# 2012-13
# Capital Improvement
# BUDGET
# &
# TEN-YEAR PLAN

Central Contra Costa Sanitary District

**Central Contra Costa Sanitary District**
# FY 2012-13 CAPITAL IMPROVEMENT BUDGET

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**Central Contra Costa Sanitary District**
FY 2012-13 CAPITAL IMPROVEMENT BUDGET

## SUMMARY

Central Contra Costa Sanitary District's Capital Improvement Budget (CIB) shows planned expenditures of $32,343,000 for Fiscal Year (FY) 2012-13 from the Sewer Construction Fund for planning, design, and construction of capital projects in four CIB programs. The total funding authorization required for projects in the CIB for FY 2012-13 is $40,950,000.

The capital program is designed to meet the following goals:

- Protect public health and the environment,
- Maintain existing assets,
- 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.

## MAJOR PROJECT EMPHASIS

Although the CIB is made up of funding estimates for many individual projects, each year there are several major projects which together account for a majority of total estimated capital expenditures. In FY 2012-13, the emphasis will be on 12 large projects, which together account for $22,502,000, or 70 percent of the total estimated expenditures. Estimated FY 2012-13 expenditures for each of these projects are noted below.

**Seismic Improvements for HOB**
**FY 2012-13: $4,500,000 Estimated total project cost: $6,013,000**
Structural steel frames constructed before the most recent Northridge earthquake may weaken during an earthquake and be unable to resist the forces generated during a seismic event. These steel framing problems in combination with the building's flexibility are the primary reasons for the HOB's seismic vulnerability. The HOB will be retrofitted to ensure a life-safety level of structural performance. In addition to seismic improvements, the project includes new carpet and interior/exterior painting, ADA improvements, upgrades to the electrical and data communication systems, office space/cubicle improvements, a kitchenette on the third floor, minor upgrades to the HVAC system and potentially the plumbing of REW to bathroom fixtures.

**Concord Landscape Project**
**FY 2012-13: $3,400,000 Estimated total project cost: $4,001,000**
The project would consist of construction of about 2.5 miles of new recycled water distribution piping and about 34 customer connections. CCCSD has acquired approximately $1,100,000 in grant funding from Department of Water Resources (State Prop 84) and from the United States Bureau of Reclamation (Title 16).

**Pump & Blower Building Seismic Upgrade**
**FY 2011-13: $3,000,000 Estimated total project cost: $4,455,000**
In 2009, a seismic evaluation of treatment plant facilities was completed. Included in the evaluation are recommendations to bring the Pump and Blower Building in line with current seismic design standards, which this project will accomplish. Construction will entail installation of shear walls and buttresses and is expected to start in late 2012.

**2012 CIPP Lining Project**
**FY 2012-13: $2,000,000 Estimated total project cost: $2,160,000**
This project will renovate approximately 2600 feet of existing large diameter deteriorated corrugated metal and reinforced concrete pipelines located in South Main between Hill Road and Lilac Drive in Walnut Creek utilizing cured in place pipe (CIPP), a trenchless rehabilitation technology. Approximately 1450 feet of large diameter deteriorated corrugated metal pipe will also be renovated in Lancaster Road between Westwood Court and Orchard Lane using CIPP. An additional 3800 feet of large diameter reinforced concrete pipe will be renovated on the Shell Refinery Property and east along Marina Vista to Highway I-680 in Martinez using the same CIPP technology. Thirty two hundred feet of 42-inch RCP will also be lined on the District's plant site.

**North Orinda Sewer Renovations – Phase 4**
**FY 2011-12: $1,806,000 Estimated total project cost: $2,256,000**
This project will replace or renovate approximately 13,000 feet of sewer pipelines predominately in the El Toyonal and Claremont Avenue areas of North Orinda.

**Lafayette Sewer Renovations – Phase 8**
**FY 2011-12: $1,800,000 Estimated total project cost: $1,991,000**
The project will renovate12,000 feet of small-diameter sewers predominately in the Upper Happy Valley Road area from Cowan Road to Los Arabis.

**Walnut Creek Sewer Renovations – Phase 9**
**FY 2011-12: $1,800,000 Estimated total project cost: $2,121,000**
This project will replace/rehabilitate 12,000 feet of small-diameter sewers predominately in the Rudgear Road, Hawthorne Drive and Mountain View Blvd. areas.

**Primary Treatment Renovation**
**FY 2011-12: $1,000,000 Estimated total project cost: $10,051,000**
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 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, constructing a new level control structure, and the odor control system will be evaluated and modified as necessary.

**TV Inspection Program, Phase 2**
**FY 2012-13: $1,000,000 Estimated total project cost: $9,000,000**
The TV inspection is a large scale, multi-year effort to CCTV inspect the entire CCCSD collection system. Phase 2 of the TV inspection program will inspect all sewers in the service area in the next 5 years where initial inspections or maintenance records indicate follow-up inspection work would be useful. Sewers on a routine maintenance schedule will be inspected once every 10 years. The inspection data will be used to organize and prioritize sewer renovation projects and modify CSOD's maintenance schedules. The initial emphasis of Phase 2 will be sewers in the Lafayette, Orinda and Walnut Creek areas.

**Outfall Improvements – Phase 6**
**FY 2012-13: $815,000 Estimated total project cost: $1,600,000**
This project will inspect both the land and submarine portions of the treatment plant outfall as allowed by the current NPDES Permit, and will make repairs as needed. In addition a new final effluent meter/structure will be constructed.

**Treatment Plant Piping Renovations – Phase 7**
**FY 2012-13: $700,000 Estimated Total project cost: $725,000**
This phase of the Piping Renovation Program will replace the centrate piping at the centrifuges, discharge piping and valves at the south RAS pump station, hypochlorite piping in the RAS pump stations, the ash hopper dust collector, ventilation and odor control system improvements at the sludge truck loading facility, sluice gates at the filter plant forebay and flow and pH meters on the scrubber water pipelines.

**2012-13 Development Sewerage**
**FY 2012-13: $681,000 Estimated total project cost: $681,000**
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.

## 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. The program contingency accounts can be used to fund new projects which are identified after the CIB is approved, and to cover project budget overruns within specified limits. 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 2012-13 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. Approximately $11.3 million is estimated to be carried over from previous Board-authorized-but-unspent project budgets in FY 2011-12 and $29.6 million is the total required new Board authorization for projects and project phases beginning in FY 2012-13. The total Board authorization for projects that are active in the CIB in FY 2012-13 is the sum of these two numbers, or $41 million. The estimated FY 2012-13 expenditure total is $32.3 million, leaving an estimated $8.6 million in authorizations for projects that carry into future years. These figures will be adjusted when actual FY 2011-12 expenditures are known and actual FY 2011-12 carryover can be determined. At that time, the Board will be informed of the corrected figures for the four programs in the CIB.

## Table 1: Capital Improvement Budget Summary for Fiscal Year 2012-13

| Program | Estimated Allocation this FY | Estimated Carryover from Previous FY | Total Proposed Authorization | Estimated FY 2012-13 Expenditures |
|---|---|---|---|---|
| **Treatment Plant** | $8,300,000 | $1,944,000 | $10,244,000 | $7,436,000 |
| **Collection System** | $8,611,000 | $9,013,000 | $17,624,000 | $13,723,000 |
| **General Improvements** | $8,520,000 | $176,000 | $8,696,000 | $7,254,000 |
| **Recycled Water** | $4,170,000 | $216,000 | $4,386,000 | $3,930,000 |
| **Total this Fiscal Year** | **$29,601,000** | **$11,349,000** | **$40,950,000** | **$32,343,000** |

## SEWER CONSTRUCTION FUND REVENUES AND EXPENDITURES

The Sewer Construction Fund acts as the bank to finance the Capital Program. In order to ensure that adequate funds are available, each year the expected revenues are reviewed and compared with planned expenditures and a determination made as to whether additional revenues are needed.

The sources of capital revenue are described in detail in the Capital Improvement Plan portion of this document. They fall into four major categories.

First are the capacity and pumped zone fees which are charged to new users when they connect to the sewer system. These fees are based on a calculation of the cost to buy in to the current value of existing District assets. The amount of these fees collected each year varies significantly depending on the health of the housing industry and the number of new homes constructed.

Second is interest earned on the Sewer Construction Fund balance, which varies depending on the economy and the amount of money in the Fund.

Third are reimbursements from others, which consist primarily of reimbursements from the City of Concord, served by the District under contract.

The fourth major source of revenue is sewer service charges (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.

Last year, the Board of Directors approved an increase in the SSC rate by $30 per Residential Unit Equivalent (RUE) for each of the next two years to fund needed capital improvements while avoiding significant debt financing. The $30 per RUE SSC increase is reflected in Table 2: Sewer Construction Fund Revenues and Expenditures on the following page. With the rate increases, staff projects that expenditures will exceed revenue by approximately $10.56 million, which would require drawing from funds available in the Sewer Construction Fund.

## Table 2: Sewer Construction Fund Revenues And Expenditures

A summary of projected FY 2012-13 Capital Improvement Program revenue and expenditures is presented below:

| | |
|---|---|
| ***Revenues*** | |
| Facilities Capacity Fees | $4,417,000 |
| Pumped Zone Fees | 637,000 |
| Interest | 350,000 |
| Property Taxes | 7,534,000 |
| Sewer Service Charges* | 4,430,000 |
| Reimbursements from Others: | |
| City of Concord | 3,833,000 |
| Recycled Water Sales ** | 61,000 |
| Developer Fees, Charges, Other | 525,000 |
| Total Revenues | $21,787,000 |
| ***Expenditures*** | |
| Treatment Plant Program | $7,436,000 |
| Collection System Program | 13,723,000 |
| General Improvements Program | 7,254,000 |
| Recycled Water Program | 3,930,000 |
| Total Expenditures | $32,343,000 |

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

| | |
|---|---|
| Projected Revenues | $21,787,000 |
| Projected Expenditures | ($32,343,000) |
| Draw from Funds Available | ($10,556,000) |

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

* Rate increase approved by the Board has been included.

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

## 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 3, 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 contingency funds up to $100,000 per item. The General Manager can allocate funds from program contingency accounts to cover project budget overruns, up to 15 percent of the final project budget established at the time of construction contract award. 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 percent of the final project budget established at the time of construction contract award. In addition, any allocation to a new project not included in the CIB that exceeds $100,000 must be brought to the Board for authorization.

## Table 3: Capital Improvement Program Authorization Limits[1]

| ACTION | | DEPARTMENT DIRECTOR | GENERAL MANAGER | BOARD OF DIRECTORS |
|---|---|---|---|---|
| Approve Capital Plan | | None | None | No limit |
| Authorize Capital Program budgets | | None | None | No limit |
| Allocate funds to individual project budgets | | $25,000 or less | Total program budget plus contingency[2] | No Board authorization required |
| Authorize Consultant Contracts | Professional Consulting Services | $35,000 or less | $100,000 or less | Greater than $100,000 |
| | Technical Consulting Services. | $35,000 or less | $100,000 or less | Greater than $100,000 |
| | Professional Eng. Services. | $35,000 or less | $100,000 or less | Greater than $100,000 |
| Allocate funds from program contingency accounts to projects not included in the CIB | | $10,000 | $100,000 or less per project | Greater than $100,000 |
| Individual equipment items and equipment contingency | | None | $100,000 or less | Greater than $100,000 |
| Authorize supplemental funds to program budgets/ contingency accounts | | Not applicable | Not applicable | Sewer Construction Fund balance |
| Allocate funds for project budget overruns | | 5% of final project budget[4] or a maximum of $10,000 | 15% of final project budget[2,3] | Greater than 15% of final project budget[2,3] |
| Award construction contracts | | None | $100,000 or less | Greater than $100,000 |
| Authorize construction change orders | Additive | $35,000 or less | $100,000 or less | Greater than $100,000 |
| | Deductive | More than ($50,000) | No limit | No Board authorization required |
| Subcontractor substitutions | | None | All substitutions unless protested by subcontractor | Substitutions protested by subcontractor |
| Construction project acceptance | | None | All projects | Informational announcement to the Board |
| Close out project | | None | All projects | Memo provided to the Board at end of FY |

[1] General Manager authority was revised by Board Resolution on December 15, 2011
[2] Limited by the remaining balances of the applicable program budget and contingency account
[3] Limited by the remaining balance of the applicable program contingency account
[4] Final project budget is established at time of award of construction contract
[5] Reduced by project overrun allocations previously made by Department Managers

## CEQA COMPLIANCE

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

Tables 4, 5, 6 and 7 present the CEQA compliance status of projects for which staff is requesting an authorization of sewer construction funds. These tables indicate the type of CEQA documentation anticipated being required for each project. The types of documentation are:

*Exemption*: Staff will prepare a Notice of Exemption, if still appropriate, when each project receives a future Board of Directors' approval.

*Negative Declaration*: Staff will prepare a Negative Declaration for the project. Board of Directors' approval of the project would follow approval of the Negative Declaration.

*Environmental Impact Report (EIR)*: Staff will direct preparation of an EIR. Board of Directors' approval of the project would follow certification of the EIR.

*CEQA Documents Completed*: For these projects, CEQA compliance already has been achieved through documents previously prepared and approved.

## Table 4: CEQA Compliance Summary for Fiscal Year 2012-13
## Treatment Plant Program

| Subprogram / Project | Exemption | CEQA Documentation Required or Completed |
|---|---|---|
| **1 Reg. Compliance/Planning/Safety** | | |
| Alternative Energy Source | | Possible Negative Declaration |
| Treatment Plant Security Upgrade | X | |
| TP Hazard Identification & Remediation | X | |
| Alternative Energy & Greenhouse Gas Reduction Plan | X | |
| Incinerator Emissions Compliance Modifications | X | |
| Soil Remediation | X | |
| Standby Effluent Pumps Refurb - ph 2 | X | |
| TP Safety Improvements Program | X | |
| Treatment Plant Planning | X | |
| TP Master Plan Update | X | |
| Nitrification | X | |
| **2 One-Time Renovation** | | |
| Outfall Improvements, Phase 6 | X | |
| Switchgear Replacement - ph 2 | X | |
| Instr & Control - PLC System Upgrades - ph 2 | X | |
| Electric Blower Renovation | X | |
| Primary Structures Demo | X | |
| POB Seismic Upgrade | X | |
| Plant Cyber Security | X | |
| Pump & Blower Bldg Seismic Upgrade | X | |
| Auxiliary Boiler Burner Upgrade | X | |
| Furnace Burner | X | |
| SCB Seismic Upgrade | X | |
| Wet and Dry Scrubber Replacement | X | |
| Primary Treatment Renovation | X | |
| Wet Weather Bypass Improvements | X | |
| Secondary Process Improvements | X | |
| Solids Handling Equipment Evaluation | X | |
| Primary Effluent Pumps Refurbishment | X | |
| **3 Recurring Renovation** | | |
| Plant Electrical and Instrumentation Replacement | X | |
| Plant Energy Optimization | X | |
| TP Facilities Renovations | X | |
| TP Equipment Replacement | X | |
| TP Asset Management | X | |
| Pavement Renovation | X | |
| TP Cathodic Prot Sys Replacement | X | |
| Concrete Renovation | X | |
| Piping Renovations - ph 6 | X | |
| Piping Renovation – ph 7 | X | |
| Electric Cable Replacement | X | |
| Coating Renovation | X | |
| **4 Expansion** | | |

## Table 5: CEQA Compliance Summary for Fiscal Year 2012-13
## Collection System Program

| Subprogram / Project | Exemption | CEQA Documentation Required or Completed |
|---|---|---|
| **1 Renovation** | | |
| Walnut Creek Sewer Renovations - ph 9 | X | |
| Walnut Creek Sewer Renovations – ph 10 | X | |
| TV Inspection Program - ph 2 | X | |
| Concrete Pipe Renovation | X | |
| Diablo Renovations - ph 2 | X | |
| North Orinda Sewer Renovations - ph 4 | X | |
| North Orinda Sewer Renovations – ph5 | X | |
| Pleasant Hill Sewer Renovations - ph 2 | X | |
| Pleasant Hill Sewer Renovations – ph 3 | X | |
| Cathodic Protection System Replacement | X | |
| Collection System Urgent Projects | X | |
| Watershed 44 Creek Xing Stabilization | X | |
| Collection System Renovation Program | X | |
| South Main/I-680 Trunk Line Sliplining **(Name)** | X | |
| Pipeburst Blanket Contract | X | |
| Martinez Sewer Renovations Phase 4 | X | |
| Suspended Pipe Support | X | |
| CIPP Blanket Contract | X | |
| Lafayette Sewer Renovation - ph 8 | X | |
| Lafayette Sewer Renovation - ph 9 | X | |
| **2 Reg. Compliance/Planning/Safety** | | |
| Manhole Remote Level Monitoring | X | |
| Collection System Planning | X | |
| Forcemain Assessment | X | |
| Martinez Facilities Plan | X | |
| Collection System Modeling Upgrade | X | |
| **3 Expansion** | | |
| Contractual Assessment Districts | X | |
| A-Line Easement Acquisition - ph 2 | | EIR, 1991 |
| Pleasant Hill Grayson Creek | X | |
| 2011-12 Development Sewerage | X | |
| Trunk Sewer Capacity Program | X | |
| **4 Pumping Stations** | | |
| Pump Station Hazard Identification | X | |
| San Ramon Pump Station Upgrades | X | |
| Pump Station Safety Improvements | X | |
| San Ramon Bypass Pump | X | |
| PS Equip & Piping Replacement | X | |
| Buchanan South Removal | X | |
| Martinez Bypass Pump | X | |
| Pumping Station Minor Upgrades | X | |
| PS SCADA Assessment/Master Plan | X | |
| Fairview/Maltby Upgrades | X | |
| Flushkleen Pump Station Upgrades | X | |
| Moraga Pump Station Grinder | X | |
| Miscellaneous Force Main Improvements | X | |

