000	$ 13,400,000	$ 13,650,000	$ 14,000,000	$ 14,250,000	$ 14,500,000	$ 129,400,000
Pump Stations	$ 400,000	$ 850,000	$ 1,150,000	$ 2,180,000	$ 500,000	$ 700,000	$ 1,600,000	$ 2,100,000	$ 1,000,000	$ 1,000,000	$ 11,480,000
General CS Improvements and Planning	$ 4,200,000	$ 7,400,000	$ 3,350,000	$ 640,000	$ 640,000	$ 8,250,000	$ 4,250,000	$ 6,190,000	$ 5,490,000	$ 740,000	$ 41,150,000
CADS Development	$ 800,000	$ 800,000	$ 800,000	$ 1,200,000	$ 1,200,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 11,300,000
Total 10-Year for Collection System Program	**$ 15,950,000**	**$ 18,125,000**	**$ 17,450,000**	**$ 18,645,000**	**$ 15,540,000**	**$ 23,650,000**	**$ 20,800,000**	**$ 23,590,000**	**$ 22,040,000**	**$ 17,540,000**	**$ 193,330,000**
Future Recycled Water Development Planning	$ 100,000	$ 250,000	$ 400,000	$ 400,000	$ 400,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 2,800,000
Existing Filter Plant and ReW R&R	$ 350,000	$ 250,000	$ 100,000	$ 100,000	$ 100,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 2,150,000
Total 10-Year for Recycled Water Program	**$ 450,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 4,950,000**
Vehicles & Equip Acquisition	$ 500,000	$ 550,000	$ 550,000	$ 550,000	$ 550,000	$ 550,000	$ 550,000	$ 550,000	$ 550,000	$ 550,000	$ 5,450,000
Buildings/District Property	$ 732,000	$ 1,385,000	$ 370,000	$ 925,000	$ 370,000	$ 320,000	$ 320,000	$ 320,000	$ 340,000	$ 370,000	$ 5,452,000
Capital Legal Services	$ 70,000	$ 70,000	$ 70,000	$ 70,000	$ 70,000	$ 70,000	$ 70,000	$ 70,000	$ 70,000	$ 70,000	$ 700,000
Asset Management Program Development	$ 1,378,000	$ 1,100,000	$ 700,000	$ 650,000	$ 550,000	$ -	$ -	$ -	$ -	$ -	$ 4,378,000
Information Tech Devt	$ 1,300,000	$ 1,500,000	$ 1,835,000	$ 500,000	$ 1,235,000	$ 425,000	$ 400,000	$ 400,000	$ 400,000	$ 1,225,000	$ 9,220,000
Total 10-Year for General Improvements Program	**$ 3,980,000**	**$ 4,605,000**	**$ 3,525,000**	**$ 2,695,000**	**$ 2,775,000**	**$ 1,365,000**	**$ 1,340,000**	**$ 1,340,000**	**$ 1,360,000**	**$ 2,215,000**	**$ 25,200,000**
Total 10-Year CIP for all four Programs	**$ 30,790,000**	**$ 36,050,000**	**$ 40,225,000**	**$ 39,555,000**	**$ 33,118,400**	**$ 35,681,550**	**$ 31,229,000**	**$ 38,790,000**	**$ 53,795,000**	**$ 74,165,000**	**$ 413,398,950**

Table 2: FY 2015 Capital Improvement Plan

15-May-15

			FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	Total
Driver	**Unit Operation**	**Project Title**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
Treatment Plant Improvements													
Liquids Treatment Process													
		Secondary Improvements											-
Regulatory	Secondary Treatment	Near-Term Optimization, Ammonia Reduction; Secondary Process Improvements Ph 2, Replace or Line Buried Aeration Header (72" & 78") (Demo Plenums, Replace Diffusers)	-	-		765,000	2,590,000	2,000,550	-	-	-	-	5,355,550
R&R	Secondary Treatment	Secondary Clarifier Rehabilitation (Rehab Drives, RAS/WAS, Hydraulic Improvements, Gates, Scum Equipment & Piping)	-	-	-	-	-	-	-	500,000	1,000,000	2,785,500	4,285,500
Sustainability/Optimization	Secondary Treatment	Aeration Steam Turbines Replacement	-	-	-	-	-	-	-	500,000	1,000,000	1,900,000	3,400,000
R&R	Primary Sedimentation	Primary Treatment Renovation	563,000	-	-	-	-	-	-	-	-	-	563,000
R&R	Primary Sedimentation	Primary Treatment Renovation Phase 2 (rails, gates, miscellaneous mechanical, E&IC)	-	-	150,000	1,000,000	2,250,000		-	-	-	-	3,400,000
Capacity Expansion	Primary Sedimentation	Influent Pump No. 6 for Third Wetwell	-	500,000	-	-	-	-	-	-	-	-	500,000
Capacity Expansion		Soils Remediation								500,000	6,000,000	6,000,000	12,500,000
Regulatory	Primary Sedimentation	Screenings Removal (Include 1/4" Barscreens for all wet wells and screenings washer/compactors, conveyance)	400,000	500,000	6,000,000			-	-	-	-	-	6,900,000
Sustainability/Optimization	Primary Sedimentation	Aeration System Renovation Ph 2 (Electric Blower for Grit, Optimize Steam Blowers)	-	100,000	500,000	1,000,000	1,250,000		-	-	-	-	2,850,000
Sustainability/Optimization	Secondary Treatment	Pump & Blower Bldg Seismic Upgrade	1,100,000	4,000,000	-	-	-	-	-	-	-	-	5,100,000
R&R	UV Disinfection	Disinfection System & Support Replacement	-	150,000	520,000	1,375,000		-	-	-	-	-	2,045,000
Regulatory	Disinfection	Disinfection System Upgrade for CEC	-	-	-	-	-		700,000	1,200,000	7,730,000	16,159,000	25,789,000
		Liquid Treatment Improvements Total Project Cost	**2,063,000**	**5,250,000**	**7,170,000**	**4,140,000**	**6,090,000**	**2,000,550**	**700,000**	**2,700,000**	**15,730,000**	**26,844,500**	**72,688,050**
Solids Handling Process Treatment													
		Rehab Existing Solids Handling/Treatment											-
Regulatory	Sludge Handling/Incineration	Wet Scrubber Replacement (Includes provisions for reducing mercury recycling to headworks. Note: no dry scrubber replacement in this estimate)	500,000	-	4,000,000	4,400,000	-	-	-	-	-	-	8,900,000
R&R	Sludge Handling/Incineration	DAF Rehab (Rehab/Replace Pressurization System, TWAS pumps, Polymer System, Process Piping, Main Gear/Bearings)	-	-	-	-	-	-	-	-	-	-	-
R&R	Sludge Handling/Incineration	Near-Term Centrifuge & Cake Pump Upgrades Including Cake Solids Improvements Using Waste Heat (e.g. Therma-Flite) or Chemicals (e.g. Ferric Sulfate)	400,000	1,800,000	1,000,000	200,000	-	-	-	-	-	-	3,400,000
R&R	Sludge Handling/Incineration	MHF Burner Upgrade	-	150,000	700,000	900,000	400,000	-	-	-	-	-	2,150,000
Safety/ Regulatory	Sludge Handling/Incineration	Ash Facility Improvements	100,000	280,000	1,000,000	-	-	-	-	-	400,000	800,000	2,580,000
Regulatory	Sludge Handling/Incineration	New Solids Handling and TreatmentFacilities (Fluidized Bed, Digester Complex) (Including Replacement of Sludge Blending, Emergency Sludge Storage, Carbide Lime System, Demo Abandoned Digester, Dewatering Polymer System, Waste Heat Boilers, Auxiliary Boilers, Solids Handling Building/Seismic)	-	-	-	-	-	-	100,000	4,575,000	8,875,000	16,375,500	29,925,500
		Solids Treatment Improvements Total Project Cost	**1,000,000**	**2,230,000**	**6,700,000**	**5,500,000**	**400,000**	**-**	**100,000**	**4,575,000**	**9,275,000**	**17,175,500**	**46,955,500**
Other													
R&R	All	Asset Replacement Program (Includes Equipment Replacement, Piping Rnovations, Plant Elec.,Inst, Cable,Concrete/Pavement/ Coatings, Lab Upgrades and Repair and Urgent Blanket Contract	2,772,000	1,790,000	1,800,000	2,400,000	2,400,000	2,500,000	2,600,000	2,800,000	3,000,000	3,000,000	25,062,000
R&R/ Safety		Fire Alarm Rehab	200,000	600,000									800,000
Safety/ Regulatory	All	Safety Enhancement Phase 4	450,000										450,000
R&R	Final Effluent Pumping	Standby Effluent Pumps Refurb - ph 2	-	-	-	-		270,000	360,000	130,000	-	-	760,000
R&R	Final Effluent Pumping	Final Effluent Pump Rehabilitation (1@75MGD, 25 ft TDH)	-	-	-	-	-	-	-	-	-	800,000	800,000
Sustainability/Optimization		SCB Siesmic Emergency Plan	-										-
R&R	Sludge Handling/Incineration	Co-Gen Replacement	-	-	-	-	-	-	-		500,000	5,000,000	5,500,000
R&R	Sludge Handling/Incineration	Rehab Standby Diesel Engine/Generators (2@2000kW each)	-	-	-	-	-	-	600,000	1,365,000		-	1,965,000
Regulatory	Sludge Handling/Incineration	Replace Portable Diesel Pumps	-	-	-	250,000	-	-	-	-	-	-	250,000
Sustainability/Optimization	General	Plant Energy Optimization (PG&E SST Project)	360,000	200,000	400,000	400,000	-	-	-	-	-	-	1,360,000
Regulatory	Final Effluent Pumping	Outfall Improvements Phase 7 (Gaskets & Manways Rehab, Valves Rehab, Address Potential Outfall Easement Issues)	50,000	50,000	50,000	50,000	700,000	1,900,000	100,000	-	-	-	2,900,000
Regulatory	Final Effluent Pumping	Outfall Improvements Phase 8 (Gaskets & Manways & Valves Rehab)	-	-	-	-	-	50,000	50,000	50,000	50,000	-	200,000
R&R	Planning/Legal	Water Systems Condition Assessment (1W, 2W, 3W)	-	-	-	100,000		-	-	-	-	-	100,000
R&R	General	Odor Control Improvements	-	-	-	-	500,000	1,500,000	2,049,000	-	-	-	4,049,000
R&R	Sludge Handling/Incineration	Water Systems Improvements (1W, 2W, 3W) - Pumps, Storage, Piping	-	-	-	-		330,000	330,000	-	-	-	660,000
R&R	General	Plant Control System Network Upgrades	50,000	80,000	80,000	-	-	-	-	-	-	-	210,000
R&R	General	Plant Control System I/O Replacement	100,000	50,000	400,000	1,680,000	2,000,000	-	-	-	-	-	4,230,000
R&R	General	PLC Sys Upgrades	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000
R&R	General	TP Electrical Cable Repl	-	100,000	100,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	1,880,000
R&R	General	Switchgear Replacement - ph 2 (Class 1 Re-Condition Existing Breakers - Westinghouse, Eaton, etc)	350,000	250,000	250,000	-	-	-	-	-	-	-	850,000
R&R	General	Critical Switchgear Replacement (Substation 16 Replacement)	400,000	200,000	500,000	1,000,000	-	-	-	-	-	-	2,100,000
R&R	General	TP Facilities Renov Pgm (Bldgs, Roofs, Roads, Security, HVAC, Drainage)	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,000,000
Sustainability/Optimization	General	POB Seismic Upgrade	-	-	100,000	520,000	700,000	-	-	-	-	-	1,320,000
Sustainability/Optimization	General	Warehouse Seismic Upgrade	-	-	-	150,000	400,000	400,000	-	-	-	-	950,000
Sustainability/Optimization	General	Laboratory Seismic Upgrade	-	-	-	-	-	100,000	200,000	100,000	250,000	-	650,000
R&R	General	TP Hazard Identification & Remediation	100,000	-	-	200,000	100,000	100,000	100,000	100,000	100,000	100,000	900,000