## Table 6: CEQA Compliance Summary for Fiscal Year 2012-13
## General Improvements Program

| Subprogram / Project | Exemption | CEQA Documentation Required or Completed |
|---|---|---|
| **1 Vehicles & Equipment** | | |
| Cap Proj Clearing | X | |
| Vehicles & Equipment Acquisition – 2012 | X | |
| **2 Management Information Systems** | | |
| Information Technology Development | X | |
| GDI-SMMS Replacement | X | |
| GDI - Treatment Plant | X | |
| **3 Projects** | | |
| Rental Property Improvements | X | |
| CSOD Facility Improvements | | Mitigated Neg. Dec. 2007 |
| Kiewit Parcel Development | | Mitigated Neg. Dec. 2005 for clean fill operation. Possible Mitigated Neg. Dec. needed for development. |
| HOB Improvements | X | |
| POD Office Imprvs | X | |
| District Easements | X | |
| Capital Improvement Plan and Budget | X | |
| General Security Access | X | |
| Martinez Easements | X | |
| Imhoff Triangle Development | | Mitigated Negative Declaration needed |
| Seismic Improvements for HOB | X | |
| CSOD Facilities Improvements | X | |
| Capital Legal Services - 2010 to 2018 | X | |
| Rental Property Seismic Improvements | X | |
| District Property Safety Improvements | X | |

## Table 7: CEQA Compliance Summary for Fiscal Year 2012-13
## Recycled Water Program

| Subprogram / Project | Exemption | CEQA Documentation Required or Completed |
|---|---|---|
| **1 Urban Landscaping** | | |
| Concord Landscape Project | | NEPA Environmental Assessment/Finding of No Significant Impact Dec. 2011 |
| Refinery Recycled Water Project | | Possible Negative Declaration/EIR |
| Concord Naval Weapons REW | X | |
| Recycled Water Planning | X | |
| REW - Cathodic Prot Sys Repl | X | |
| Zone 1 Recycled Water - ph 1C | | Mitigated Neg. Dec. 2007 |
| Replace REW Line serving Conco | | |

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# TREATMENT PLANT PROGRAM

This section includes detailed information for the Treatment Plant Program. Table TP-1 presents project listings and budget information. Detailed project information, schedules, and cash flow tables are presented in individual project data sheets. These data sheets are found at the appropriately numbered subprogram tab. The numbered tabs represent the following:

| TAB NO. | SUBPROGRAM |
|---|---|
| 1 | Regulatory Compliance and Safety |
| 2 | One-Time Renovation |
| 3 | Recurring Renovation |
| 4 | Expansion |

## OVERVIEW

The Treatment Plant Program at $7.4 million comprises 23 percent of the total estimated capital expenditures for FY 2012-13. The Treatment Plant Program continues with asset preservation, and there is now added effort on future regulatory compliance, wet weather flow processing, and seismic strengthening.

### Regulatory Compliance/Planning/Safety

This subprogram makes up eight percent of the FY 2012-13 Treatment Plant Program expenditures. Projects emphasize preparing for future regulations and treatment plant planning, which includes pilot testing various new technologies. The Alternative Energy Study will assess the impacts greenhouse gas (GHG) reduction regulations may have on the District. Work will be done to investigate new furnace permitting requirements and install incinerator emissions improvements. A plan will be developed in conjunction with Department of Toxic Substances Control (DTSC) to address the issue of contaminated soil at the plant site. A long term project to identify and remove any hazardous materials at the Treatment Plant will continue. In addition further investigations will be conducted on ammonia toxicity and evaluation of appropriate treatment to remove it.

### One-Time Renovation

This subprogram accounts for 72 percent of the Treatment Plant Program expenditures. There are three high expenditure projects. First, the Seismic Upgrades for the Pump and Blower Building, DP 7291, will retrofit the Pump and Blower Building to current design standards. The second project, the Outfall Improvements, Phase 6 will inspect and make necessary repairs the existing 72-inch outfall pipe and add protection to the submarine portion of the outfall. Work will continue on design and construction of the third project, the Primary Treatment Renovation that will renovate primary treatment facilities.

**Recurring Renovation**

This subprogram makes up 20 percent of the FY 2012-13 Treatment Plant Program expenditures. Projects in this subprogram are targeted at asset preservation. The main project in this program is the Piping Renovations and Replacement, Phase 7. Other projects include Plant Energy Optimization, Asset Management, Concrete Renovation, Plant Electrical and Instrumentation, and finishing construction of the Piping Renovations, Phase 6.

**Expansion**

There are no projects in the Expansion program in FY 2012-13. Primary Treatment Expansion will be explored further by testing new primary tanks baffles and addition of chemicals to enhance primary treatment performance. The results will influence future design decisions and expansion requirements for the primaries and aeration system.

# Table TP-1: Treatment Plant Subprogram/Project List

| Subprogram / Project No. / Project Title | | Project Manager | Estimated Total Project Expenditures | Anticipated Allocations To 06/30/12 | Estimated Expenditures To 06/30/12 | Anticipated Allocations FY 2012-13 | Estimated Expenditures FY 2012-13 |
|---|---|---|---|---|---|---|---|
| **1Reg.** | | | | | | | |
| 7256 | Alternative Energy & Greenhouse Gas Reduction Plan | LaBella | 557,000 | 542,000 | 547,000 | 15,000 | 10,000 |
| pTP21 | Alternative Energy Facilities | Antkowiak | 7,030,000 | 80,000 | 5,000 | 0 | 25,000 |
| pTP22 | Incinerator Emissions Compliance Modifications | Mizutani | 150,000 | 75,000 | 75,000 | 75,000 | 75,000 |
| pTP20 | Nitrification | Antkowiak | 43,530,000 | 20,000 | 5,000 | 0 | 5,000 |
| pTP31 | Permitting Study for New Furnace | Antkowiak | 50,000 | 0 | 0 | 50,000 | 25,000 |
| pTP33 | Treatment Plant Soil Remediation | Antkowiak | 20,147,000 | 0 | 0 | 52,000 | 25,000 |
| pTP12 | Standby Effluent Pumps Refurb - ph 2 | Antkowiak | 570,000 | 20,000 | 10,000 | 0 | 10,000 |
| 7283 | Fire Protection System Improvements | Morales | 55,000 | 50,000 | 50,000 | 5,000 | 5,000 |
| 7284 | TP Hazard Identification & Remediation | Morales | 894,000 | 125,000 | 119,000 | 39,000 | 70,000 |
| 7287 | TP Master Plan Update | Miyamoto-Mills | 554,000 | 365,000 | 459,000 | 189,000 | 95,000 |
| 7301 | Treatment Plant Planning | Miyamoto-Mills | 1,662,000 | 0 | 142,000 | 470,000 | 230,000 |
| pTP08 | TP Safety Improvements FY 2011-12 thru 2019-20 | Antkowiak | 45,000 | 45,000 | 5,000 | 0 | 5,000 |
| pTP23 | Treatment Plant Sec Upgrade - FY12-13 thru 20-21 | Deutsch | 80,000 | 0 | 0 | 40,000 | 10,000 |
| | **Subprogram Total** | | 75,324,000 | 1,322,000 | 1,417,000 | 935,000 | 590,000 |
| **2One-Time Renovation** | | | | | | | |
| 7272 | Aeration System Renovation | Shima | 2,004,000 | 474,000 | 399,000 | 100,000 | 100,000 |
| 7295 | Auxiliary Boiler Burner Upgrade | Mizutani | 185,000 | 120,000 | 180,000 | 65,000 | 5,000 |
| pTP03 | Plant Cyber Security | Morales | 100,000 | 25,000 | 25,000 | 25,000 | 25,000 |
| pTP15 | MHF Furnace Burner | Shima | 1,300,000 | 0 | 0 | 100,000 | 50,000 |
| pTP24 | Instr & Control - PLC Sys Upgrades | McEachen | 800,000 | 0 | 0 | 80,000 | 80,000 |
| 7290 | Outfall Improvements, Phase 6 | Shima | 2,000,000 | 2,000,000 | 1,185,000 | 0 | 815,000 |
| 7255 | Primary Structures Demo | Penny | 1,274,000 | 1,480,000 | 1,269,000 | 0 | 5,000 |
| 7302 | Primary Effl Pumps Refurb - ph 2 | Rathunde | 900,000 | 0 | 0 | 100,000 | 100,000 |
| 7285 | Primary Treatment Renovation | Rathunde | 10,051,000 | 925,000 | 386,000 | 1,061,000 | 1,000,000 |
| 7294 | Secondary Process Improvements | Antkowiak | 1,402,000 | 50,000 | 42,000 | 5,000 | 5,000 |
| 7291 | Pump & Blower Bldg Seismic Upgrade | Hodges | 4,455,000 | 235,000 | 1,450,000 | 4,220,000 | 3,000,000 |
| 7289 | POB Seismic Upgrade | Hodges | 1,259,000 | 50,000 | 82,000 | 230,000 | 1,000 |
| 7296 | SCB Seismic Upgrade Study | Hodges | 179,000 | 150,000 | 178,000 | 29,000 | 1,000 |
| pTP35 | Solids Handling Equipment Evaluation | Antkowiak | 100,000 | 0 | 0 | 50,000 | 50,000 |
| 7292 | Switchgear Replacement - ph 2 | Shima | 2,444,800 | 125,000 | 74,800 | 100,000 | 90,000 |
| 7297 | Wet and Dry Scrubber Replacement | Hodges | 6,508,000 | 25,000 | 6,000 | 0 | 1,000 |
| 7241 | Wet Weather Bypass Improvements | Shima | 3,213,000 | 3,320,000 | 3,193,000 | 0 | 10,000 |
| | **Subprogram Total** | | 38,495,800 | 9,399,000 | 8,790,800 | 6,165,000 | 5,338,000 |
| **3Recurring Renovation** | | | | | | | |
| pTP16 | Coating Renovation | Rathunde | 3,530,000 | 0 | 0 | 25,000 | 5,000 |
| pTP30 | Concrete Renovation | Penny | 310,000 | 10,000 | 10,000 | 50,000 | 50,000 |
| pTP32 | Plant Energy Optimization | Hodges | 100,000 | 50,000 | 25,000 | 0 | 25,000 |
| pTP29 | Pavement Renovation | Penny | 320,000 | 10,000 | 10,000 | 5,000 | 5,000 |
| pTP37 | Piping Renovations and Replacement | Antkowiak | 8,005,000 | 0 | 0 | 5,000 | 5,000 |
| 7288 | Piping Renovations - ph 6 | Penny | 2,186,000 | 2,253,000 | 1,660,000 | 0 | 526,000 |
| 7298 | Piping Renovations Phase 7 | Rathunde | 725,000 | 75,000 | 25,000 | 650,000 | 700,000 |
| 7269 | TP Asset Management | Lawson | 1,184,000 | 1,184,000 | 575,000 | 0 | 45,000 |
| 7254 | TP Cathodic Prot Sys Repl | Morales | 589,000 | 460,000 | 559,000 | 129,000 | 5,000 |
| pTP27 | Electrical Cable Replacement | Morales | 2,855,000 | 0 | 0 | 5,000 | 5,000 |
| pTP06 | Plant Electrical and Instrumentation Repl | Antkowiak | 30,000 | 20,000 | 5,000 | 10,000 | 25,000 |
| 7265 | TP Equipment Replacement | Antkowiak | 1,257,000 | 950,000 | 757,000 | 307,000 | 100,000 |
| 7268 | TP Facilities Renovations | Antkowiak | 180,000 | 200,000 | 156,000 | 14,000 | 12,000 |
| | **Subprogram Total** | | 21,271,000 | 5,212,000 | 3,782,000 | 1,200,000 | 1,508,000 |
| | **Program Total** | | 135,521,800 | 16,364,000 | 14,419,800 | 8,300,000 | 7,436,000 |

# Alternative Energy and Greenhouse Gas Reduction Plan

**Project Manager, Department/Division:**
Melody LaBella, Engineering/Environmental Services

**Project Purpose:**
Evaluate renewable energy sources and make recommendations for meeting future greenhouse gas (GHG) emission reduction requirements. In addition, review current energy use and make recommendations for future energy reduction projects.

**Project History:**
In 2006, the California Global Warming Solutions Act (AB 32) was enacted to require a statewide reduction in GHG emissions to 1990 levels by 2020. The California Air Resources Board (CARB) estimates that this would correspond to a 25 percent overall statewide emission reduction. Additional legislation signed by the governor (in an Executive Order) requires an 80 percent reduction in GHG emissions by 2050.

In January 2008, CARB adopted GHG emissions reporting regulations that require the District to begin reporting GHG emissions in April 2009 (for calendar year 2008). CARB is also responsible for developing regulations specifying the details of how the AB 32 emission goals will be achieved. These emission reduction regulations are required to be adopted by CARB by 2012 and would require compliance beginning January 1, 2012 through the year 2020.

The District has the potential to fall into a capped sector of AB 32, if the power cogeneration system in the Treatment Plant continues to operate when the District's local landfill gas supply is exhausted. Facilities that fall within a capped sector have a compliance obligation that can be met with actual GHG reductions and/or participation in the carbon trading market. A San Francisco court ruled in late March 2011 that the state must spend more time studying alternatives to the carbon trading market. Some nonprofit environmental groups are concerned that the rules could increase pollution in low-income, largely minority communities near power plants and oil refineries if those facilities are allowed to trade pollution credits. This may delay implementation of cap and trade rules.

**Project Description:**
The study will be completed by URS, who was selected by staff after a formal process and who is familiar with energy and GHG emission technologies and reduction strategies. Their effort includes an evaluation of the feasibility of alternative energy technologies such as wind, solar and biofuels. The ultimate product of the study will be a recommended power portfolio that will meet the Treatment Plant's energy needs, while complying with AB 32. This project will be integrated with the work evaluating options to respond to new air emission requirements for the District's multiple-hearth furnaces.

**Project Location:**
Entire treatment plant

## Project Schedule and Cost:

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2007 | 06/20/2013 | $557,000 |
| Design | - | - | $0 |
| Construction | - | - | $0 |
| | | Total: | **$557,000** |

Estimated expenditures this FY are: **$10,000**
Anticipated Allocations this FY are: **$0**

## Project Fiscal Year Allocation/Expenditure Table:

*Project Title/Subprogram:* Alternative Energy & Greenhouse Gas Reduction Plan / 1
*Project Number/Filename:* 7256 / alt_energy
*Project Manager/% Expansion:* LaBella / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 50,000 | 10,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 510,000 | 47,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 510,000 | 97,000 | 10,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (460,000) | (87,000) | (10,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 50,000 | 10,000 | 0 | 0 | 0 | 0 |

# Alternative Energy Facilities

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
The project will evaluate replacement of the existing cogeneration turbine system to a larger, more efficient, and lower emissions unit.

**Project History:**
In the mid 1990s, the District installed a 3.2MW gas turbine cogeneration system that provides the majority of the electrical power for the treatment plant. The system includes a waste heat recovery boiler that provides steam for the aeration turbines. Emissions standards, from local, state, and federal regulatory sources are being developed to reduce pollutants of concern (such as oxides of nitrogen) and greenhouse gases. The existing air permit for the turbine limits the amount of power the turbine can produce and the amount of fuel it can use. Upcoming greenhouse gas regulation will penalize facilities that burn fossil fuels.

Cogeneration units are now available that produce less greenhouse gas emissions and are more efficient, thus requiring less fuel. Newer turbines could provide greater electrical capacity that could reduce the District's imported power costs and improve reliability during utility power outages or periods of high electrical use. The current Greenhouse Gas and Alternative Energy project is examining how cogeneration fits into the overall District-wide energy scheme over the next several years. This planning includes the possibility that the District may adopt a different source of power for the aeration blowers.

Replacing the existing cogeneration system with a new turbine that is more efficient and produces less pollutant is one possible option to meet future energy needs and will allow the District to respond to changing emissions limits.

**Project Description:**

Greenhouse gas (GHG) regulations are expected to have a significant impact on District operations. This project includes evaluation and replacement of the District's existing cogeneration unit with a new more efficient power generation unit or use of another alternate energy source. Replacement of the existing cogeneration unit could provide GHG credits to keep the District under the GHG cap. This project will also complete a feasibility study including a cost-benefit analysis and design and installation of new replacement equipment as appropriate.

**Project Location:**
Solids Conditioning Building

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $80,000 |
| Design | 07/01/2011 | 07/01/2013 | $210,000 |
| Construction | 07/01/2013 | 06/30/2018 | $6,740,000 |
| | | Total: | **$7,030,000** |

Estimated expenditures this FY are: **$25,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Alternative Energy Facilities / 1
*Project Number/Filename:* pTP21 / alt_energy_facil
*Project Manager/% Expansion:* Antkowiak / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 75,000 | 50,000 | 448,000 | 423,000 | 273,000 |
| **B. Anticipated Allocations** | 80,000 | 0 | 423,000 | 0 | 0 | 6,527,000 |
| **C. Authorized this Year** | 80,000 | 75,000 | 473,000 | 448,000 | 423,000 | 6,800,000 |
| **D. Estimated Expenditures** | (5,000) | (25,000) | (25,000) | (25,000) | (150,000) | (4,400,000) |
| **E. Estimated Carry-over** | 75,000 | 50,000 | 448,000 | 423,000 | 273,000 | 2,400,000 |

# Fire Protection System Improvements

**Project Manager, Department/Division:**
Nathan Morales, Engineering/Capital Projects

**Project Purpose:**
The purpose of the project is to modernize and standardize the various fire alarm and protection systems found at the Treatment Plant.