Table 2: FY 2015 Capital Improvement Plan

15-May-15

Driver	Unit Operation	Project Title	FY 2015/16 1	FY 2016/17 2	FY 2017/18 3	FY 2018/19 4	FY 2019/20 5	FY 2020/21 6	FY 2021/22 7	FY 2022/23 8	FY 2023/24 9	FY 2024/25 10	Total
R&R	General	WC / Grayson Creek Levee Rehab	15,000	200,000	400,000	-	-	-	-	-	-	-	615,000
R&R	General	TP Safety Improvements Program	50,000	50,000	-	100,000	50,000	50,000	50,000	50,000	50,000	50,000	500,000
R&R	General	Treatment Plant Security Upgrades	60,000	5,000	50,000				-	50,000			165,000
R&R	General	Lab Upgrades and Equipment Replacement	200,000	150,000									350,000
R&R	General	Plant Cyber Security		15,000	50,000	100,000	-	16,000	-	-	-	-	181,000
Capacity Expansion	Planning/Legal	Treatment Plant Planning	250,000	350,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	2,600,000
Capacity Expansion	Planning/Legal	Treatment Plant Master Plan & Master Plan Updates	1,400,000	800,000	-	-	-	-	400,000	500,000	-	-	3,100,000
Capacity Expansion	Planning/Legal	Pilot Program - Innovation and Research	240,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	1,590,000
Capacity Expansion	Planning/Legal	Treatment Plant Soil Remediation Studies			-	50,000	10,000	10,000	10,000	-	-	-	80,000
R&R	Planning/Legal	Wet Weather Facilities Condition Assessment (Structures/Piping)		-	-	130,000	-	-	-	-	-	-	130,000
R&R	Planning/Legal	Odor Control Facilities Condition Assessment	-	-	-	5,000	13,400	-	-	-	-	-	18,400
		General Treatment Plant Improvements Total Project Cost	**7,347,000**	**5,340,000**	**4,880,000**	**8,075,000**	**7,813,400**	**8,166,000**	**7,789,000**	**6,085,000**	**4,890,000**	**9,890,000**	**70,275,400**
			10,410,000	**12,820,000**	**18,750,000**	**17,715,000**	**14,303,400**	**10,166,550**	**8,589,000**	**13,360,000**	**29,895,000**	**53,910,000**	**189,918,950**
Collection System Improvements													
R&R	Collection System	**Collection System Repair & Rehabilitation Projects**	**$ 10,550,000**	**$ 9,075,000**	**$ 12,150,000**	**$ 14,625,000**	**$ 13,200,000**	**$ 13,400,000**	**$ 13,650,000**	**$ 14,000,000**	**$ 14,250,000**	**$ 14,500,000**	**$ 129,400,000**
All		**Pump Stations**	**400,000**	**850,000**	**1,150,000**	**2,180,000**	**500,000**	**700,000**	**1,600,000**	**2,100,000**	**1,000,000**	**1,000,000**	**11,480,000**
Capacity Expansion	Planning/Legal	Coll Sys Modeling Upgrade (Configure/Calibrate Dynamic Model & Flow Monitoring)	400,000	200,000	250,000	-	-	-	-	-	-	300,000	1,150,000
Capacity Expansion	Planning/Legal	Comprehensive Collection System Master Plan Updates	600,000	600,000		-	-	-		350,000	350,000	-	1,900,000
Capacity Expansion	Planning/Legal	Collection System Planning	150,000	200,000	500,000	200,000	200,000	200,000	200,000	200,000	250,000	300,000	2,400,000
Regulatory	Collection System	Collection System Capacity Projects based on Reliable Capacity for Existing Customers	$ 3,050,000	$ 6,400,000	$ 2,600,000	$ 440,000	$ 440,000	$ 8,050,000	$ 4,050,000	$ 5,640,000	$ 4,890,000	$ 140,000	35,700,000
Planning	Collection System	**Collection System Planning and Other Improvements**	**4,200,000**	**7,400,000**	**3,350,000**	**640,000**	**640,000**	**8,250,000**	**4,250,000**	**6,190,000**	**5,490,000**	**740,000**	**41,150,000**
Capacity Expansion		**CAD and Development Sewerage**	**800,000**	**800,000**	**800,000**	**1,200,000**	**1,200,000**	**1,300,000**	**1,300,000**	**1,300,000**	**1,300,000**	**1,300,000**	**11,300,000**
			15,950,000	**18,125,000**	**17,450,000**	**18,645,000**	**15,540,000**	**23,650,000**	**20,800,000**	**23,590,000**	**22,040,000**	**17,540,000**	**193,330,000**
Recycled Water													
Future ReW Dvelopment													
Capacity Expansion	Planning/Legal	Recycled Water Development Planning & Other	100,000	185,000	400,000	400,000	400,000	250,000	250,000	250,000	250,000	250,000	2,735,000
Capacity Expansion	Planning/Legal	Recycled Water Distribution Surge Analysis	-	65,000			-	-	-	-	-	-	65,000
	ReW Planning	**Subtotal Future Recycled Water Development Planning**	**$ 100,000**	**$ 250,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 250,000**	**$ 250,000**	**$ 250,000**	**$ 250,000**	**$ 250,000**	**$ 2,800,000**
Maintain Existing Infrasturture													
Sustainability/Optimization	Buildings/District Property	Replace Decorative Pond w/ Low Water Use Landscaping	-		50,000	60,000	-	-	-	-	-	-	110,000
R&R	Planning/Legal	Recycled Water Distribution System Condition Assessments			-	-	-	-	-	-	-	-	-
R&R	Existing ReW Facility	Recycled Water Distribution System - Maltby Replacement			-	-	-	-	-	-	-	-	-
R&R	Existing ReW Facility	Recycled Water Distribution System Renovations Program	-	-	-	-				100,000	100,000	100,000	300,000
R&R	Existing ReW Facility	Recycled Water Treatment Facility Improvements (Replace Filter Media, Rehab/Replace Underdrains, Replace Backwash Troughs/Headers/Rotary Washers, Other Filter Internals)	200,000	250,000	100,000	100,000	100,000	250,000	250,000	150,000	150,000	150,000	1,700,000
R&R	Existing ReW Facility	Concord Landscape Project	150,000	-	-	-	-	-	-	-	-	-	150,000
	ReW	**Subtotal Existing Filter Plant and ReW R&R**	**$ 350,000**	**$ 250,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 250,000**	**$ 250,000**	**$ 250,000**	**$ 250,000**	**$ 250,000**	**$ 2,150,000**
			$ 450,000	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 4,950,000**
General Improvements													
R&R	**Vehicles & Equipment**	**Vehicles & Equip Acquisition**	**$ 500,000**	**$ 550,000**	**$ 550,000**	**$ 550,000**	**$ 550,000**	**$ 550,000**	**$ 550,000**	**$ 550,000**	**$ 550,000**	**$ 550,000**	**$ 5,450,000**
R&R	Buildings/District Property	District Properties (CSOD,HOB, POB,Warehouse, Annex,)	407,000	230,000	180,000	180,000	200,000	150,000	150,000	150,000	60,000	200,000	1,907,000
Sustainability/Optimization	Buildings/District Property	CSO Vehicle Maint Bldg	-	-	20,000	575,000	-	-	-	-	-	-	595,000
Sustainability/Optimization	Buildings/District Property	Server Room Relocation	100,000	1,000,000	-	-	-	-	-	-	150,000	-	1,250,000
R&R	Buildings/District Property	Buffer and Rental Property Improvements	225,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	495,000
Sustainability/Safety	Buildings/District Property	General Security/Safety Improvements	-	50,000	65,000	65,000	65,000	65,000	65,000	65,000	25,000	65,000	530,000
Capacity Expansion	Buildings/District Property	District Easements	-	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	675,000
		Buildings/District Property	**$ 732,000**	**$ 1,385,000**	**$ 370,000**	**$ 925,000**	**$ 370,000**	**$ 320,000**	**$ 320,000**	**$ 320,000**	**$ 340,000**	**$ 370,000**	**$ 5,452,000**
Capacity Expansion	**Planning/Legal**	**Capital Legal Services**	**$ 70,000**	**$ 70,000**	**$ 70,000**	**$ 70,000**	**$ 70,000**	**$ 70,000**	**$ 70,000**	**$ 70,000**	**$ 70,000**	**$ 70,000**	**$ 700,000**
Sustainability/Optimization	Asset Manage	CMMS	508,000	120,000									628,000
Sustainability/Optimization	Asset Manage	GDI-SMMS Replacement	270,000	80,000	-	-	-	-	-	-	-	-	350,000
R&R	Planning/Legal	Asset Management Program Development	600,000	900,000	700,000	650,000	550,000	-	-	-	-	-	3,400,000
		Asset Management Program Development	**$ 1,378,000**	**$ 1,100,000**	**$ 700,000**	**$ 650,000**	**$ 550,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 4,378,000**
Sustainability/Optimization	**IT-Software**	**Information Tech Devt**	**$ 1,300,000**	**$ 1,500,000**	**$ 1,835,000**	**$ 500,000**	**$ 1,235,000**	**$ 425,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 1,225,000**	**$ 9,220,000**
							-	-	-	-	-	-	
			$ 3,980,000	**$ 4,605,000**	**$ 3,525,000**	**$ 2,695,000**	**$ 2,775,000**	**$ 1,365,000**	**$ 1,340,000**	**$ 1,340,000**	**$ 1,360,000**	**$ 2,215,000**	**$ 25,200,000**
			30,790,000	**36,050,000**	**40,225,000**	**39,555,000**	**33,118,400**	**35,681,550**	**31,229,000**	**38,790,000**	**53,795,000**	**74,165,000**	**413,398,950**