**Project History:**
There are several types of fire protection systems throughout the Treatment Plant. Many of these systems were installed in the 1980s and 1990s and are outdated. Some of the systems lack proper controls to allow them to be tested correctly and some have been modified so that they do not function as originally intended.

**Project Description:**
The project will upgrade and/or replace existing fire alarm panels and accessories. New panels and accessories will be compatible with each other and will meet current codes.

**Project Location:**
Treatment Plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 11/01/2009 | 06/30/2011 | $6,000 |
| Construction | 02/01/2011 | 06/30/2013 | $49,000 |
| | | Total: | **$55,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$5,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Fire Protection System Improvements / 1
*Project Number/Filename:* 7283 / TP_Fire_Prot
*Project Manager/% Expansion:* Morales / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| A. Current Carry-over | 0 | 24,000 | 19,000 | 0 | 0 | 0 |
| B. Anticipated Allocations | 25,000 | 0 | 25,000 | 5,000 | 0 | 0 |
| C. Authorized this Year | 25,000 | 24,000 | 44,000 | 5,000 | 0 | 0 |
| D. Estimated Expenditures | (1,000) | (5,000) | (44,000) | (5,000) | 0 | 0 |
| E. Estimated Carry-over | 24,000 | 19,000 | 0 | 0 | 0 | 0 |

# Incinerator Emissions Compliance Modifications

**Project Manager, Department/Division:**
Craig Mizutani, Engineering/Capital Projects

**Project Purpose:**
Modify incinerator and install incinerator process systems to ensure compliance with Clean Air Act Sewage Sludge Incinerator Regulations adopted by the EPA in 2011.

**Project History:**
In early 2011, the EPA made changes to the Clean Air Act (CAA) to include sewage sludge incinerators (SSIs) in category of solid waste incinerators. Previously, limits for emissions from SSIs were included in the regulations for sewage sludge (the "503" regulations). The regulations include a category for existing multiple hearth furnaces that will establish emission limits on nine pollutants: Cadmium, Carbon Monoxide, Hydrochloric Acid, Mercury, Oxides of Nitrogen, Lead, Polychlorinated Dibenzo-P-Dioxins and Polychlorinated Dibenzofurans, Particulate Matter, and Sulfur Dioxide. The limits can be attained by the District's current MHFs. The new regulations require new parametric monitoring of scrubber pH and flow.

Under the new regulations, more frequent source testing is required and is budgeted in the O&M budget.

**Project Description:**
This project will evaluate the regulations and determine what impact they will have on the District's current incinerator operations. Staff will hire a consultant(s) to evaluate the impact of the regulations on the incinerators, and cross-media impacts (i.e. impacts on the rest of the treatment process). If necessary, modifications to the incinerator process such as replacement of the wet and dry scrubbers to reduce emissions to a safe level to assure compliance will be evaluated. In addition, the study will be performed in conjunction with work being done on other projects that are looking into the affects of the processes on greenhouse gases, energy use, etc.

**Project Location:**
Solids Conditioning Building

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2011 | 09/01/2011 | $80,000 |
| Design | 09/01/2011 | 07/01/2012 | $0 |
| Construction | 07/01/2012 | 12/31/2012 | $70,000 |
| | | Total: | **$150,000** |

Estimated expenditures this FY are: **$75,000**
Anticipated Allocations this FY are: **$75,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Incinerator Emissions Compliance Modifications / 1
*Project Number/Filename:* pTP22 / Incinerator_mods
*Project Manager/% Expansion:* Mizutani / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 75,000 | 75,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 75,000 | 75,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (75,000) | (75,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Nitrification

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
This project provides funding for next steps in moving forward, as needed, into new process implementation for nitrification. More appropriate funding levels will result as the regulatory or scientific/technical driver continues to evolve.

**Project History:**
Several District projects have focused on various aspects of nitrification. Recent NPDES permitting of upstream Sacramento Regional WWTP has included requirements to nitrify. Studies are currently being conducted that include the effects of ammonia from the CCCSD effluent on the Suisun Bay-Delta system. Many NGOs are pushing for redefinition of secondary treatment. It's hard to know when the District will be required to include processes for nitrogen removal.

**Project Description:**
The project will be used to fund continuing investigation of technology to accomplish process changes as they become necessary.

**Project Location:**
Treatment Plant - primarily the secondary process.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 01/01/2012 | 01/01/2014 | $30,000 |
| Design | 01/01/2014 | 05/01/2016 | $5,000,000 |
| Construction | 05/01/2016 | 12/30/2020 | $38,500,000 |
| | | Total: | **$43,530,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Nitrification / 1
*Project Number/Filename:* pTP20 / Nitrification
*Project Manager/% Expansion:* Antkowiak / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 15,000 | 10,000 | 5,000 | 0 | 5,000 |
| **B. Anticipated Allocations** | 20,000 | 0 | 0 | 0 | 10,000 | 0 |
| **C. Authorized this Year** | 20,000 | 15,000 | 10,000 | 5,000 | 10,000 | 5,000 |
| **D. Estimated Expenditures** | (5,000) | (5,000) | (5,000) | (5,000) | (5,000) | (5,000) |
| **E. Estimated Carry-over** | 15,000 | 10,000 | 5,000 | 0 | 5,000 | 0 |

# Permitting Study for New Furnace

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
Evaluate permit requirements needed for replacement or installation of new incinerators.

**Project History:**
In early 2011, the EPA made changes to the Clean Air Act (CAA) to include sewage sludge incinerators (SSIs) in category of solid waste incinerators. This changed the emission limits on nine pollutants: Cadmium, Carbon Monoxide, Hydrochloric Acid, Mercury, Oxides of Nitrogen, Lead, Polychlorinated Dibenzo-P-Dioxins and Polychlorinated Dibenzofurans, Particulate Matter, and Sulfur Dioxide. Current evaluation shows that the new limits can be attained by the District's existing Multiple Hearth Furnaces. Depending on new regulations the District may need to change the solids handling process. In order to determine feasible future solids handling options the District will investigate what permits and what requirements are needed to replace or install new incinerators.

**Project Description:**
This project will investigate what are the permit requirements to install new multiple hearth furnaces or replace the existing furnaces with fluidized bed furnaces. This study will be performed in conjunction with work being done on other projects.

**Project Location:**
Treatment Plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2012 | 06/30/2014 | $50,000 |
| Design | - | - | $0 |
| Construction | - | - | $0 |
| | | Total: | **$50,000** |

Estimated expenditures this FY are: **$25,000**
Anticipated Allocations this FY are: **$50,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Permitting Study for New Furnace / 1
*Project Number/Filename:* pTP31 / permit_study_furnace
*Project Manager/% Expansion:* Antkowiak / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 25,000 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 50,000 | 0 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 50,000 | 25,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (25,000) | (25,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 25,000 | 0 | 0 | 0 | 0 | 0 |

# Treatment Plant Soil Remediation

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
This project provides funding for evaluation, characterization and development of alternatives to relocate or remove and dispose of the contaminated soil in the area northeast of existing aeration tanks. A concept of relocating the spoils pile to another location on site will be discussed with Department of Toxic Substances Control (DTSC) and Environmental Protection Agency (EPA). The relocation may trigger additional Regulatory Requirements. If relocation on site is not viable, the District will need to dispose the contaminated soil off site. To select the best disposal option the contaminated soil will need to be characterized.

**Project History:**
In 1960's spoils from 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. Depending on upcoming regulations the surcharge area may be needed for future plant expansion needed to comply with the new regulations (i.e. nitrification). 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 appropriate class landfill.

**Project Description:**
This project will evaluate, perform characterization and develop alternatives to remove and dispose of the contaminated soils located northeast of the existing aeration tanks.

**Project Location:**
Treatment Plant area northeast of existing aeration tanks.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2012 | 07/01/2016 | $52,000 |
| Design | 07/01/2016 | 07/01/2018 | $550,000 |
| Construction | 07/01/2018 | 06/30/2022 | $19,545,000 |
| | | Total: | **$20,147,000** |

Estimated expenditures this FY are: **$25,000**
Anticipated Allocations this FY are: **$52,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Treatment Plant Soil Remediation / 1
*Project Number/Filename:* pTP33 / plant_soil_rem
*Project Manager/% Expansion:* Antkowiak / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 27,000 | 2,000 | 1,000 | 0 | 0 |
| **B. Anticipated Allocations** | 52,000 | 0 | 0 | 0 | 50,000 | 500,000 |
| **C. Authorized this Year** | 52,000 | 27,000 | 2,000 | 1,000 | 50,000 | 500,000 |
| **D. Estimated Expenditures** | (25,000) | (25,000) | (1,000) | (1,000) | (50,000) | (500,000) |
| **E. Estimated Carry-over** | 27,000 | 2,000 | 1,000 | 0 | 0 | 0 |

# Standby Effluent Pumps Refurbishment, Phase 2

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
This project will increase effluent discharge capacity to meet wet weather and diurnal peak flow demands.

**Project History:**
The standby effluent pumps are critical elements in continuously providing discharge capacity to meet wet weather and diurnal peak flow demands. This project will increase the reliability and improve the operability of the standby effluent pumps.

**Project Description:**
This project will replace the electric drive motor, variable speed clutch assembly, right angle gear drive assembly and pump assembly for Standby Effluent Pump Numbers 1 and 2. It will also install new direct-coupling motors and modernization of instrumentation and the control system for both standby effluent pumps.

**Project Location:**
Pump and Blower Building

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2011 | 07/01/2013 | $20,000 |
| Construction | 07/01/2013 | 06/17/2014 | $550,000 |
| | | Total: | **$570,000** |

Estimated expenditures this FY are: **$10,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Standby Effluent Pumps Refurb - ph 2 / 1
*Project Number/Filename:* pTP12 / standby_eff2
*Project Manager/% Expansion:* Antkowiak / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 10,000 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 20,000 | 0 | 550,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 20,000 | 10,000 | 550,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (10,000) | (10,000) | (550,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 10,000 | 0 | 0 | 0 | 0 | 0 |

# Treatment Plant Hazard Identification & Remediation

**Project Manager, Department/Division:**
Nathan Morales, Engineering/Capital Projects

**Project Purpose:**
Increase personnel safety by identifying and reducing exposure to hazardous materials within the treatment plant.

**Project History:**
Recent construction projects have encountered hazardous materials requiring abatement, such as asbestos in pipe insulation, roofing materials, or lead paint. Exposure amounts and durations are limited by CalOSHA. Knowledge of these materials ahead of time allows District staff, the design engineer, or the contractor to properly prepare and equip themselves with Personal Protective Equipment (PPE), monitors, or plan for medical surveillance. District staff performs urgent, and sometimes unscheduled, work to maintain operation of the facility, which hinders the ability to conduct testing in advance of their work to determine if hazardous materials are present and allow proper planning or mitigation to occur.

In 2010, KellcoMACS conducted a plant-wide survey for hazardous materials, such as asbestos, lead, CAM 17 heavy metals, etc., by certified inspectors. The findings were summarized in a report and a database was developed to track the information.

**Project Description:**
This project will develop a remediation plan and begin design and remediation efforts to reduce the potential for exposure within the plant to hazardous materials where feasible.

**Project Location:**
Entire treatment plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 10/01/2009 | 07/01/2012 | $259,000 |
| Construction | 07/01/2012 | 06/30/2020 | $635,000 |
| | | Total: | **$894,000** |

Estimated expenditures this FY are: **$75,000**
Anticipated Allocations this FY are: **$39,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* TP Hazard Identification & Remediation / 1
*Project Number/Filename:* 7284 / TP_Hazard_ID
*Project Manager/% Expansion:* Morales / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 38,000 | 38,000 | 36,000 | 0 | 0 |
| **B. Anticipated Allocations** | 100,000 | 50,000 | 5,000 | 39,000 | 75,000 | 75,000 |
| **C. Authorized this Year** | 100,000 | 88,000 | 43,000 | 75,000 | 75,000 | 75,000 |
| **D. Estimated Expenditures** | (62,000) | (50,000) | (7,000) | (75,000) | (75,000) | (75,000) |
| **E. Estimated Carry-over** | 38,000 | 38,000 | 36,000 | 0 | 0 | 0 |

# Treatment Plant Master Plan Update

**Project Manager, Department/Division:**
Jarred Miyamoto-Mills, Engineering/Environmental Services

**Project Description:**
This project will update the last treatment plant master plan from 1999 to include:

- Facility modifications since 1999
- Conceptual plans to deal with potential air and water regulations such as greenhouse gas, nutrient removals and constituents of emerging concern (CECs)
- Potential increased flow and solids loadings due to developments in the service area

Asset management or regulatory-driven improvements to the sludge incineration process are covered under separate projects but will be incorporated into this overall plan.

**Project Location:**
Entire treatment plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2009 | 07/01/2010 | $529,000 |
| Design | 07/01/2010 | 12/31/2011 | $0 |
| Construction | 12/31/2011 | 06/17/2013 | $25,000 |
| | | Total: | **$554,000** |

Estimated expenditures this FY are: **$95,000**
Anticipated Allocations this FY are: **$95,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* TP Master Plan Update / 1
*Project Number/Filename:* 7287 / TP_mpUpdate
*Project Manager/% Expansion:* Miyamoto-Mills / 80

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 25,000 | 160,000 | 274,000 | 95,000 | 0 | 0 |
| **C. Authorized this Year** | 25,000 | 160,000 | 274,000 | 95,000 | 0 | 0 |
| **D. Estimated Expenditures** | (25,000) | (160,000) | (274,000) | (95,000) | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Treatment Plant Planning

**Project Manager, Department/Division:**
Jarred Miyamoto-Mills, Engineering/Environmental Services

**Project Purpose:**
The purpose of this project is to provide funding for feasibility and pilot-scale system work that may be needed in the event that emerging regulatory initiatives require Treatment Plant process modifications to maintain compliance. Evolution of wastewater technology could also trigger an investigation under this project.

**Project History:**
As wastewater regulations continue to develop at the regional, state, and national level, and as new wastewater treatment technology becomes available, process modifications may be required in the Treatment Plant. Recently, staff has completed the URS model for greenhouse gas and conducted an exercise to scope the plant of the future for CCCSD.

**Project Description:**
This project may include:

- Review and evaluation of new technology
- Evaluation of proposed regulations
- Pilot projects to assess technologies and develop design/operation parameters
- Monitoring and data collection
- Investigation of potential process optimization

**Project Location:**
Entire treatment plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2011 | 06/30/2021 | $1,662,000 |
| Design | - | - | $0 |
| Construction | - | - | $0 |
| | | Total: | **$1,662,000** |

Estimated expenditures this FY are: **$230,000**
Anticipated Allocations this FY are: **$230,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Treatment Plant Planning / 1
*Project Number/Filename:* 7301 / TP_planning
*Project Manager/% Expansion:* Miyamoto-Mills / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 98,000 | 98,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 240,000 | 230,000 | 142,000 | 150,000 | 150,000 | 150,000 |
| **C. Authorized this Year** | 240,000 | 328,000 | 240,000 | 150,000 | 150,000 | 150,000 |
| **D. Estimated Expenditures** | (142,000) | (230,000) | (240,000) | (150,000) | (150,000) | (150,000) |
| **E. Estimated Carry-over** | 98,000 | 98,000 | 0 | 0 | 0 | 0 |

# Treatment Plant Safety Improvements Program

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
This project will provide funding for safety projects.

**Project History:**
The District and the treatment plant have very active and aggressive 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.

**Project Description:**
This project provides funding to install safety improvements for the treatment plant.

**Project Location:**
Entire treatment plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2011 | 07/01/2012 | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2012 | 06/17/2020 | $45,000 |
| | | Total: | **$45,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* TP Safety Improvements FY 2011-12 thru 2019-20 / 1
*Project Number/Filename:* pTP08 / TP_SafetyPGM
*Project Manager/% Expansion:* Antkowiak / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 40,000 | 35,000 | 30,000 | 25,000 | 20,000 |
| **B. Anticipated Allocations** | 45,000 | 0 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 45,000 | 40,000 | 35,000 | 30,000 | 25,000 | 20,000 |
| **D. Estimated Expenditures** | (5,000) | (5,000) | (5,000) | (5,000) | (5,000) | (5,000) |
| **E. Estimated Carry-over** | 40,000 | 35,000 | 30,000 | 25,000 | 20,000 | 15,000 |

# Treatment Plant Security Upgrade – FY 12-13 thru 20-21

**Project Manager, Department/Division:**
Shari Deutsch, Administrative Department

**Project Purpose:**
This project will reduce the District's exposure to liability and property loss; meet reliability/safety standards and reduce operations and maintenance expenses.

**Project 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.

**Project 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 to allow more efficient access for District personnel and equipment, upgrading plant security cameras, signage, and improving general area lighting.