Table 3: Ten-year Program Estimated Expenditures – Collection System Program

2015 CIP

Inflation Factor	0%	In 2015 Dollars	River Watch Projects

Program and Sub-Program		Estimated Expenditures in the Capital Plan										CIP
		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	(10-Year) Total
1 - Renovation and Rehabilitation												
5991	Pleasant Hill Sewer Renovations - ph 2	$ 66,000	$ 15,000	$ 50,000	$ 2,750,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,881,000
5982	Pipeburst Blanket Contract	$ 260,000	$ 275,000	$ 200,000	$ 200,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 1,385,000
5999	CIPP Blanket Contract	$ 125,000	$ 150,000	$ 150,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 950,000
8410	Cathodic Prot Sys Repl - 12-13 thru 21-22	$ 50,000	$ 50,000	$ -	$ -	$ 50,000	$ -	$ -	$ 100,000	$ 100,000	$ 100,000	$ 450,000
8415	Martinez Sewer Renovations Phase 4	$ 3,100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,100,000
8417	Survey Monument Installation LT	$ 50,000	$ 75,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 525,000
pCS40	Coll Sys Urgent Proj - 2013-14 thru 22-25	$ 275,000	$ 200,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 1,275,000
8421	Lafayette Sewer Renovations - ph 9	$ 2,524,000	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,534,000
8423	North Orinda Sewer Renovations - ph 6	$ 600,000	$ 3,100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,700,000
pCS16	Collection System Renovation Program	$ -	$ 100,000	$ 200,000	$ 100,000	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ 500,000
none	Lafayette Sewer Renovations - ph 10	$ 550,000	$ 3,100,000	$ 250,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,900,000
8424	M-1 CIPP Lining Project	$ 2,500,000	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,700,000
8422	Walnut Creek Sewer Renovations - ph 11	$ 150,000	$ 500,000	$ 3,100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,750,000
none	Martinez Phase 5	$ 150,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 150,000
none	Walnut Creek Sewer Renovations - ph 12	$ -	$ 150,000	$ 500,000	$ 3,200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,850,000
none	Diablo Renovations - ph 3	$ -	$ -	$ -	$ -	$ 300,000	$ 2,800,000	$ -	$ -	$ -	$ -	$ 3,100,000
none	Lafayette Sewer Renovations - ph 11	$ 150,000	$ 500,000	$ 3,100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,750,000
none	South Orinda Sewer Renovations - ph 6	$ -	$ 650,000	$ 3,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,650,000
none	Lafayette Sewer Renovations - ph 12	$ -	$ -	$ 150,000	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 650,000
none	Walnut Creek Sewer Renovations - ph 13	$ -	$ -	$ 650,000	$ 3,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,650,000
none	South Orinda Sewer Renovations - ph 7	$ -	$ -	$ 650,000	$ 3,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,650,000
pCS32	Pleasant Hill Sewer Renovations - ph 3	$ -	$ -	$ -	$ -	$ 300,000	$ 2,800,000	$ -	$ -	$ -	$ -	$ 3,100,000
none	South Orinda Sewer Renovations - ph 8	$ -	$ -	$ -	$ 300,000	$ 2,000,000	$ 1,000,000	$ -	$ -	$ -	$ -	$ 3,300,000
none	Martinez Sewer Renovations - ph 5	$ -	$ -	$ -	$ 250,000	$ 3,100,000	$ -	$ -	$ -	$ -	$ -	$ 3,350,000
none	Pleasant Hill Sewer Renovations - ph 4	$ -	$ -	$ -	$ 300,000	$ 2,800,000	$ -	$ -	$ -	$ -	$ -	$ 3,100,000
none	North Orinda Sewer Renovations - ph 7	$ -	$ -	$ -	$ 300,000	$ 2,700,000	$ -	$ -	$ -	$ -	$ -	$ 3,000,000
none	Walnut Creek Sewer Renovations - ph 14	$ -	$ -	$ -	$ 500,000	$ 1,200,000	$ 1,800,000	$ -	$ -	$ -	$ -	$ 3,500,000
pCS23	Walnut Creek Civic Center Main Improvs	$ -	$ -	$ -	$ -	$ 350,000	$ 3,500,000	$ -	$ -	$ -	$ -	$ 3,850,000
none	Locust Street Improvements	$ -	$ -	$ -	$ -	$ -	$ 300,000	$ 2,800,000	$ -	$ -	$ -	$ 3,100,000
none	North Main Trunk Improvements	$ -	$ -	$ -	$ -	$ -	$ 100,000	$ 600,000	$ 3,100,000	$ -	$ -	$ 3,800,000
none	Walnut Creek Sewer Renovations - ph 15	$ -	$ -	$ -	$ -	$ -	$ 260,000	$ 2,600,000	$ -	$ -	$ -	$ 2,860,000
none	A-Line Relief-39 Inch Rehab	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000	$ 2,600,000	$ 3,100,000	$ 5,900,000
pCS06	Mount Diablo Blvd Main Improvements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000	$ 3,000,000	$ 3,000,000	$ 6,200,000
none	Collection System Renovation Program - LT	$ -	$ -	$ -	$ -	$ -	$ 540,000	$ 7,350,000	$ 10,100,000	$ 8,250,000	$ 8,000,000	$ 34,240,000
none	Lafayette Sewer Renovations - ph 13	$ -	$ -	$ -	$ -	$ -	$ -	$ -				$ -
none	Walnut Creek Sewer Renovations - ph 17	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			$ -
none	Walnut Creek Sewer Renovations - ph 16	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			$ -
pCS99	Watershed 44 Creek Xing Stabilization	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			$ -
	Subtotal Renovation	**$ 10,550,000**	**$ 9,075,000**	**$ 12,150,000**	**$ 14,625,000**	**$ 13,200,000**	**$ 13,400,000**	**$ 13,650,000**	**$ 14,000,000**	**$ 14,250,000**	**$ 14,500,000**	**$ 129,400,000**