**Project Location:**
Various sites on the treatment plant property

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2012 | 06/30/2020 | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2012 | 06/30/2020 | $45,000 |
| | | Total: | **$80,000** |

Estimated expenditures this FY are: **$10,000**
Anticipated Allocations this FY are: **$40,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* TP Security Upgrade FY 2012-13 thru 2020-21 / 1
*Project Number/Filename:* pTP23 / TP_Security
*Project Manager/% Expansion:* Deutsch / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| A. Current Carry-over | 0 | 30,000 | 20,000 | 10,000 | 0 | 30,000 |
| B. Anticipated Allocations | 40,000 | 0 | 0 | 0 | 40,000 | 0 |
| C. Authorized this Year | 40,000 | 30,000 | 20,000 | 10,000 | 40,000 | 30,000 |
| D. Estimated Expenditures | (10,000) | (10,000) | (10,000) | (10,000) | (10,000) | (10,000) |
| E. Estimated Carry-over | 30,000 | 20,000 | 10,000 | 0 | 30,000 | 20,000 |

# Aeration System Renovation

**Project Manager, Department/Division:**
Clint T. Shima, Engineering/Capital Projects

**Project 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.

**Project History:**
The electric blower serves as a back up to the two steam-powered turbine blowers. It is started every two weeks to make sure that it is still operational. It has a capacity of 45,000 scfm while each of the steam powered turbine blowers has a capacity of 75,000 scfm. 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, specifically in the secondary aeration process, significantly increases; and the electric blower does not have enough capacity to meet the demand.

In March of 2007, the District began this study to evaluate the aeration needs for the treatment plant's activated sludge process. Preliminary results indicate that the District can defer the renovation of the aeration process by seven to ten years. This is possible due to the significant air loss savings achieved by recently completed aeration basin renovation project phases 1 and 2, and the ability to upgrade the capacity of the existing electric blower by ten percent, and the possibility of enhancing capacity by adding a highly efficient small blower system for the aerated grit chamber.

The evaluation also indicates that if full treatment plant flow nitrification is mandated by future regulations, renovation of the existing aeration system might be needed to meet the additional air demands. The study determined the most cost effective approach for providing nitrification of the entire treatment plant flow thus allowing proper completion of the electric blower study. This nitrification feasibility study looks at:

- Conventional nitrification
- Integrated Fixed-film Activated Sludge
- Moving Bed Biofilm Reactor (MBBR)
- Biological Aerated Filter (BAF)

**Project Description:**
This project evaluates the capacity needed by the electric blower. Improving the capacity of the electric blower is a potential project in FY 2013-14. Funds will be used to further refine the most efficient use of the steam and electric blower, which are in good shape because they were rebuilt in the early 2000's (steam blowers) or lack of use as a back-up system (electric blowers). The following work will be considered:

- Replace guide vanes on the electric blower,
- Install new impeller
- Add high efficiency blower
- Remove channel air from the main aeration system

**Project Location:**
Pump and Blower Building

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $799,000 |
| Construction | 01/01/2007 | 06/17/2015 | $1,205,000 |
| | | Total: | **$2,004,000** |

Estimated expenditures this FY are: **$100,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Aeration System Renovation / 2
*Project Number/Filename:* 7272 / aeration_system_reno
*Project Manager/% Expansion:* Shima / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 111,000 | 101,000 | 1,000 | 5,000 | 0 |
| **B. Anticipated Allocations** | 500,000 | 0 | 0 | 1,504,000 | 0 | 0 |
| **C. Authorized this Year** | 500,000 | 111,000 | 101,000 | 1,505,000 | 5,000 | 0 |
| **D. Estimated Expenditures** | (389,000) | (10,000) | (100,000) | (1,500,000) | (5,000) | 0 |
| **E. Estimated Carry-over** | 111,000 | 101,000 | 1,000 | 5,000 | 0 | 0 |

# Auxiliary Boiler Burner Upgrade

**Project Manager, Department/Division:**
Craig Mizutani, Engineering/Capital Projects

**Project Purpose:**
Regulations on NOx emissions, implemented by the BAAQMD, require NOx emissions to be reduced from the current permit limit of 30 ppmv to 9 ppmv by January 2013. A limit of 15 ppmv may be allowed if the District can prove that there is no technology for 9 ppmv on a variable load boiler. In order to meet these limits, the two existing auxiliary boilers will be modified by replacing the existing burners with new low-NOx burners and other emission control devices to meet the regulations.

**Project History:**
The auxiliary boilers were installed with the treatment plant expansion in 1975. New burners were fitted to both boilers in the 1980s when stricter NOx regulations came into effect. The boilers were upgraded again in 2009 with new direct-acting, solid state, PLC-based controls to improve reliability, turndown, and fuel efficiency. The new controls can be used to provide precise control of the burners and will allow installation of ultra-low NOx burners that will be required to meet the new limits.

**Project Description:**
This project will replace the burners in the two auxiliary boilers and modify related ancillary systems to meet the upcoming regulations.

**Project Location:**
Solids Conditioning Building

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2010 | 07/01/2011 | $0 |
| Design | 07/01/2011 | 07/01/2012 | $80,000 |
| Construction | 07/01/2012 | 06/30/2013 | $105,000 |
| | | Total: | **$185,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Auxiliary Boiler Burner Upgrade / 2
*Project Number/Filename:* 7295 / Aux_boiler_burner_upg
*Project Manager/% Expansion:* Mizutani / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 115,000 | 5,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 120,000 | 65,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 120,000 | 180,000 | 5,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (5,000) | (175,000) | (5,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 115,000 | 5,000 | 0 | 0 | 0 | 0 |

# Instrumentation and Control - PLC System Upgrades
# FY 12-13 through 21-22

**Project Manager, Department/Division:**
Bill McEachen/Plant Operations Department

**Project Purpose:**
Upgrade Programmable Logic Controller (PLC) system to current technology for increased performance and improved compatibility.

**Project 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 in the treatment plant and additional units in the pumping stations. Over the years several PLC models have become obsolete and have been discontinued. The original "chassis mount" PLCs used in the Solids Conditioning Building were replaced by a previous project.

Programming software for the newer PLCs no longer runs efficiently on the older programming units. The original PLC communication network has also been discontinued and has now been replaced.

**Project Description:**
This project will continue to upgrade the treatment plant's PLC system by:

- Providing Programmable Device Support (PDS) hardware and software necessary to maintain the PLC application software. The PDS system allows PLC programs to be stored on a server and maintains version control so that all changes made to the PLCs are logged and a current backup is always available.
- Replacing older programming computers with newer models capable of running the current programming software efficiently.
- Investigation of existing and new equipment to ensure that the District remains in the mainstream of process control technology.
- Upgrading older PLC models as they become out of date to be compatible with the newer models to increase performance and reliability. The next PLCs to be replaced are the oldest of the 984 controllers.
- Installing a newer PLC communication network to the older PLCs to allow communication between PLCs and programming from a central location.
- Providing funding for District personnel to coordinate, perform, and oversee PLC system upgrades.

**Project Location:**
Treatment Plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2012 | | $100,000 |
| Construction | 07/01/2012 | 06/17/2022 | $700,000 |
| | | Total: | **$800,000** |

Estimated expenditures this FY are: **$80,000**
Anticipated Allocations this FY are: **$80,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Instrument & Control – PLC System Upgrades / 2
*Project Number/Filename:* pTP24 / ic_upgrades
*Project Manager/% Expansion:* McEachen / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 |
| **C. Authorized this Year** | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 |
| **D. Estimated Expenditures** | (80,000) | (80,000) | (80,000) | (80,000) | (80,000) | (80,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# MHF Burner Upgrades

**Project Manager and Department/Division:**
Clint T. Shima, Engineering/Capital Projects

**Project Purpose:**
This project will improve the operational flexibility of the existing multiple hearth furnaces (MHFs) by repairing the auxiliary fuel delivery piping, by modifying or replacing the auxiliary fuel burners, adding a VFD to the center shaft, upsizing the Induced Draft Fan, and optimizing the furnace control system.

**Project History:**
The furnaces were constructed during the early 1970s and made operational in 1985. Bi-annual preventive maintenance has kept the internal refractory and the external shell in good condition, but many downstream components are reaching the end of their useful lives and need replacement. Modifications will also be implemented to ensure compliance with emerging regulations while enhancing the reliability and flexibility of the incineration process.

**Project 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. The project would include replacement of 1 to 4 of the top hearth burners (8 MMBtu/hr) with smaller low NOx/High mix burners. In order to comply with 129 regulations for organics and NOx, the temperature of the afterburner needs better control. This means replacing two of the four large burners (8 MMBtu/hr) with smaller burners (2 MMBtu/hr).

Modernizing the control system will economize fuel consumption and realize some cost savings. A consultant will investigate the existing furnaces and make additional recommendations for modifications. Features that enhance operability, ease maintenance, or improve safety will be considered. The project will span multiple years because at any given time the solids handling process requires a furnace.

**Project Location:**
Solids Conditioning Building

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2012 | 07/01/2016 | $1,300,000 |
| Construction | - | - | $0 |
| | | Total: | **$1,300,000** |

Estimated expenditures this FY are: **$50,000**
Anticipated Allocations this FY are: **$100,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Furnace Burner / 2
*Project Number/Filename:* pTP15 / furnace_burner
*Project Manager/% Expansion:* Shima / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 50,000 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 100,000 | 0 | 800,000 | 400,000 | 0 | 0 |
| **C. Authorized this Year** | 100,000 | 50,000 | 800,000 | 400,000 | 0 | 0 |
| **D. Estimated Expenditures** | (50,000) | (50,000) | (800,000) | (400,000) | 0 | 0 |
| **E. Estimated Carry-over** | 50,000 | 0 | 0 | 0 | 0 | 0 |

# Outfall Improvements, Phase 6

**Project Manager and Department/Division:**
Clint T. Shima, Engineering/Capital Projects

**Project Purpose:**
This project will inspect both the land and submarine portions of the treatment plant outfall as allowed by the current NPDES Permit, and will make repairs as needed.

**Project History:**
The treatment plant outfall was built in 1958 in soils that are known to shift and settle significantly over time. In 2003, as part of the Outfall Improvements - Phase 5 Project, the outfall was bypassed to inspect its condition, and make repairs. Every joint was tested to a specified threshold with failed joints resulting in the installation of over 300 mechanical seals. The submarine portion of the outfall was not evaluated at that time.

This project will allow inspection of both the land and submarine portions of the outfall as allowed by the current NPDES permit, and make any additional repairs.

**Project Description:**
It has been over five years since the last outfall inspection, and it is time to re-evaluate its condition as allowed by the current NPDES permit. The current plan is to retest the land portion of the outfall in a similar fashion to the work in 2003, and install new seals as necessary. Bypassing of effluent will make use of the new bypass structure in Basin B, which discharges directly to Walnut Creek. The submarine portion may need additional ballast, remote operated vehicle (ROV) inspection, and protection from boat anchors in Suisun Bay. The submarine portion requires numerous permits.

**Project Location:**
District Outfall

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 01/01/2011 | 06/17/2013 | $185,000 |
| Construction | 01/01/2011 | 06/17/2013 | $1,415,000 |
| | | Total: | **$1,600,000** |

Estimated expenditures this FY are: **$815,000**
Anticipated Allocations this FY are: **$815,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Outfall Improvements, Phase 6 / 2
*Project Number/Filename:* 7290 / Outfall_insp
*Project Manager/% Expansion:* Shima / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 100,000 | 685,000 | 815,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 100,000 | 685,000 | 815,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (100,000) | (685,000) | (815,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Plant Cyber Security

**Project Manager, Department/Division:**
Nathan Morales, Engineering/ Capital Projects

**Project Purpose:**
Protect the plant from electronic breaches through plant control system, electrical distribution system, and/or equipment.

**Project History:**
In 2008, NACWA informed the District of the newly-identified risk for major service interruption through cyber vulnerabilities. The Water Sector Coordinating Council (WSCC) along with the Department of Homeland Security (DHS) developed a security sensitive Mitigation Plan. A special task force was created to review the Mitigation Plan and implement recommendations, which included:

- Identification of all Programmable Language Controllers (PLCs) and Variable Frequency Drives (VFDs) 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
- Obtaining a Cisco switch for electrical substation security

Some recommendations have already been implemented. This project will address the remaining, more costly measures.

**Project Description:**
The project will evaluate the plant control system and electrical distribution system and/or equipment for vulnerabilities to electronic breaches. If vulnerabilities are identified, then solutions will be identified, evaluated, and implemented to address these vulnerabilities.

**Project Location:**
Treatment Plant.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2011 | 07/01/2012 | $0 |
| Design | 07/01/2012 | 07/01/2013 | $50,000 |
| Construction | 07/01/2013 | 06/30/2015 | $50,000 |
| | | Total: | **$100,000** |

Estimated expenditures this FY are: **$25,000**
Anticipated Allocations this FY are: **$25,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Plant Cyber Security / 2
*Project Number/Filename:* pTP03 / cyber security
*Project Manager/% Expansion:* Morales / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 25,000 | 25,000 | 25,000 | 25,000 | 0 | 0 |
| **C. Authorized this Year** | 25,000 | 25,000 | 25,000 | 25,000 | 0 | 0 |
| **D. Estimated Expenditures** | (25,000) | (25,000) | (25,000) | (25,000) | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Primary Structures Demolition

**Project Manager, Department/Division:**
Michael Penny, Engineering/Capital Projects

**Project Purpose:**
This project will increase safety around the abandoned primary sedimentation tanks and allow for future expansion of the primary sedimentation tanks and related facilities.

**Project History:**
The original primary sedimentation tanks, constructed in 1948 and 1957, have been out of service and abandoned for decades. Due to the potential for falling into the tanks, they pose a safety hazard to District employees.

The lime storage silos, located on the east side of the HOB, were constructed in 1974 to store lime used in the primary sedimentation process. They have not been used in over 20 years and are no longer needed. In the future, the silos would have to be maintained in order to keep them safe.

The abandoned sedimentation tanks and silos will interfere with the addition of future primary sedimentation tanks and odor control facilities that are part of the Primary Treatment Expansion Project (DP 7264).

**Project Description:**
This project will demolish the abandoned primary sedimentation tanks and backfill the area. It will also demolish the lime storage silos, building, and associated piping systems. Additional obsolete facilities may be included in this project based on further evaluations.

**Project Location:**
Abandoned primary sedimentation tanks

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 10/01/2007 | 04/01/2011 | $79,000 |
| Construction | 04/01/2011 | 06/30/2013 | $1,195,000 |
| | | Total: | **$1,274,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Primary Structures Demo / 2
*Project Number/Filename:* 7255 / pri_demol
*Project Manager/% Expansion:* Penny / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 51,000 | 5,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 130,000 | 1,144,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 130,000 | 1,195,000 | 5,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (79,000) | (1,190,000) | (5,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 51,000 | 5,000 | 0 | 0 | 0 | 0 |

# Primary Effluent Pumps Refurbishment, Phase 2

**Project Manager, Department/Division:**
Gary E Rathunde, Engineering/Capital Projects

**Project Purpose:**
This project will evaluate and rehabilitate the two existing primary effluent pumps installed in 1975.

**Project History:**
There are currently three primary effluent pumps, which transfer flow from the primary sedimentation basin to the secondary aeration facilities. Two pumps were installed in 1975 as part of the 5A treatment plant expansion. These pumps consist of horizontal, high-speed, induction motors (1,800 rpm) with hydraulic variable-speed gear drives rather than conventional variable frequency drives (VFDs). The third pump was installed in 1995 and is driven by a high-speed induction motor (1,800 rpm) and gear reducer, and has a 480V VFD.

All three pumps were rated for 75 mgd, but have never achieved that pumping capacity. In addition, replacement parts are no longer manufactured for the hydraulic variable-speed gear drives on the two older pumps.

**Project Description:**
This project will evaluate, design and rehabilitate the two primary effluent pumps installed in 1975. The pumps and driving system will be refurbished. In addition to being refurbished, these pumps will be evaluated for increasing their capacity to the intended rating of 75 mgd.

**Project Location:**
Pump and Blower Building.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2012 | 09/01/2012 | $55,000 |
| Design | 09/01/2012 | 06/30/2016 | $0 |
| Construction | 06/30/2016 | 06/30/2014 | $845,000 |
| | | Total: | **$900,000** |

Estimated expenditures this FY are: **$100,000**
Anticipated Allocations this FY are: **$100,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Primary Effl Pumps Refurb - ph 2 / 2
*Project Number/Filename:* 7302 / pri_effl_pumps_ph2.doc
*Project Manager/% Expansion:* Rathunde / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 100,000 | 800,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 100,000 | 800,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (100,000) | (800,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Primary Treatment Renovation

**Project Manager, Department/Division:**
Gary E. Rathunde, Engineering/Capital Projects

**Project Purpose:**
This project will improve the reliability of the Primary Treatment area of the plant.

**Project History:**
Two of the four primary sedimentation tanks were constructed in the mid 60s and the final two tanks were constructed in the mid 70s as part of the 5A expansion project. Most of the piping and components in the primary treatment area are more than 35 years ago, with some approximately 50 years old. Some of the piping and process components have been observed to be corroding, requiring more maintenance, or otherwise nearing the end of their respective service life.

**Project Description:**
This project will renovate or replace the water and air supply pipelines at the primary sedimentation tanks. The 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, constructing a new level control structure, and the odor control system will be evaluated and modified as necessary.