Table 3: Ten-year Program Estimated Expenditures – Collection System Program

2015 CIP

Inflation Factor	0%	In 2015 Dollars		River Watch Projects						

Program and Sub-Program		Estimated Expenditures in the Capital Plan										CIP
		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	(10-Year) Total
2 - Reg. Compliance/Planning												
5962	Manhole Remote Level Monitoring	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5993	Forcemain Assessment		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8418	Coll Sys Modeling Upgr 12-13 thru 17-18	$ 400,000	$ 200,000	$ 250,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 300,000	$ 1,150,000
8419	Coll Sys Planning - FY2013-14 to 2022-23	$ 750,000	$ 800,000	$ 500,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 500,000	$ -	$ -	$ 3,150,000
none	Manhole Remote Level Monitoring - LT		$ -		$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 350,000
none	Collect Sys Planning - FY 23-24 to 32-33	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 550,000	$ 250,000	$ 800,000
	Subtotal Regulatory Compliance and Safety	**$ 1,150,000**	**$ 1,000,000**	**$ 750,000**	**$ 200,000**	**$ 200,000**	**$ 200,000**	**$ 200,000**	**$ 550,000**	**$ 600,000**	**$ 600,000**	**$ 5,450,000**
3 - Expansion												
pCS33	Trunk Sewer Expansion Program	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 140,000	$ 140,000
8412	Pleasant Hill - Grayson Creek Trunk	$ 3,050,000	$ 6,400,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 9,450,000
none	Martinez Alhambra Avenue Trunks	$ -	$ -	$ -	$ 40,000	$ 200,000	$ 2,500,000	$ 250,000	$ -	$ -	$ -	$ 2,990,000
pCS08	Lancaster Rd WC, Tr 13-600	$ -	$ -	$ -	$ -	$ 200,000	$ 2,500,000	$ -	$ -	$ -	$ -	$ 2,700,000
none	Lafayette - Happy Valley Road Sewer	$ -	$ -	$ -	$ -	$ 40,000	$ 2,500,000	$ -	$ -	$ -	$ -	$ 2,540,000
pCS18	Trunk Sewer Expansion Program - LT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
pCS20	Moraga Way Orinda, Tr 10-200/300	$ -	$ -	$ -	$ -	$ -	$ 400,000	$ 2,800,000	$ -	$ -	$ -	$ 3,200,000
pCS38	Pleasant Hill Road Corridor	$ -	$ -	$ 2,600,000	$ 400,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,000,000
none	A-Line-Phase 2B	$ -	$ -	$ -	$ -	$ -	$ -		$ 100,000	$ 1,600,000	$ -	$ 1,700,000
pCS10	Walnut Creek - Palmer Road	$ -	$ -	$ -	$ -	$ -	$ 150,000	$ 500,000	$ 2,300,000	$ -	$ -	$ 2,950,000
none	WC-Walnut Blvd Corr-Trunk 29-200	$ -	$ -	$ -	$ -	$ -	$ -	$ 500,000	$ 2,300,000	$ -	$ -	$ 2,800,000
none	Diablo Rd Dan, Tr 35-400 Phase 1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 150,000	$ 320,000	$ -	$ 470,000
none	Lafayette Lower Pleasant Hill Road Trunk	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 270,000	$ -	$ 270,000
none	Danville-Diablo Road Corridor	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 100,000	$ 500,000	$ -	$ 600,000
none	Nelson Ave Sewer Repl	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 90,000	$ 600,000	$ -	$ 690,000
pCS09	San Ramon Sched C Interceptor - ph 2	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 600,000	$ 1,600,000	$ -	$ 2,200,000
	Subtotal Expansions	**$ 3,050,000**	**$ 6,400,000**	**$ 2,600,000**	**$ 440,000**	**$ 440,000**	**$ 8,050,000**	**$ 4,050,000**	**$ 5,640,000**	**$ 4,890,000**	**$ 140,000**	**$ 35,700,000**
3 - Expansion (CAD and Developpers Sewerage												
8402	Contractual Assessment Districts	$ 100,000	$ 100,000	$ 100,000	$ 500,000	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ 1,300,000
none	CAD: Contractual Assessment Districts - LT	$ -	$ -	$ -	$ -	$ -	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 400,000	$ 2,400,000
8420	Devt Sewerage - 2013-14 thru 17-18	$ 700,000	$ 700,000	$ 700,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,100,000
pCS17	Devt Sewerage 2018-19 thru 2022-23	$ -	$ -	$ -	$ 700,000	$ 700,000	$ 800,000	$ 800,000	$ 800,000	$ -	$ -	$ 3,800,000
none	Devt Sewerage 2023-24 thru 27-28	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 800,000	$ 900,000	$ 1,700,000
	Subtotal Expansions Related to CASD and Deveop Swg	**$ 800,000**	**$ 800,000**	**$ 800,000**	**$ 1,200,000**	**$ 1,200,000**	**$ 1,300,000**	**$ 1,300,000**	**$ 1,300,000**	**$ 1,300,000**	**$ 1,300,000**	**$ 11,300,000**
	Subtotal All Expansions	**$ 5,000,000**	**$ 8,200,000**	**$ 4,150,000**	**$ 1,840,000**	**$ 1,840,000**	**$ 9,550,000**	**$ 5,550,000**	**$ 7,490,000**	**$ 6,790,000**	**$ 2,040,000**	**$ 47,000,000**