The project will include electrical upgrades to the motor control center that provides power to the primary treatment facilities and high efficiency lighting will be installed around the tanks. In addition, the old grit handling system will be demolished and replaced with new grit washers/classifiers to be located in the Chemical Feed building.

**Project Location:**
Primary Treatment area

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2010 | 07/01/2011 | $386,000 |
| Construction | 07/01/2011 | 06/30/2016 | $9,665,000 |
| | | Total: | **$10,051,000** |

Estimated expenditures this FY are: **$1,000,000**
Anticipated Allocations this FY are: **$1,061,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Primary Treatment Renovation / 2
*Project Number/Filename:* 7285 / PrimaryTrtRenov
*Project Manager/% Expansion:* Rathunde / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 50,000 | (61,000) | 0 | 3,665,000 | 165,000 |
| **B. Anticipated Allocations** | 100,000 | 225,000 | 1,061,000 | 8,665,000 | 0 | 0 |
| **C. Authorized this Year** | 100,000 | 275,000 | 1,000,000 | 8,665,000 | 3,665,000 | 165,000 |
| **D. Estimated Expenditures** | (50,000) | (336,000) | (1,000,000) | (5,000,000) | (3,500,000) | (165,000) |
| **E. Estimated Carry-over** | 50,000 | (61,000) | 0 | 3,665,000 | 165,000 | 0 |

# Secondary Process Improvements

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
Improve and/or renovate the Secondary Process including the Mixed Liquor Channel spray system, tank drainage, gate leakage, return activated sludge (RAS) system, the waste activated sludge (WAS) system, and scum collection.

**Project History:**
In FY 2010/2011 several scope items were assessed including the RAS system, conversion of the southern Primary Effluent Channel into a Selector Channel, flow splitting and dissolved oxygen (DO) control. A workshop was held between Engineer and Plant Operations Departments that reviewed and evaluated the existing scope items. From that workshop, several items were removed and other issues were identified that require further examination.

**Project Description:**
This project will evaluate the newly identified scope items including the spray system, tank drainage, gate leakage and scum collection and further investigate improvements to the RAS and WAS systems. The evaluation will also consider potential regulations that could affect the Secondary Process, and will attempt not to put investment into areas that could be changed by new regulations in the next ten years. Those items identified for improvement will be designed and constructed.

**Project Location:**
Secondary Treatment Process

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 02/26/2010 | 01/01/2011 | $0 |
| Design | 01/01/2011 | 07/01/2014 | $52,000 |
| Construction | 07/01/2014 | 06/30/2017 | $1,350,000 |
| | | Total: | **$1,402,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$5,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Secondary Process Improvements / 2
*Project Number/Filename:* 7294 / Sec_Process_Imprvs
*Project Manager/% Expansion:* Antkowiak / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 24,000 | 24,000 | 18,000 | 18,000 | 18,000 |
| **B. Anticipated Allocations** | 50,000 | 5,000 | 5,000 | 5,000 | 5,000 | 100,000 |
| **C. Authorized this Year** | 50,000 | 29,000 | 29,000 | 23,000 | 23,000 | 118,000 |
| **D. Estimated Expenditures** | (26,000) | (5,000) | (11,000) | (5,000) | (5,000) | (100,000) |
| **E. Estimated Carry-over** | 24,000 | 24,000 | 18,000 | 18,000 | 18,000 | 18,000 |

# SCB Seismic Upgrade Study

**Project Manager, Department/Division:**
Nathan Hodges, Engineering/Capital Projects

**Project Purpose:**
Seismic improvements to the Solids Conditioning Building (SCB) will be studied.

**Project 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 SCB in line with current seismic design standards.

**Project Description:**
This project will study seismic improvements to the SCB. The new regulatory requirements may necessitate addition of new emissions control equipment or replacement of the existing Multiple Hearth Furnaces with Fluidized Bed Furnaces, Digesters, or other solids handling facilities. If the MHF has to be replaced, a new building may need to be constructed. Therefore, seismic upgrades of the SCB are not recommended at this time. This study is already in progress and will be placed on hold until a study of the future solids handling facilities is complete.

**Project Location:**
Solids Conditioning Building

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2010 | 07/01/2013 | $179,000 |
| Construction | - | - | $0 |
| | | Total: | **$179,000** |

Estimated expenditures this FY are: **$1,000**
Anticipated Allocations this FY are: **$1,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* SCB Seismic Upgrade Study / 2
*Project Number/Filename:* 7296 / seismic_SCB_upg
*Project Manager/% Expansion:* Hodges / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 145,000 | -28,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 150,000 | 0 | 29,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 150,000 | 145,000 | 1,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | 5,000 | (173,000) | (1,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 145,000 | -28,000 | 0 | 0 | 0 | 0 |

# Pump & Blower Building Seismic Upgrades

**Project Manager, Department/Division:**
Nathan Hodges, Engineering/Capital Projects

**Project Purpose:**
Seismic improvements will be made to the Pump & Blower Building.

**Project 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. Since the equipment housed in the Pump & Blower Building is critical to the operation of the plant, it is one of the first buildings to be seismically upgraded.

**Project Description:**
This project will make seismic improvements to the Pump & Blower Building.

**Project Location:**
Pump & Blower Building

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2010 | 07/01/2011 | $0 |
| Design | 07/01/2011 | 01/01/2012 | $150,000 |
| Construction | 01/01/2012 | 06/30/2014 | $4,305,000 |
| | | Total: | **$4,455,000** |

Estimated expenditures this FY are: **$3,000,000**
Anticipated Allocations this FY are: **$3,000,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Pump & Blower Bldg Seismic Upgrade / 2
*Project Number/Filename:* 7291 / seismic_P&B_upg
*Project Manager/% Expansion:* Hodges / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | (140,000) | 5,000 | 5,000 | 0 | 0 |
| **B. Anticipated Allocations** | 10,000 | 1,445,000 | 3,000,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 10,000 | 1,305,000 | 3,005,000 | 5,000 | 0 | 0 |
| **D. Estimated Expenditures** | (150,000) | (1,300,000) | (3,000,000) | (5,000) | 0 | 0 |
| **E. Estimated Carry-over** | (140,000) | 5,000 | 5,000 | 0 | 0 | 0 |

# POB Seismic Upgrades

**Project Manager, Department/Division:**
Nathan Hodges, Engineering/Capital Projects

**Project Purpose:**
Seismic improvements will be made to the Plant Operations Building (POB).

**Project 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 POB in line with current seismic design standards.

**Project Description:**
This project will make seismic improvements to the POB. This includes improvements to the Board Room, Administration Offices, and the tunnel area beneath POB.

The Multi-Purpose Room (MPR) has been identified as the District's primary Emergency Operations Center. As such, the MPR will receive additional strengthening to provide continuous service after a design seismic event.

**Project Location:**
Plant Operation Building

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2010 | 07/01/2011 | $234,000 |
| Construction | 07/01/2011 | 06/30/2017 | $1,025,000 |
| | | Total: | **$1,259,000** |

Estimated expenditures this FY are: **$1,000**
Anticipated Allocations this FY are: **$230,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* POB Seismic Upgrade / 2
*Project Number/Filename:* 7289 / seismic_POB_upg
*Project Manager/% Expansion:* Hodges / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | (40,000) | (72,000) | 157,000 | 1,175,000 | 1,025,000 |
| **B. Anticipated Allocations** | 10,000 | 0 | 230,000 | 1,019,000 | 0 | 0 |
| **C. Authorized this Year** | 10,000 | (40,000) | 158,000 | 1,176,000 | 1,175,000 | 1,025,000 |
| **D. Estimated Expenditures** | (50,000) | (32,000) | (1,000) | (1,000) | (150,000) | (1,000,000) |
| **E. Estimated Carry-over** | (40,000) | (72,000) | 157,000 | 1,175,000 | 1,025,000 | 25,000 |

# Solids Handling Equipment Evaluation

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
This project will review and implement modifications to improve the reliability and performance of the sludge dewatering system.

**Project History:**
The existing centrifuges and cake pumps have been in service for more than 20 years by 2012. 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. In addition, as centrifuge design and materials of construction continue to develop, the next generation centrifuges are expecting to last longer and cost less to operate.

**Project Description:**
This project will evaluate the condition of the existing centrifuges and cake pumps, and recommend, and implement necessary modifications to extend useful life and improve the reliability and performance of the existing equipment.

**Project Location:**
Solids Conditioning Building

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $100,000 |
| Design | - | - | $0 |
| Construction | 07/01/2012 | 06/30/2014 | $0 |
| | | Total: | **$100,000** |

Estimated expenditures this FY are: **$50,000**
Anticipated Allocations this FY are: **$50,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Solids Handling Equipment Evaluation / 2
*Project Number/Filename:* pTP35 / solids_hdlg_equpt
*Project Manager/% Expansion:* Antkowiak / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 50,000 | 50,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 50,000 | 50,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (50,000) | (50,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Switchgear Refurbishment, Phase 2

**Project Manager, Department/Division:**
Clint Shima, Engineering/Capital Projects

**Project Purpose:**
This project will refurbish electrical switchgear, especially 480v circuit breakers, to maintain the electrical reliability of the treatment plant.

**Project 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 require replacement. Circuit breakers have been sent out for Class 1 reconditioning and trip unit replacement on an as-needed basis. In the first phase of this project, the oldest circuit breakers (GE) at Substation 40 were refurbished.

Staff has developed a work plan and schedule for the electrical renovation program, which includes the remaining 480v circuit breakers.

**Project Description:**
The remaining 480v circuit breakers (approx 66, Westinghouse/Cutler-Hammer), will be refurbished over a five-year period. The labor and coordination will be performed by District maintenance staff.

Future work includes replacement of the switchgear and circuit breakers in Substation 16, as well as 2400v breakers at Substation 52, Substation 40, and air breakers at Substation 82. Funding for refurbishment and purchase of replacement switchgears and circuit breakers will be provided under this project.

**Project Location:**
Treatment Plant substations

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 01/01/2010 | 07/01/2013 | $254,800 |
| Construction | 07/01/2013 | 06/30/2018 | $2,190,000 |
| | | Total: | **$2,444,800** |

Estimated expenditures this FY are: **$90,000**
Anticipated Allocations this FY are: **$100,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Switchgear Replacement - ph 2 / 2
*Project Number/Filename:* 7292 / switch_2
*Project Manager/% Expansion:* Shima / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 85,000 | 35,000 | 25,000 | 35,000 | 120,000 |
| **B. Anticipated Allocations** | 100,000 | 0 | 0 | 100,000 | 275,000 | 320,000 |
| **C. Authorized this Year** | 100,000 | 85,000 | 35,000 | 125,000 | 310,000 | 440,000 |
| **D. Estimated Expenditures** | (15,000) | (50,000) | (10,000) | (90,000) | (190,000) | (440,000) |
| **E. Estimated Carry-over** | 85,000 | 35,000 | 25,000 | 35,000 | 120,000 | 0 |

# Wet and Dry Scrubber Replacement

**Project Manager, Department/Division:**
Nathan Hodges, Engineering/Capital Projects

**Project Purpose:**
Replace the wet and dry scrubbers on each Multiple Hearth Furnace (MHF) based on the recommendations from the November 2005 Solids Handling Facilities Plan Update and the 2008 Black & Veatch Metals Removal Report.

**Project History:**
The Solids Handling Facilities Plan was updated in 2005. Incinerator Rx and Industrial Furnace Company (IFCO) determined that the Multiple Hearth Furnaces 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.

USEPA released new 129 regulations, and initial testing indicates that the District's MHF can meet the standards. More testing will be performed in 2012 to confirm this determination.

**Project Description:**
This project will replace the wet and dry scrubbers, and their associated piping and equipment on the MHFs. The project may also include side stream treatment of the scrubber water for the removal of cyanide if nitrification is required. The scrubbers and associated equipment will need to be maintained and repaired for several more years before replacement.

**Project Location:**
Solids Conditioning Building

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2010 | 06/01/2010 | $3,000 |
| Design | 06/01/2010 | 07/01/2016 | $705,000 |
| Construction | 07/01/2016 | 06/30/2018 | $5,800,000 |
| | | Total: | **$6,508,000** |

Estimated expenditures this FY are: **$1,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Wet and Dry Scrubber Replacement / 2
*Project Number/Filename:* 7297 / wet_scrub_repl
*Project Manager/% Expansion:* Hodges / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 20,000 | 19,000 | 18,000 | 17,000 | 0 |
| **B. Anticipated Allocations** | 25,000 | 0 | 0 | 0 | 183,000 | 500,000 |
| **C. Authorized this Year** | 25,000 | 20,000 | 19,000 | 18,000 | 200,000 | 500,000 |
| **D. Estimated Expenditures** | (5,000) | (1,000) | (1,000) | (1,000) | (200,000) | (500,000) |
| **E. Estimated Carry-over** | 20,000 | 19,000 | 18,000 | 17,000 | 0 | 0 |

# Wet Weather Bypass Improvements Project

**Project Manager, Department/Division:**
Clint T. Shima, Engineering/Capital Projects

**Project Purpose:**
The purpose of this project is to make improvements to the wet weather emergency discharge system.

**Project History:**
In the early 1990s, the District conducted evaluations and planning for the relocation of the Basin C discharge point as part of the Wet Weather Overflow Project and the Basin Discharge Hydraulics project in an effort to decrease the risk of overflows from the basins during the wet weather season. Improvements specifically recommended from those previous investigations included a new headworks and expanded disinfection facilities. These improvements have already been or are being implemented. An area of focus that has not been addressed was the wet weather bypass system.

Computer modeling predicted that storms for a 20-year system event would produce a peak flow of approximately 310 mgd. With the expansion of the UV Disinfection Facilities, the peak wet weather flow capacity is approximately 130 mgd. Therefore, the emergency wet weather bypass system needs to have sufficient capacity to convey the remaining 180 mgd during these storm events. The present hydraulic capacity of the District's bypass facilities to Pacheco Creek is limited to approximately 50 mgd during 20-25 year storm events. The construction phase of this project has been completed. The District is required to monitor the wetland area north of basin B.

**Project Description:**
This project constructed necessary improvements to the wet weather discharge system. The project included design and construction of a gravity overflow structure located near the northeastern side of Basin B and a new box culvert under a Flood Control District access road to discharge directly to Walnut Creek. In addition, the culvert between the two on-site bypass channels, which direct flow to Basin B, were replaced with larger box culverts to increase capacity. Furthermore, a narrow section of the northern most on-site bypass channel just upstream of Basin B was widened to improve flow. These improvements required a permit from the Army Corps of Engineers and wetland mitigations.

A future phase of this project will evaluate and design/construct modifications to raise the levees around Basin C to match the height of the levees around Basin B to maximize storage capacity of the holding basins.

**Project Location:**
Basin B and Basin C

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 09/01/2004 | 09/01/2005 | $2,000 |
| Design | 09/01/2005 | 07/01/2006 | $431,400 |
| Construction | 07/01/2006 | 06/17/2015 | $2,779,600 |
| | | Total: | **$3,213,000** |

Estimated expenditures this FY are: **$10,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Wet Weather Bypass Improvements / 2
*Project Number/Filename:* 7241 / wet_weather_bypass
*Project Manager/% Expansion:* Shima / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 507,000 | 127,000 | 117,000 | 0 | 0 |
| **B. Anticipated Allocations** | 3,320,000 | 0 | 0 | (107,000) | 0 | 0 |
| **C. Authorized this Year** | 3,320,000 | 507,000 | 127,000 | 10,000 | 0 | 0 |
| **D. Estimated Expenditures** | (2,813,000) | (380,000) | (10,000) | (10,000) | 0 | 0 |
| **E. Estimated Carry-over** | 507,000 | 127,000 | 117,000 | 0 | 0 | 0 |

# Coating Renovation

**Project Manager, Department/Division:**
Gary Rathunde, Engineering/Capital Projects

**Project Purpose:**
The purpose of this project is to extend the useful life and minimize corrosion of select treatment plant equipment, piping, and surfaces through the application of coatings.

**Project History:**
The original treatment plant was built in the late 1940s. Since then, there have been multiple additions and expansions, such as that in the late 1970s. Much of the process infrastructure is almost 35 years old; and except as discussed below, has received limited coating or repainting over the lifetime of the treatment plant.

The first four phases of this project applied protective coatings to structures, vessels, piping and equipment throughout the plant with deteriorating coatings and in need of surface rehabilitation. This work included the submerged steel components in the secondary clarifiers, the concrete surface of the denitrification channel, the sludge blending tanks, electrical MCC enclosures, water system air gap tanks, switchgear and transformers at Substations 33, 34, 40, 52, 73, and 81, fuel oil storage tanks, carbide lime tanks, headwork's bar screens, and all non-fiberglass piping and equipment at the SCB's odor control unit.

**Project Description:**
The Treatment Plant Asset Management Plan project (DP 7269) 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 due to aging or functional obsolescence.

In addition, 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 and will contribute to the efforts of the Treatment Plant Asset Management Plan project. Recommendations from both projects will be used to plan future phases of the long-term protective coating program.

**Project Location:**
Entire treatment plant.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $5,000 |
| Design | 07/01/2012 | 07/01/2013 | $25,000 |
| Construction | 07/01/2013 | 06/30/2022 | $3,500,000 |
| | | Total: | **$3,530,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$25,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Coating Renovation / 3
*Project Number/Filename:* pTP16 / Coating_renov
*Project Manager/% Expansion:* Rathunde / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 20,000 | 50,000 | 500,000 | 500,000 | 450,000 |
| **B. Anticipated Allocations** | 25,000 | 55,000 | 500,000 | 500,000 | 450,000 | 500,000 |
| **C. Authorized this Year** | 25,000 | 75,000 | 550,000 | 1,000,000 | 950,000 | 950,000 |
| **D. Estimated Expenditures** | (5,000) | (25,000) | (50,000) | (500,000) | (500,000) | (450,000) |
| **E. Estimated Carry-over** | 20,000 | 50,000 | 500,000 | 500,000 | 450,000 | 500,000 |

# Concrete Renovation

**Project Manager, Department/Division:**
Michael Penny, Engineering/Capital Projects

**Project Purpose:**
This project will renovate concrete throughout the treatment plant.

**Project 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.

**Project Description:**
This project will 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, that were identified and any additional ones that are identified.

**Project Location:**
Entire treatment plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2010 | 07/01/2012 | $10,000 |
| Construction | 07/01/2012 | 06/30/2018 | $300,000 |
| | | Total: | **$310,000** |

Estimated expenditures this FY are: **$50,000**
Anticipated Allocations this FY are: **$50,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Concrete Renovation / 3
*Project Number/Filename:* pTP30 / Concrete_renov
*Project Manager/% Expansion:* Penny / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 5,000 | 5,000 | 50,000 | 50,000 | 50,000 | 50,000 |
| **C. Authorized this Year** | 5,000 | 5,000 | 50,000 | 50,000 | 50,000 | 50,000 |
| **D. Estimated Expenditures** | (5,000) | (5,000) | (50,000) | (50,000) | (50,000) | (50,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Plant Energy Optimization

**Project Manager, Department/Division:**
Nathan Hodges, Engineering/Capital Projects

**Project Purpose:**
Evaluate energy optimization projects for the treatment plant.

**Project 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.

**Project Description:**
This project will 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 replacing Dissolved Air Flotation (DAF) recirculation pumps with micro-bubble pumps. As other energy efficiency proposals are made they will be included in this evaluation project.

For implementation, staff will determine the most cost effective approach.

**Project Location:**
Treatment Plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2011 | 12/01/2011 | $0 |
| Design | 12/01/2011 | 08/01/2012 | $100,000 |
| Construction | 08/01/2012 | 06/30/2015 | $0 |
| | | Total: | **$100,000** |

Estimated expenditures this FY are: **$25,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Plant Energy Optimization / 3
*Project Number/Filename:* pTP32 / energy optimize
*Project Manager/% Expansion:* Hodges / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 25,000 | 0 | 25,000 | 0 | 0 |
| **B. Anticipated Allocations** | 50,000 | 0 | 50,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 50,000 | 25,000 | 50,000 | 25,000 | 0 | 0 |
| **D. Estimated Expenditures** | (25,000) | (25,000) | (25,000) | (25,000) | 0 | 0 |
| **E. Estimated Carry-over** | 25,000 | 0 | 25,000 | 0 | 0 | 0 |

# Pavement Renovation

**Project Manager, Department/Division:**
Michael Penny, Engineering/Capital Projects

**Project Purpose:**
This project will renovate pavement throughout the treatment plant.

**Project 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.

**Project Description:**
This project will renovate asphalt pavement as identified and will be completed in multiple phases based on the condition assessment and changing condition of the pavement over time.

**Project Location:**
Entire treatment plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2010 | 07/01/2015 | $70,000 |
| Construction | 07/01/2015 | 06/30/2020 | $250,000 |
| | | Total: | **$320,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$5,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Pavement Renovation / 3
*Project Number/Filename:* pTP29 / Pavement_renov
*Project Manager/% Expansion:* Penny / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| A. Current Carry-over | 0 | 0 | 0 | 0 | 0 | 0 |
| B. Anticipated Allocations | 5,000 | 5,000 | 5,000 | 5,000 | 50,000 | 50,000 |
| C. Authorized this Year | 5,000 | 5,000 | 5,000 | 5,000 | 50,000 | 50,000 |
| D. Estimated Expenditures | (5,000) | (5,000) | (5,000) | (5,000) | (50,000) | (50,000) |
| E. Estimated Carry-over | 0 | 0 | 0 | 0 | 0 | 0 |

# Piping Renovations and Replacement

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
To improve the reliability of the piping systems above and below ground in the treatment plant by inspection, renovation, and replacement where required.

**Project 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 30 years. Some of these pipes are leaking due to corrosion. Failure of such piping will adversely affect the treatment processes.

The first six phases of this program have renovated or replaced various piping systems. This program will identify and incorporate into other capital projects or renovate piping systems that were not included in previous phases.

**Project Description:**
This project will renovate piping systems when urgent repairs are identified. Less urgent work will be incorporated into concurrent capital projects as appropriate. Future phases will address the remaining repairs that were identified and any additional ones that are identified.

**Project Location:**
Throughout the treatment plant.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2012 | 06/17/2021 | $8,005,000 |
| | | Total: | **$8,005,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$5,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Piping Renovations and Replacement / 3
*Project Number/Filename:* pTP37 / PipeRen_Program
*Project Manager/% Expansion:* Antkowiak / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 5,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 |
| **C. Authorized this Year** | 5,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 |
| **D. Estimated Expenditures** | (5,000) | (1,000,000) | (1,000,000) | (1,000,000) | (1,000,000) | (1,000,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Piping Renovations, Phase 6

**Project Manager, Department/Division:**
Michael Penny, Engineering/Capital Projects

**Project Purpose:**
To improve the reliability of the piping systems above and below ground in the treatment plant by inspection, renovation, and replacement where required.

**Project 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 30 years. Some of these pipes are leaking due to corrosion. Failure of such piping will adversely affect the treatment processes.

The first five phases of this program had renovated or replaced various piping systems. This included the service air line from the compressor to the air driers, the main service air header, piping between the grit pumps and classifiers, RAS pump station suction header piping, scum piping to reduce blockages, centrate and ash conveyance system piping in the Solids Conditioning Building, blow down piping on auxiliary boilers, piping at various hypochlorite facilities, and fuel oil piping.

**Project Description:**
This phase of the Treatment Plant Piping Renovations Project includes previously identified piping renovations and replacement work not included in previous construction projects. This work includes:

- Replace sections of the scrubber water piping at the seal tank on wet scrubber #2
- Replace a section of the centrate pipe at the foam suppression tank
- Replace flow meter in the discharge piping of aeration blower #2
- Replace a section of the scrubber drain piping in the SCB plenum
- Replace leaking connections at the cake pump feed pipelines
- Pilot test installation of a primary baffle in one tank

**Project Location**:
Throughout the treatment plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 02/26/2010 | 07/01/2012 | $140,000 |
| Construction | 07/01/2012 | 06/30/2013 | $2,046,000 |
| | | Total: | **$2,186,000** |

Estimated expenditures this FY are: **$526,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Piping Renovations - ph 6 / 3
*Project Number/Filename:* 7288 / PipeRen6
*Project Manager/% Expansion:* Penny / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 20,000 | 520,000 | 526,000 | 0 | 0 |
| **B. Anticipated Allocations** | 60,000 | 600,000 | 1,526,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 60,000 | 620,000 | 2,046,000 | 526,000 | 0 | 0 |
| **D. Estimated Expenditures** | (40,000) | (100,000) | (1,520,000) | (526,000) | 0 | 0 |
| **E. Estimated Carry-over** | 20,000 | 520,000 | 526,000 | 0 | 0 | 0 |

# Piping Renovations, Phase 7

**Project Manager, Department/Division:**
Gary E. Rathunde, Engineering/Capital Projects

**Project Purpose:**
To improve the reliability of the piping systems above and below ground in the treatment plant by inspection, renovation, and replacement where required.

**Project 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 35 years. Some of these pipes are leaking due to corrosion. Failure of such piping will adversely affect the treatment processes.

The first six phases of this program had renovated or replaced various piping systems. This included the service air line from the compressor to the air driers, the main service air header, piping between the grit pumps and classifiers, RAS pump station suction header piping, scum piping to reduce blockages, centrate and ash conveyance system piping in the Solids Conditioning Building, blow down piping on auxiliary boilers, piping at various hypochlorite facilities, fuel oil piping, and aeration air pipelines at the A/N Tanks.

**Project 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. This work includes:

- Centrate piping at the centrifuges
- Discharge piping and valves at the south RAS pump stations
- Hypochlorite piping in the RAS pump stations
- Ash hopper dust collector
- Ventilation and odor control system improvements at the sludge truck loading facility
- Sluice gates at the filter plant forebay
- Flow meters and pH meters on the scrubber water pipelines

**Project Location:**
Treatment Plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 09/01/2011 | 10/01/2011 | $8,000 |
| Design | 10/01/2011 | 07/01/2012 | $17,000 |
| Construction | 07/01/2012 | 06/30/2013 | $700,000 |
| | | Total: | **$725,000** |

Estimated expenditures this FY are: **$700,000**
Anticipated Allocations this FY are: **$700,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Piping Renovations Phase 7 / 3
*Project Number/Filename:* 7298 / PipeRen7
*Project Manager/% Expansion:* Rathunde / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 25,000 | 700,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 25,000 | 700,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (25,000) | (700,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Treatment Plant Asset Management Plan

**Project Manager, Department/Division:**
Dana Lawson, Plant Operations Department

**Project Purpose:**
To create a capital project forecasting and to provide management with information to make funding decisions.

**Project History:**
Staff previously estimated that about $6M per year in capital improvements (2001 dollars) is necessary to maintain the reliability of the treatment plant through gradual renewal and replacement of aging equipment and facilities. These expenditures are in addition to those required for capacity and regulatory-driven improvements.

While projects over the next few years are well defined in the Capital Budget and Plan, additional evaluations will be used to better define the long-term needs of the District. It is critical to understand the scope and cost of projects necessary to maintain the treatment plant assets for proper budgeting and responsible rate setting.

**Project Description:**
Asset Management is an integrated set of processes to minimize the life-cycle costs of owning, operating and maintaining assets, while continuously delivering established levels of service at an acceptable level of risk.

The District has implemented portions of asset management at various levels and typically as stand-alone practices.

The District has a good inventory of its assets, except for the piping infrastructure within the plant. The Mainsaver® database has been updated to include the service life, install date, replacement cost (as of 2009), and other useful information. An import tool has been developed to assist with inputting this data. The following conditions assessments have been completed to-date: asphalt pavement, concrete structures, electrical switchgear, and protective coatings.

Future phases of the Treatment Plant Asset Management Project should include:

- Condition assessment of: mechanical, electrical, instrumentation
- Evaluation of consequence and redundancy to develop a Business Risk Exposure (BRE) score for each system

Completion of these will allow for a more accurate reinvestment rate and development of a formal procedure for prioritizing projects.

**Project Location:**
Treatment Plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 12/01/2005 | 07/01/2007 | $99,100 |
| Design | 07/01/2007 | 06/30/2015 | $625,900 |
| Construction | - | - | $0 |
| | | Total: | **$725,000** |

Estimated expenditures this FY are: **$50,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* TP Asset Management / 3
*Project Number/Filename:* 7269 / tp_asset_man
*Project Manager/% Expansion:* Lawson / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 310,000 | 281,000 | 231,000 | 181,000 | 0 |
| **B. Anticipated Allocations** | 856,000 | 0 | 0 | 0 | (131,000) | 0 |
| **C. Authorized this Year** | 856,000 | 310,000 | 281,000 | 231,000 | 50,000 | 0 |
| **D. Estimated Expenditures** | (546,000) | (29,000) | (50,000) | (50,000) | (50,000) | 0 |
| **E. Estimated Carry-over** | 310,000 | 281,000 | 231,000 | 181,000 | 0 | 0 |

# Cathodic Protection Systems Replacement

**Project Manager, Department/Division:**
Nathan Morales, Engineering/Capital Projects

**Project Purpose:**
A master plan for treatment plant cathodic protection was prepared in 2006/07 and updated in 2010/11. Based on the master plan, adequate cathodic protection on all underground and other facilities throughout the treatment plant will be provided by replacing existing expended facilities and installing new systems where required.

**Project History:**
To extend the useful life of the District treatment plant facilities, structures and pipelines, cathodic protection systems need to be monitored and maintained. A comprehensive cathodic protection survey of the treatment plant was performed and identified facilities that needed replacement and improvements over the next five-year period. The report also identified existing facilities requiring further investigations. The current project will prioritize and implement urgent work recommended by the master plan.

**Project Description:**
Cathodic protection facilities are surveyed, inspected and monitored and based on the finding projects are prioritized. Based on the recommendations from the recently updated master plan, the cathodic protection systems that are not providing adequate protection will be repaired and/or replaced, and any other facilities that may require cathodic protection will be identified. It is anticipated that several systems will require refurbishment over the next few years.

**Project Location:**
Treatment Plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2006 | 02/01/2007 | $214,000 |
| Construction | 02/01/2007 | 06/17/2016 | $375,000 |
| | | Total: | **$589,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* TP Cathodic Prot Sys Repl / 3
*Project Number/Filename:* 7254 / TP_cathodic
*Project Manager/% Expansion:* Morales / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 75,000 | 30,000 | 25,000 | 20,000 | 10,000 |
| **B. Anticipated Allocations** | 589,000 | 0 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 589,000 | 75,000 | 30,000 | 25,000 | 20,000 | 10,000 |
| **D. Estimated Expenditures** | (514,000) | (45,000) | (5,000) | (5,000) | (10,000) | (10,000) |
| **E. Estimated Carry-over** | 75,000 | 30,000 | 25,000 | 20,000 | 10,000 | 0 |

# Treatment Plant Electrical Cable Replacement

**Project Manager, Department/Division:**
Nathan Morales, Engineering/ Capital Projects

**Project Purpose:**
The purpose of this project is to identify deficiencies in the existing electrical system and replace cables prior to failure.

**Project History:**
Treatment Plant operation is dependant 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.

**Project Description:**
This project will evaluate the treatment plant's electrical feeders, and replace deficient cables due to age, undersize or functional obsolescence.

**Project Location:**
Entire treatment plant.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2012 | 07/01/2013 | $0 |
| Construction | 07/01/2013 | 06/30/2022 | $2,855,000 |
| | | Total: | **$2,855,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$5,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Electrical Cable Replacement / 3
*Project Number/Filename:* pTP27 / TP_E_cable
*Project Manager/% Expansion:* Morales / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 5,000 | 50,000 | 50,000 | 250,000 | 250,000 | 250,000 |
| **C. Authorized this Year** | 5,000 | 50,000 | 50,000 | 250,000 | 250,000 | 250,000 |
| **D. Estimated Expenditures** | (5,000) | (50,000) | (50,000) | (250,000) | (250,000) | (250,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Treatment Plant Electrical/Instrumentation Replacement Program

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
The purpose of this project is to identify deficiencies in the existing electrical and instrumentation system components and replace them prior to failure.

**Project 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. The electrical system has numerous components, including 12,000-volt switchgear at the 10 high-voltage substations and 30 oil-filled transformers that are well maintained using preventative techniques, such as thermo scan, to identify potential problems and correct them prior to failure. The maintenance inspections have indicated areas subject to premature failures, which could cripple the electrical system. The instrumentation system consists of thousands of field devices and the PLC control system. The PLC system replacement work is included in other ongoing projects.

**Project Description:**
The Treatment Plant Asset Management Plan project is documenting recent renewal and replacement projects and will ultimately be used to provide recommendations for any additional renewal and replacement needs of equipment and facilities at the treatment plant due to aging or functional obsolescence. This project will 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.

**Property Location:**
Treatment Plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2010 | 06/17/2013 | $30,000 |
| | | Total: | **$30,000** |

Estimated expenditures this FY are: **$25,000**
Anticipated Allocations this FY are: **$10,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Plant Electrical and Instrumentation Repl / 3
*Project Number/Filename:* pTP06 / TP_ElecInstr
*Project Manager/% Expansion:* Antkowiak / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 20,000 | 15,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 20,000 | 0 | 10,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 20,000 | 20,000 | 25,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | 0 | (5,000) | (25,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 20,000 | 15,000 | 0 | 0 | 0 | 0 |

# Treatment Plant Equipment Replacement Program

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
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.

**Project History:**
The initial work on this project, then known as the "Major Equipment Replacement Study," assembled a list of current treatment plant equipment; verified equipment name, number, and size; acquired their design records; and estimated equipment life and replacement cost. Equipment maintenance costs are now being tracked in the District's Computerized Maintenance Management System (CMMS). Several major pieces of equipment are reaching the end of their expected service life and require either replacement or a total reconditioning to extend their useful life. Furthermore, the Treatment Plant Asset Management Plan project is also documenting recent renewal and replacement projects and will ultimately be used to provide recommendations for any additional renewal and replacement needs of equipment and facilities at the treatment plant due to aging or functional obsolescence. Appropriate upgrading will also be included.

**Project Description:**
Specific examples of equipment upon which this project will focus include:

- Filter Plant Polymer Pumps (2)
- Influent Pump Wear Rings (4)
- Headworks Air Conditioners (2)
- 3WLP 12" Strainer (1)
- Waste Steam Exchanger Shell (1)
- Scum Tank Assembly (1)
- Grease Separator

Examples of equipment replaced to date include: Carbine lime recirculating pump, polymer feed pump, carbine lime feed pump, waste heat boiler soot ash rotary air lock and grit classifier assemblies.