Table 3: Ten-year Program Estimated Expenditures – Collection System Program

2015 CIP

Inflation Factor	0%	In 2015 Dollars		River Watch Projects							
Program and Sub-Program	Estimated Expenditures in the Capital Plan										CIP
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	(10-Year) Total
4 - Pump Stations											
5941	PS Equip & Piping Repl	$ 100,000	$ 100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000
8406	Pump Station Security Improvements	$ -	$ -	$ -	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ -	$ -	$ -	$ 120,000
8408	Pumping Stations Master Plan	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
pCS31	Pump Station Hazard Identification	$ -	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 90,000
pCS34	Misc. Force Main Improvements	$ -	$ 70,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 70,000
pCS29	Fairview / Maltby Upgrades	$ 150,000	$ 120,000	$ 70,000	$ 350,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 690,000
pCS28	Flush Kleen Pumping Station Improv	$ -	$ -	$ 75,000	$ 350,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 425,000
pCS36	Pumping Station Arc Flash Stdy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
none	Pump Station Safety Improv - LT	$ -	$ 50,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 530,000
8414	Moraga/ Crossroads Pumping Stations	$ 150,000	$ 500,000	$ 440,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,090,000
pCS24	Lower Orinda PS Force Main	$ -	$ -	$ 415,000	$ 1,200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,615,000
none	PS Equip & Piping Repl - LT	$ -	$ -	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 640,000
none	Buchanan North PS Upgrades	$ -	$ -	$ -	$ 100,000	$ 260,000	$ -	$ -	$ -	$ -	$ -	$ 360,000
none	Bates Blvd PS Upgrades	$ -	$ -	$ -	$ -	$ 60,000	$ 260,000	$ -	$ -	$ -	$ -	$ 320,000
none	Moraga Pumping Station Force Main	$ -	$ -	$ -	$ -	$ -	$ 260,000	$ 1,320,000	$ 1,150,000	$ -	$ -	$ 2,730,000
none	Clyde Parallel Force Main	$ -	$ -	$ -	$ -	$ -	$ -	$ 100,000	$ 800,000	$ -	$ -	$ 900,000
none	Moraga Diesel Repl	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 450,000	$ 450,000	$ 900,000
none	Concord Industrial Pumping Station	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000	$ 200,000	$ 400,000
pCS39	Orinda Crossroads PS Force Main	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000	$ 200,000	$ 400,000
	Subtotal Pumping Station	**$ 400,000**	**$ 850,000**	**$ 1,150,000**	**$ 2,180,000**	**$ 500,000**	**$ 700,000**	**$ 1,600,000**	**$ 2,100,000**	**$ 1,000,000**	**$ 1,000,000**	**$ 11,480,000**
TOTAL	**Collection System Program Total**	**$ 15,950,000**	**$ 18,125,000**	**$ 17,450,000**	**$ 18,645,000**	**$ 15,540,000**	**$ 23,650,000**	**$ 20,800,000**	**$ 23,590,000**	**$ 22,040,000**	**$ 17,540,000**	**$ 193,330,000**

Comprehensive Wastewater Master Plan

Beginning in Fiscal Year 2015-16, the District plans to undertake a Comprehensive Wastewater Master Plan project. This project will develop a Comprehensive Wastewater Master Plan (CWMP) that determines the future direction, capital improvement needs, and priorities for the District's collection system, wastewater treatment plant, and recycled water facilities.

The majority of the District's 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 in the early 1900's. The District recognizes the need to address aging infrastructure and, as a result, is developing an Asset Management Plan. Due to potential changes in future State and/or Federal water, air, and solids regulations, there is a need to develop a Comprehensive Wastewater Master Plan that coordinates regulatory-driven changes with aging infrastructure needs and other capacity-related and optimization improvements. Potential regulatory changes include:

- Changes to existing final effluent limits and new final effluent limits for 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 biosolids handling/management and disposal regulations;
- Indirect and direct potable reuse requirements; and
- Collection system regulatory requirements.

A key deliverable of the CWMP will be a recommended Capital Improvement Plan for the next 20-year planning horizon. The recommended CIP will include descriptions, rationales, and estimated costs for collection system and wastewater treatment plant capital improvement projects and on-going programs in order to address aging infrastructure, meet existing and anticipated regulatory requirements, accommodate planned growth, optimize energy use, and implement the District's vision for a "plant of the future" that is consistent with the District's Strategic Plan. For example, the CWMP will be a critical tool used by the District to implement the following strategies from the District's Strategic Plan (FY 2014/2016):

- Meet Regulatory Requirements for the Good of the Community and Environment by striving to achieve 100% permit compliance in air, water, land and other regulations and by striving to reduce the number of sanitary sewer overflows by continuing Best Management Practices.

- Be a Leader in the Wastewater Industry by using sustainable practices that minimize waste, maximize resources, protect the ratepayer, improve the community, and embrace innovation.
- Maintain Reliable Wastewater Infrastructure by updating the Capital Improvement Program through prioritization, risk analysis, while focusing on the sustainability of customer service, environmental needs, and economic demands.

The CWMP is *critical* for maintaining a high level of service, establishing long-term fiscally responsible policies for our customers, and providing a clear direction for the District. To accomplish this, the CWMP will:

1. Confirm CIP projects, costs, and site layouts for future facilities.
2. Identify 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.
3. Identify triggers for implementing applied research (if applicable), preliminary design, design, and construction of the recommended capital improvement projects in order to determine efficient “just-in-time” project implementation.
4. Identify policies, programs, and guidelines to address overall program implementation including project prioritizations, implementation costs, project delivery methods, potential funding sources, and an estimated schedule for implementing plan elements.
5. Confirm and incorporate operations, maintenance, and energy management strategies.
6. Accelerate and coordinate condition assessments with implementation of the asset management plan and confirm long-term repair and replacement strategies.

Potential future projects are not currently included in the District’s CIP. The District’s CIP will be updated annually as projects are clarified and coordinated with the District’s CWMP.

CAPITAL IMPROVEMENT BUDGET/CAPITAL IMPROVEMENT PLAN

Finance and Revenue

TABLE OF CONTENTS

Revenue and Finance

Sewer Construction Fund Revenues and Expenditures

The District's Capital Program is maintained in the Sewer Construction Fund (SCF). Revenue from several sources and capital projects are tracked and accounted for within the Fund. Debt financing for projects is accounted for in the Debt Service Fund. In order to ensure that adequate funds are available, each year the expected revenues are reviewed and compared with planned expenditures and a determination is made whether additional revenues or debt financing are needed.