**Project Location:**
Treatment Plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2007 | 06/17/2018 | $535,000 |
| Construction | 07/01/2007 | 06/17/2018 | $722,000 |
| | | Total: | **$1,257,000** |

Estimated expenditures this FY are: **$100,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* TP Equipment Replacement / 3
*Project Number/Filename:* 7265 / TP_EquipRepl
*Project Manager/% Expansion:* Antkowiak / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 515,000 | 500,000 | 400,000 | 300,000 | 200,000 |
| **B. Anticipated Allocations** | 1,150,000 | 107,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 1,150,000 | 622,000 | 500,000 | 400,000 | 300,000 | 200,000 |
| **D. Estimated Expenditures** | (635,000) | (122,000) | (100,000) | (100,000) | (100,000) | (100,000) |
| **E. Estimated Carry-over** | 515,000 | 500,000 | 400,000 | 300,000 | 200,000 | 100,000 |

# Treatment Plant Facilities Renovations

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
This project will investigate and renovate the treatment plant facilities including buildings, roofs, roads, HVAC, and the drainage system.

**Project History:**
In the mid-1980s, the treatment plant building roofs and paved areas were inspected and evaluated. A priority list was developed and a replacement program was implemented. Several other facilities, such as the warehouse and mechanical maintenance building, will also be evaluated. Heavy construction traffic also continues to deteriorate the existing pavement within the plant site.

**Project Description:**
The Treatment Plant Asset Management Plan project is documenting recent renewal and replacement projects and will ultimately be used to provide recommendations for any additional renewal and replacement needs of equipment and facilities at the treatment plant due to aging or functional obsolescence.

**Project Location:**
Entire treatment plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2004 | 07/01/2007 | $10,000 |
| Design | 07/01/2007 | 07/01/2011 | $170,000 |
| Construction | 07/01/2011 | 06/17/2015 | $0 |
| | | Total: | **$180,000** |

Estimated expenditures this FY are: **$12,000**
Anticipated Allocations this FY are: **$14,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* TP Facilities Renovations / 3
*Project Number/Filename:* 7268 / TP_FacilRenov
*Project Manager/% Expansion:* Antkowiak / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 36,000 | 10,000 | 12,000 | 0 | 0 |
| **B. Anticipated Allocations** | 166,000 | 0 | 14,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 166,000 | 36,000 | 24,000 | 12,000 | 0 | 0 |
| **D. Estimated Expenditures** | (130,000) | (26,000) | (12,000) | (12,000) | 0 | 0 |
| **E. Estimated Carry-over** | 36,000 | 10,000 | 12,000 | 0 | 0 | 0 |

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## COLLECTION SYSTEM PROGRAM

This section includes detailed information for the Collection System Program. Table CS-1 presents specific project listings showing authorizations and allocations for total project costs. The subprogram names are used to categorize the projects among the several reasons for which the District does work. The numbered tabs for the project groupings are as follows:

| Tab Number | Subprogram |
|---|---|
| 1 | Renovation |
| 2 | Regulatory Compliance/Planning/Safety |
| 3 | Expansion |
| 4 | Pumping Stations |

### OVERVIEW

The Collection System Program at $13.7 M comprises 42 percent of the total estimated capital expenditures for FY 2012-13. The major points of emphasis for the Collection System Program are:

- 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;
- 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 six major components:

- The Collection System Master Plan Update (2010), which identified capacity limitations for lines 10 inches in diameter and larger;
- Results from the District's TV inspection program that identify lines in need of rehabilitation or replacement;
- CSO maintenance records including overflows and stoppages;
- The Pumping Station Inventory Update (2011), which identified necessary capacity and reliability improvements;
- Collection system facility plans, which identify capacity limitations in the 6 through 10-inch lines; and
- Coordination with capital improvement programs for paving and pipeline projects of other agencies/utilities.

This process allows staff to establish priorities and schedules for the individual elements of the system that are incorporated into the capital budget and plan. Assessment tools, such as 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.

**Renovation**

Currently, 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 2012-13 Capital Budget, approximately $10.3 M or 75 percent of the Collection System Program will be spent in this subprogram. The largest renovation projects focus on multiple sites in Walnut Creek, Orinda, Lafayette, Martinez and Diablo.

The FY 2001-02 CIB initiated a District-wide TV inspection program to help identify and prioritize renovation needs. In FY 2011-12, the TV inspection program will continue with expenditures estimated at $1.0M and will focus on high maintenance and problem areas in Orinda, Lafayette, and Walnut Creek.

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 situations:

- Capacity-related overflows occur.
- There is a structural failure in a pipe.
- The District's Collection System Operations Department (CSO) maintenance records indicate a persistent and continuous problem.

**Regulatory Compliance/Planning/Safety**

The collection system planning process ensures timely reconstruction and replacement of the sewer collection system as needed. In the short term, the process ensures that developers pay their fair share for downstream improvements to provide capacity needed within the sewer main system. In the long term, it ensures that developments are not connected to deficient sewers. The Collection System Master Plan update process was completed in FY 2009-10 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.

A Pumping Station Inventory document is periodically updated to include information as projects are completed.

Approximately $384,000 in FY 2012-13, or approximately three percent of the Collection System program will be spent on projects in this subprogram.

**Expansion**

Priorities called out in the Collection System Master Plan Update of 2010 have been used to establish the list of projects to be included in the Capital Improvement Plan for capacity reasons. In FY 2012-13, design will start on trunk sewer improvements along the Grayson Creek Corridor in Pleasant Hill. The subprogram includes Development Sewerage for 2012 and Contractual Assessment District projects for a total cost of $1.7M or 12 percent of the Collection System Program.

**Pumping Stations**

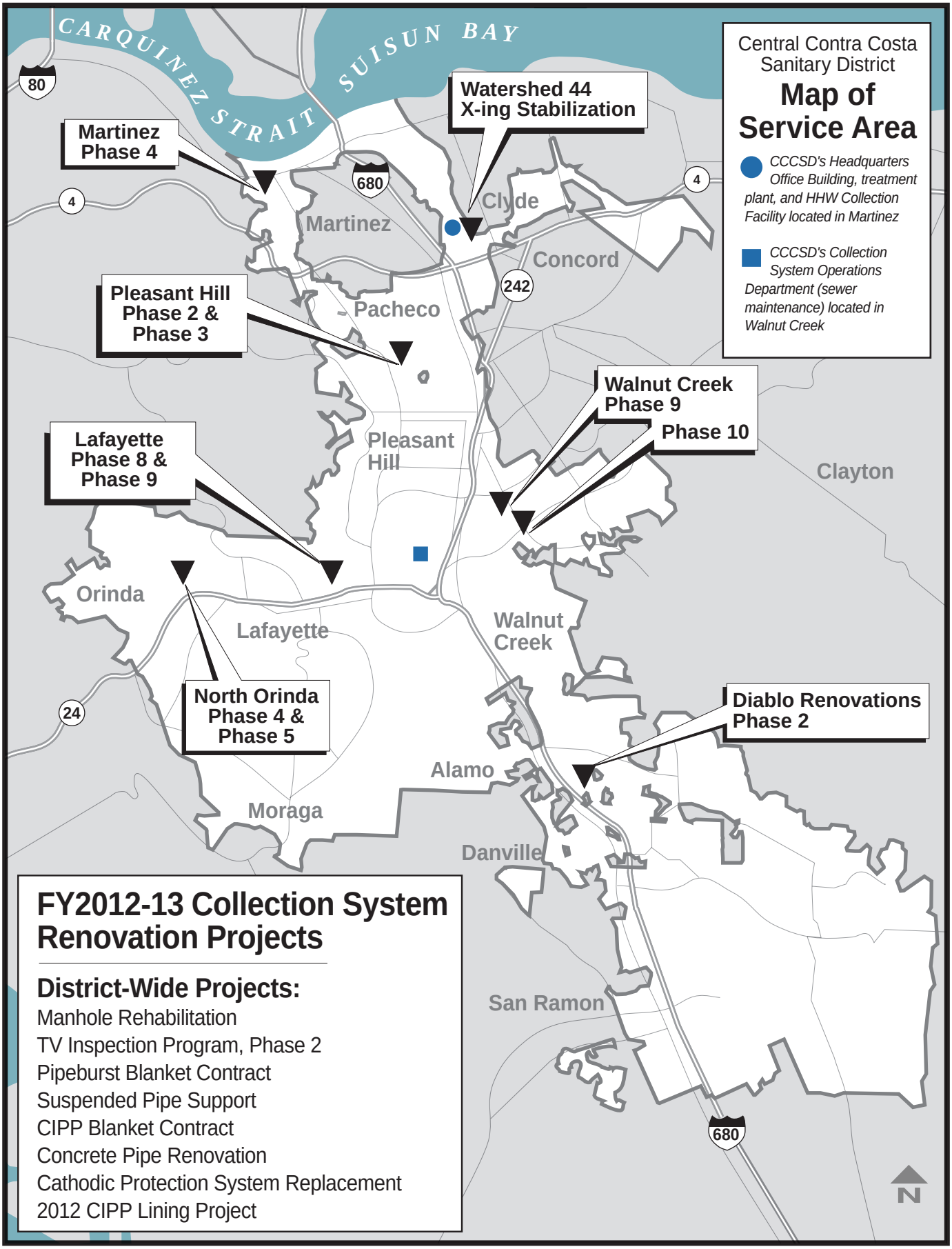
In FY 2012-13, the goal of the Pumping Stations subprogram focuses on reliability, safety and operational improvements of pumping stations. The San Ramon Pumping Station Upgrades project will provide capacity needed to handle increased flow from the Dougherty Valley. A major project involves the removal of the South Buchanan Station and conversion to a gravity system. Approximately $1.3 M or 10 percent of the Collection System program will be spent in this subprogram during FY 2012-13.

## Table CS-1: Collection System Subprogram/Project List

| Subprogram / Project No. / Project Title | | Project Manager | Estimated Total Project Expenditures | Anticipated Allocations To 06/30/12 | Estimated Expenditures To 06/30/12 | Anticipated Allocations FY 2012-13 | Estimated Expenditures FY 2012-13 |
|---|---|---|---|---|---|---|---|
| **1Renovation** | | | | | | | |
| pCS22 | Concrete Pipe Renovation Program | Seitz | 10,000 | 0 | 0 | 1,000 | 1,000 |
| pCS05 | Cathodic Prot Sys Repl - 12-13 thru 21-22 | Antkowiak | 1,200,000 | 0 | 0 | 200,000 | 200,000 |
| 5976 | Diablo Renovations - ph 2 | Seitz | 2,365,000 | 200,000 | 65,000 | 300,000 | 300,000 |
| 8404 | Lafayette Sewer Renovation - ph 8 | Seitz | 1,991,000 | 250,000 | 191,000 | 1,741,000 | 1,800,000 |
| pCS36 | Lafayette Sewer Renovations - ph 9 | Seitz | 2,050,000 | 0 | 0 | 250,000 | 250,000 |
| pCS26 | Martinez Sewer Renovations Phase 4 | Seitz | 2,010,000 | 0 | 0 | 10,000 | 10,000 |
| 5973 | North Orinda Sewer Renovations - ph 4 | Seitz | 2,830,000 | 2,830,000 | 450,000 | 0 | 1,806,000 |
| pCS37 | North Orinda Sewer Renovations - ph 5 | Seitz | 2,064,000 | 0 | 0 | 264,000 | 264,000 |
| 5991 | Pleasant Hill Sewer Renovations - ph 2 | Seitz | 2,383,300 | 400,000 | 143,300 | 183,300 | 200,000 |
| pCS32 | Pleasant Hill Sewer Renovations - ph 3 | Seitz | 2,060,000 | 0 | 0 | 10,000 | 10,000 |
| pCS16 | Collection System Renovation Program | Seitz | 36,450,000 | 0 | 0 | 100,000 | 100,000 |
| 8405 | 2012 CIPP Lining Project | Mestetsky | 2,160,000 | 2,760,000 | 160,000 | 0 | 2,000,000 |
| pCS35 | Walnut Creek Sewer Renovations - ph 10 | Seitz | 2,029,000 | 0 | 0 | 229,000 | 229,000 |
| 8401 | Walnut Creek Sewer Renovations - ph 9 | Seitz | 3,078,000 | 3,078,000 | 320,000 | 0 | 1,800,000 |
| 5982 | Pipeburst Blanket Contract | Seitz | 520,000 | 828,000 | 220,000 | 100,000 | 100,000 |
| 5999 | CIPP Blanket Contract | Seitz | 236,000 | 92,200 | 26,000 | 110,000 | 10,000 |
| pCS40 | Collection Sys Urgent Proj - 12-13 thru 21-22 | Seitz | 500,000 | 0 | 0 | 50,000 | 50,000 |
| 5955 | Suspended Pipe Support | Seitz | 129,500 | 90,000 | 29,500 | 39,500 | 100,000 |
| 5948 | TV Inspection Program - ph 2 | Rozul | 9,000,000 | 1,100,000 | 1,000,000 | 1,300,000 | 1,000,000 |
| pCS99 | Watershed 44 Creek Xing Stabilization | Seitz | 164,000 | 159,000 | 83,000 | 5,000 | 81,000 |
| | **Subprogram Total** | | 75,994,480 | 14,551,880 | 5,442,480 | 4,892,800 | 10,321,000 |
| **2Reg. Compliance/Planning/Safety** | | | | | | | |
| 5997 | CNWS Facility Plan | Waples | 83,000 | 178,000 | 83,000 | 0 | 0 |
| pCS03 | Collection System Modeling Upgrade 12-13 thru 17-18 | Waples | 100,000 | 0 | 0 | 100,000 | 100,000 |
| 5965 | Collection System Planning | Waples | 1,253,000 | 1,250,000 | 1,083,000 | 3,000 | 170,000 |
| 5993 | Forcemain Assessment | Waples | 74,000 | 100,000 | 60,000 | 0 | 14,000 |
| 5962 | Manhole Remote Level Monitoring | Waples | 510,000 | 150,000 | 210,000 | 200,000 | 100,000 |
| | **Subprogram Total** | | 2,020,000 | 1,678,000 | 1,436,000 | 303,000 | 384,000 |
| **3Expansion** | | | | | | | |
| pCS17 | Development Sewerage - Capital Plan years | Miyamoto-Mills | 7,762,000 | 0 | 0 | 681,000 | 681,000 |
| 5967 | A-Line Easement Acquisition - ph 2 | Gronlund | 1,573,000 | 1,447,000 | 1,564,000 | 9,000 | 9,000 |
| 5937 | Alhambra Vly Assmt Districts | Miyamoto-Mills | 130,000 | 200,000 | 127,000 | 0 | 3,000 |
| 8402 | Contractual Assessment Districts | Miyamoto-Mills | 5,000,000 | 165,000 | 500,000 | 835,000 | 500,000 |
| pCS33 | Trunk Sewer Expansion Program | Seitz | 10,000 | 3,000 | 3,000 | 1,000 | 1,000 |
| 6002 | Pleasant Hill Grayson Creek | Seitz | 3,100,000 | 0 | 0 | 500,000 | 500,000 |
| | **Subprogram Total** | | 17,575,000 | 1,815,000 | 2,194,000 | 2,026,000 | 1,694,000 |
| **4Pumping Stations** | | | | | | | |
| 8403 | Buchanan South PS Replacement Sewer | Miyamoto-Mills | 850,000 | 25,000 | 50,000 | 425,000 | 400,000 |
| pCS29 | Fairview / Maltby Upgrades | Antkowiak | 75,000 | 25,000 | 25,000 | 50,000 | 50,000 |
| pCS28 | Flush Kleen Pumping Station Improvements | Antkowiak | 300,000 | 0 | 0 | 50,000 | 50,000 |
| pCS34 | Misc. Force Main Improvements | Antkowiak | 225,000 | 0 | 0 | 25,000 | 25,000 |

**Collection System Subprogram / Project List**
**Expenditures and Allocations**
**FY 2012-13**

| Subprogram / Project No. / Project Title | | Project Manager | Estimated Total Project Expenditures | Anticipated Allocations To 06/30/12 | Estimated Expenditures To 06/30/12 | Anticipated Allocations FY 2012-13 | Estimated Expenditures FY 2012-13 |
|---|---|---|---|---|---|---|---|
| pCS27 | Moraga PS Grinder | Antkowiak | 400,000 | 0 | 0 | 50,000 | 50,000 |
| 8407 | Martinez Bypass Pump | Antkowiak | 280,000 | 200,000 | 275,000 | 80,000 | 5,000 |
| pCS31 | Pump Station Hazard Identification | Antkowiak | 39,000 | 20,000 | 19,000 | 19,000 | 20,000 |
| 5941 | PS Equip & Piping Repl | Rhoads | 820,000 | 525,000 | 445,000 | 75,000 | 75,000 |
| 8408 | Pumping Stations Master Plan | Waples | 150,000 | 0 | 0 | 80,000 | 80,000 |
| 8406 | Pump Station Safety Improvements | Rhoads | 600,000 | 60,000 | 60,000 | 60,000 | 60,000 |
| pCS13 | PS SCADA O&M Manual | Rhoads | 20,000 | 20,000 | 10,000 | 0 | 10,000 |
| pCS25 | SCADA Master Plan | Antkowiak | 50,000 | 0 | 0 | 50,000 | 25,000 |
| 6003 | San Ramon Pumping Station Upgrades | Rathunde | 580,000 | 400,000 | 330,000 | 180,000 | 250,000 |
| 5995 | San Ramon Bypass Pump | Antkowiak | 300,000 | 55,000 | 100,000 | 245,000 | 200,000 |
| | **Subprogram Total** | | 4,764,000 | 1,405,000 | 1,364,000 | 1,389,000 | 1,325,000 |
| | **Program Total** | | 100,353,480 | 19,449,880 | 10,436,480 | 8,610,800 | 13,723,000 |