Revenue Sources

Capital Improvement revenue sources include the following:

Ad Valorem (Property) Tax Revenue

Property Tax is used to fund Debt Service first, and the remainder is used for capital projects. The State of California has reduced our share of property tax over the years and most recently the State borrowed a portion of our property tax funds. Proposition 1A, passed by the California voters in November 2004, allowed the State of California to divert property tax revenues from local government for two years, 2004-05 and 2005-06. Effective 2006-07, Proposition 1A dictates that no additional property tax diversion will occur. The State can, however, borrow a portion of the tax revenue twice in the next ten years, but must pay it back, with interest, within three years.

Sewer Service Charge Revenue (SSC)

SSC are the one revenue source that is completely within the discretion of the District Board of Directors. Therefore, each year staff evaluates the District's finances and recommends a SSC rate it determines to be prudent to sustain the Capital Improvement Program without the need for large SSC rate increases or substantial debt financing in the future. If an increase in the SSC rate is proposed, the Board of Directors conducts a public hearing, and considers all available information in coming to a final decision on setting the SSC rate.

The capital component of the Sewer Service Charge (SSC) has traditionally been used to supplement all other sources of revenue as needed to fund the capital program. When the District lost 40% of the property tax revenue in 1992-93 it compensated by adding a capital project component to the SSC. Since then, the capital component of

the SSC has varied each year, depending on the capital revenue available from other sources and the planned expenditures.

Capacity Fee and Pumped Zone Fee Revenue

A capacity fee is paid by each new connector to the District. This fee represents the cost of buying into the existing assets of the District and is intended to equalize the investment in District assets among current and new users. Capacity fee revenue projections from new connections have been adjusted to reflect changes in the housing market, which is difficult to predict and can have a substantial impact on the available revenues for the capital program. When the housing market cools, revenue from capacity fees and pumped zone fees is reduced, and has to be made up by additional revenue from sewer service charges. Capacity fees are the most volatile revenues as they are directly impacted by development within the Districts service area.

Reimbursements

A major source of revenue to the SCF is reimbursements from others, which consist primarily of reimbursements from the City of Concord, served by the District under contract. The District calculates the amount of the reimbursement according to the written agreement, and it is based on the percentage of the District's flow attributable to Concord dischargers. This revenue category also includes proceeds from the sale of recycled water and revenue from permit fees and associated fees collected at the District's Permit Counter.

Interest on Investments

A projection of the rate of return on the invested Sewer Construction Funds Available is needed to predict interest revenues in the future. The investment strategy of the District is designed to attain a market-average rate of return while exercising a minimum of risk. The District's current allowed areas of investment are the Local Agency Investment Fund of the State of California United States, Treasury Bills and Notes, Commercial Paper and CD's. Currently the weighted average of the portfolio is less than 1%.

The following chart includes estimated revenue for each category for FY 2015-16 along with planned capital expenditures and estimated Sewer Construction Funds Available.

Table 1: SEWER CONSTRUCTION FUND REVENUES AND EXPENDITURES

A summary of projected FY 2015-16 Capital Improvement Program revenue and expenditures is presented below:

Revenues	
Capacity Fees	$ 6,184,000
Pumped Zone Fees	450,000
Interest	187,000
Ad Valorem Taxes	10,060,000
Sewer Service Charges	8,110,000
Reimbursements from Others:	
City of Concord	3,150,000
Recycled Water Sales	257,000
Developer Fees, Charges, Other	369,500
Total Revenues *	$ 28,767,500
Expenditures	
Treatment Plant Program	$ 10,410,000
Collection System Program	15,950,000
General Improvements Program	3,980,000
Recycled Water Program	450,000
Total Expenditures	$ 30,790,000

A summary of Sewer Construction Funds Available Impact is Presented Below:

Projected Revenues	$ 28,767,500
Projected Expenditures	(30,790,000)
Draw From Funds Available	$ (2,022,500)

More specific information regarding expenditure categories is included in the Capital Improvement Plan.

* 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.

Debt Financing

The District has on occasion used debt financing to fund projects. A separate Debt Fund has been established to collect revenue and repay debt; therefore, debt repayment is not reflected in Capital Program cash flow projections.

History: In December of 1994, $25,000,000 in long-term (20 years) debt financing was completed to fund several large projects including the Pleasant Hill Relief Interceptor and Outfall Improvement projects. The 1994 debt was refunded with 1998 refunding Revenue Bonds to achieve significant savings in debt service costs through lower interest rates. In 1998-1999 the District received a total of $2,916,872 in loans for the recycled water program from the State of California. In 2002, an additional $16,600,000 million in long-term (20 years) debt financing was completed to allow escalation of schedules for several major projects needed to serve the Dougherty Valley in San Ramon. In 2009, the District issued $54,125,000 in Certificates of Participation (COP) which retired the 1998 and 2002 debt to take advantage of favorable bond interest rates, and included $30 million in debt which was issued to fund some large, needed one-time projects.

FUNDING PRINCIPLES

The District has developed and maintained a capacity fee system, which equitably divides the cost obligations of the capital program between the existing customers of District facilities and new customers of these facilities. Under this “fair share” approach, existing customers, primarily through property taxes and a capital component of the annual SSC, and new users through capacity fees based on a proportional “buy-in” to the current value of all existing capital assets, fund facilities upgrade, renovation and replacement costs as well as expansion projects needed to accommodate growth.

The Board of Directors has generally preferred a pay-as-you-go financing approach, raising sewer service charge rates as needed to fund the capital program. Occasionally, the District has bond-financed capital projects, particularly when such projects are large, one- time expenditures that will benefit current and future ratepayers.

Going forward, the two discretionary sources of capital revenue for the District Board are sewer service charge and bond financing. Thus, any reduction in capital revenue from other sources, such as capacity fees, would have to be made up by an increase in the sewer service charge, by a like reduction in expenditures on the capital program, or by borrowing.