CARQUINEZ STRAIT
SUISUN BAY
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680
4
242
Central Contra Costa Sanitary District
Map of Service Area
CCCSD's Headquarters Office Building, treatment plant, and HHW Collection Facility located in Martinez
CCCSD's Collection System Operations Department (sewer maintenance) located in Walnut Creek
Watershed 44 X-ing Stabilization
Martinez Phase 4
Pleasant Hill Phase 2 & Phase 3
Lafayette Phase 8 & Phase 9
Walnut Creek Phase 9
Phase 10
North Orinda Phase 4 & Phase 5
Diablo Renovations Phase 2
Clyde
Martinez
Concord
Pacheco
Pleasant Hill
Clayton
Orinda
Lafayette
Walnut Creek
Alamo
Moraga
Danville
San Ramon
24
N
FY2012-13 Collection System Renovation Projects
District-Wide Projects:
Manhole Rehabilitation
TV Inspection Program, Phase 2
Pipeburst Blanket Contract
Suspended Pipe Support
CIPP Blanket Contract
Concrete Pipe Renovation
Cathodic Protection System Replacement
2012 CIPP Lining Project

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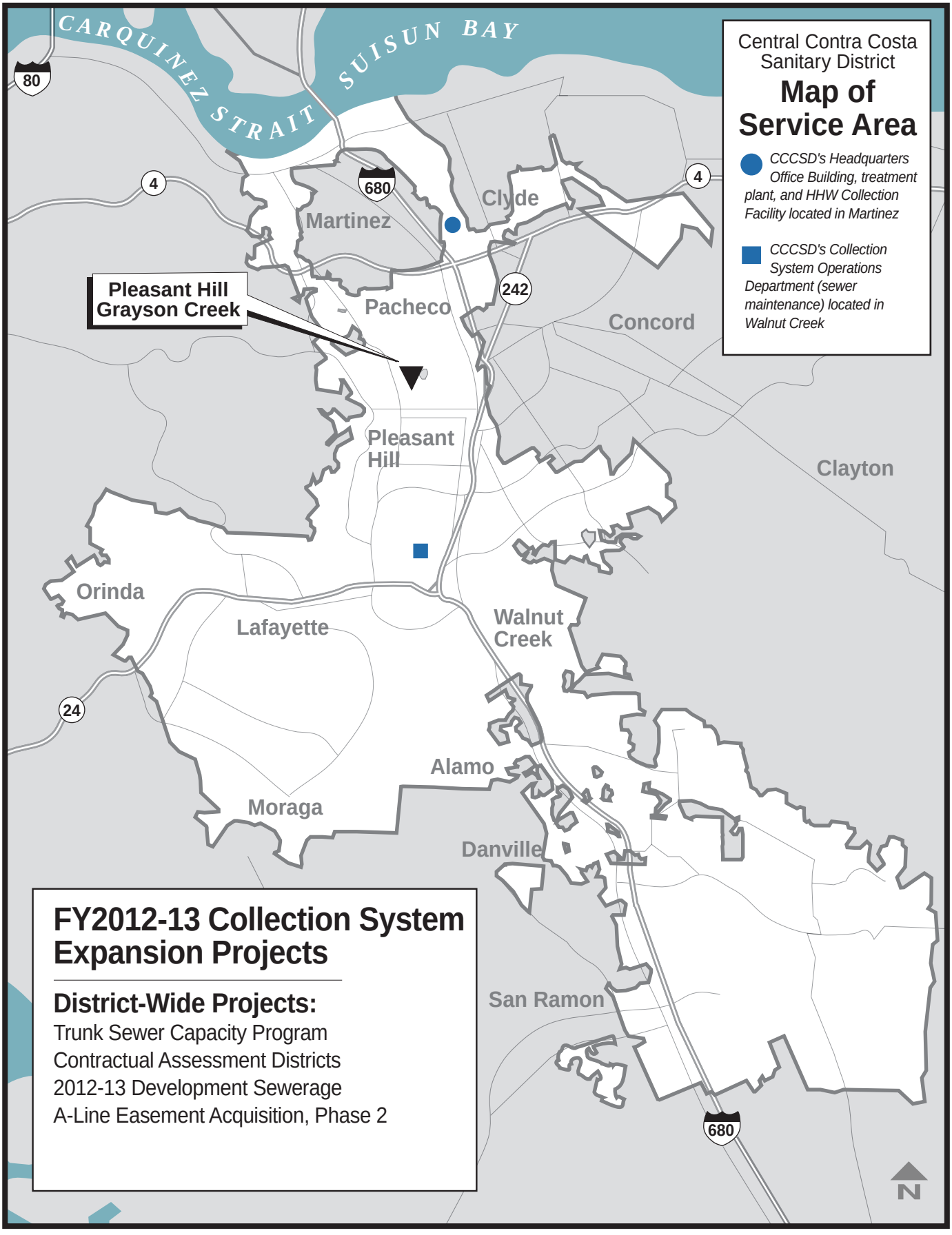
CARQUINEZ STRAIT
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Clyde
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Pleasant Hill
Grayson Creek
Pacheco
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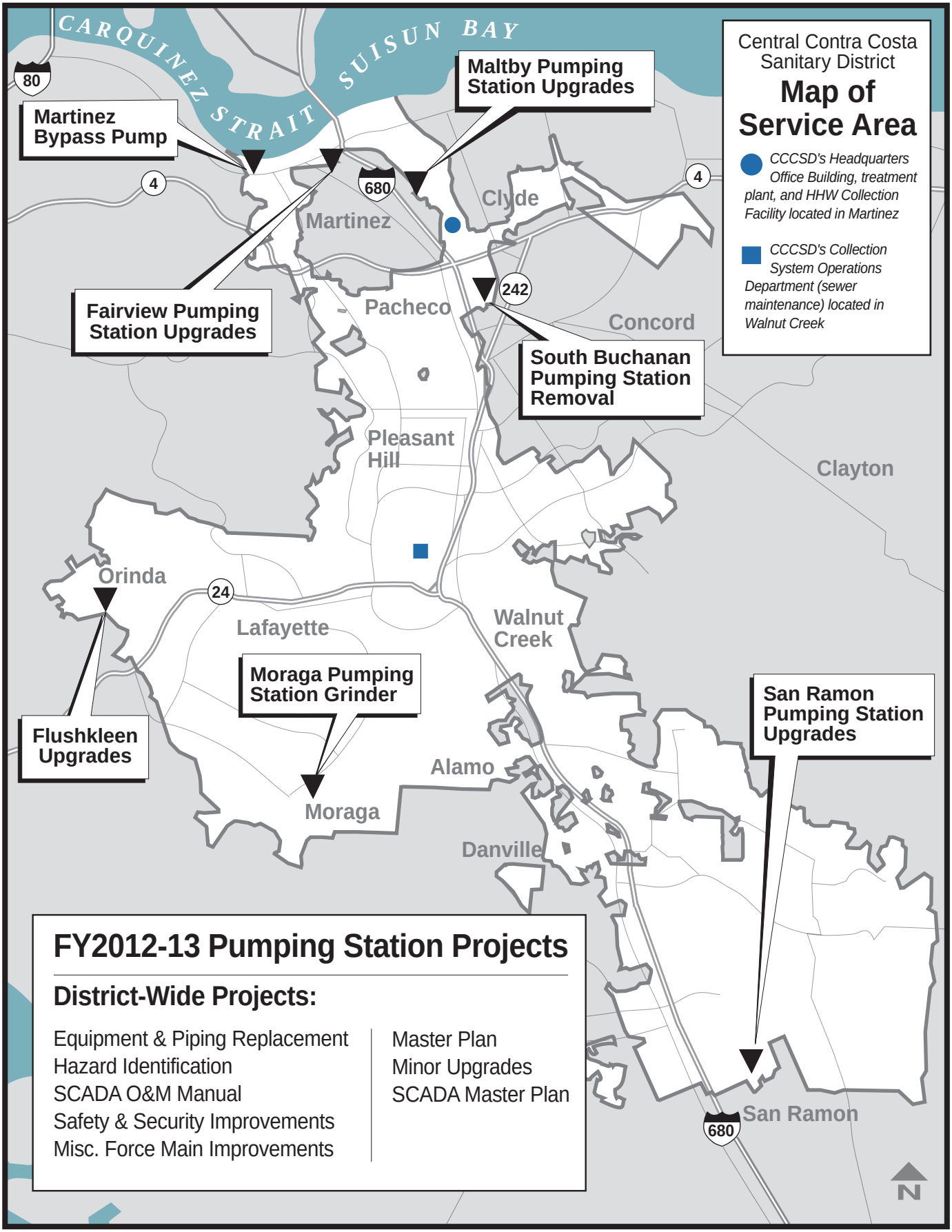
Concord
Pleasant
Hill
Clayton
Orinda
Lafayette
Walnut
Creek
24
Alamo
Moraga
Danville
San Ramon
680
N
Central Contra Costa
Sanitary District
Map of
Service Area
CCCSD's Headquarters Office Building, treatment plant, and HHW Collection Facility located in Martinez
CCCSD's Collection System Operations Department (sewer maintenance) located in Walnut Creek
FY2012-13 Collection System
Expansion Projects
District-Wide Projects:
Trunk Sewer Capacity Program
Contractual Assessment Districts
2012-13 Development Sewerage
A-Line Easement Acquisition, Phase 2

0022B-03/12


CARQUINEZ STRAIT
SUISUN BAY
80
Martinez Bypass Pump
Maltby Pumping Station Upgrades
4
680
Martinez
Clyde
4
Fairview Pumping Station Upgrades
242
Pacheco
Concord
South Buchanan Pumping Station Removal
Pleasant Hill
Clayton
Orinda
24
Lafayette
Walnut Creek
Moraga Pumping Station Grinder
San Ramon Pumping Station Upgrades
Flushkleen Upgrades
Alamo
Moraga
Danville
680
San Ramon
N
Central Contra Costa Sanitary District
Map of Service Area
CCCSD's Headquarters Office Building, treatment plant, and HHW Collection Facility located in Martinez
CCCSD's Collection System Operations Department (sewer maintenance) located in Walnut Creek
FY2012-13 Pumping Station Projects
District-Wide Projects:
Equipment & Piping Replacement
Hazard Identification
SCADA O&M Manual
Safety & Security Improvements
Misc. Force Main Improvements
Master Plan
Minor Upgrades
SCADA Master Plan

0022C-03/12

# Cathodic Protection Systems Replacement
# FY 2012-13 through 2021-22

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
This project will continue a District-wide cathodic protection survey of all underground facilities, including the pumping stations and buried metallic piping, by replacing existing spent facilities and installing new systems where required. As part of this project, a master plan will be updated and include recommendations for required maintenance, replacement and/or addition of new cathodic protection for facilities requiring such protection. The master plan will include cathodic protection implementation and monitoring recommendations.

**Project History:**
The District is responsible for maintenance and operation of pumping stations and collection system pipelines. These facilities and systems along with other miscellaneous underground structures require continuous protection and monitoring. A comprehensive cathodic protection survey of the collection system, pumping stations and treatment plant was originally prepared in 2008 and was updated in 2012.

**Project Description:**
This project will include required maintenance, replacement, and/or addition of cathodic protection. Work on this project will be coordinated with similar efforts in the treatment plant and recycled water systems.

**Project Location:**
Throughout the District service area.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $449,000 |
| Construction | 07/01/2012 | 06/30/2022 | $751,000 |
| | | Total: | **$1,200,000** |

Estimated expenditures this FY are: **$200,000**
Anticipated Allocations this FY are: **$200,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Cathodic Protection System Replacement 2012-13 thru 21-22
*Project Number/Filename:* pCS05 / cs_cathodic_LT
*Project Manager/% Expansion:* Antkowiak / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 200,000 | 200,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| **C. Authorized this Year** | 200,000 | 200,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| **D. Estimated Expenditures** | (200,000) | (200,000) | (100,000) | (100,000) | (100,000) | (100,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Collection System Renovation Program

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Purpose:**
To systematically 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 (as measured by stoppages, private property damage, traffic problems, entry onto private property) to the residents/ratepayers.

**Project 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.

In January 2001, USEPA released a proposed regulation setting out requirements for capacity analysis, management, operation and maintenance of sewer systems. The proposed regulation was immediately withdrawn by the incoming administration. In the absence of the federal program, all California Regional Water Quality Control Boards have included similar requirements in regulation. An order was also promulgated by the State Water Resources Control Board during 2005. In many regions, the State program has replaced the Regional program. While the State's Order has precedence over the Regional regulation for the SF Bay region, periodically, there are issues requiring duplicate reporting.

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.

**Project Description:**
The Collection System Renovation Program is an ongoing series of projects. Candidate sewer line segments are identified, evaluated, and placed on a priority list for replacement or renovation. Within the Collection System Operations and Engineering Departments, staff identifies the candidate sewer lines. These line segments are grouped by geographical area into projects totaling 5,000 to 15,000 feet of sewer replacement or renovation. In FY 2012-13, the renovation program will construct the Walnut Creek Sewer Renovations, Phase 9 project in Walnut Creek, the North Orinda Sewer Renovations, Phase 4 project in Orinda, and the Lafayette Sewer Renovations, Phase 8 project in Lafayette. In addition, design will begin or continue on North Orinda Phase 5, Walnut Creek Phase 10, Lafayette Phase 9, Diablo Phase 2, Pleasant Hill

Phase 2 & 3, Martinez Phase 4 and Watershed 44 Stabilization across the Walnut Creek Channel.

A blanket contract for cured-in-place lining will be bid and construction started this fiscal year. A multi-year pipe burst blanket contract was bid last fiscal year. The blanket contracts will allow the District to address critical renovations throughout the service area in a more timely fashion. A multi-year cathodic protection program to evaluate and renovate existing systems will continue during this fiscal year.

The multi-year television inspection of the collection system is helping to develop a comprehensive database of system condition. This information will be used in conjunction with the renovation strategy to develop the appropriate yearly expenditure levels. In addition, technology demonstration projects will be conducted to evaluate various manhole rehabilitation products and no dig pipeline rehabilitation methods.

**Project Location:**
Locations throughout the District

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2012 | 07/01/2011 | $0 |
| Construction | 07/01/2011 | 06/30/2022 | $36,450,000 |
| | | Total: | **$36,450,000** |

Estimated expenditures this FY are: **$100,000**
Anticipated Allocations this FY are: **$100,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Collection System Renovation Program / 1
*Project Number/Filename:* pCS16 / csr_program_LT
*Project Manager/% Expansion:* Seitz / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 100,000 | 100,000 | 1,000,000 | 2,500,000 | 1,600,000 | 3,300,000 |
| **C. Authorized this Year** | 100,000 | 100,000 | 1,000,000 | 2,500,000 | 1,600,000 | 3,300,000 |
| **D. Estimated Expenditures** | (100,000) | (100,000) | (1,000,000) | (2,500,000) | (1,600,000) | (3,300,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Diablo Sewer Renovations, Phase 2

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Purpose:**
The existing sewer running along Calle Arroyo and through property at #1903 to #1963 Alameda Diablo are very shallow (as little as 1-ft of cover), notoriously flat and generally in poor condition. Diablo Phase 2 proposes to lower and increase fall for these lines by diverting flow into an existing line that is 16-ft deep.

**Project Description:**
The Diablo Sewer Renovations, Phase 2 project will replace/relocate approximately 12,000 feet of 6-inch and 8-inch sewer pipe in the public right of way and easements. The project is scheduled for construction in FY 2013-14.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 08/01/2009 | 06/01/2009 | $0 |
| Design | 06/01/2009 | 06/01/2013 | $360,000 |
| Construction | 06/01/2013 | 06/17/2014 | $2,005,000 |
| | | Total: | **$2,365,000** |

Estimated expenditures this FY are: **$300,000**
Anticipated Allocations this FY are: **$300,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Diablo Renovations - ph 2 / 1
*Project Number/Filename:* 5976 / csr_diablo2
*Project Manager/% Expansion:* Seitz / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| A. Current Carry-over | 0 | 0 | 0 | 0 | 0 | 0 |
| B. Anticipated Allocations | 10,000 | 50,000 | 5,000 | 300,000 | 2,000,000 | 0 |
| C. Authorized this Year | 10,000 | 50,000 | 5,000 | 300,000 | 2,000,000 | 0 |
| D. Estimated Expenditures | (10,000) | (50,000) | (5,000) | (300,000) | (2,000,000) | 0 |
| E. Estimated Carry-over | 0 | 0 | 0 | 0 | 0 | 0 |

# Lafayette Sewer Renovations, Phase 8

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Purpose:**
The Lafayette Sewer Renovations, Phase 8 project will replace/rehabilitate approximately 12,000 feet of 6 and 8-inch sewer pipe predominately in the Upper Happy Valley Road area from Cowan Road to Las Arabis. The design of this project will start in FY 2011-12 with construction scheduled for FY 2012-13.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2010 | 07/01/2011 | $0 |
| Design | 07/01/2011 | 07/01/2012 | $191,000 |
| Construction | 07/01/2012 | 06/30/2013 | $1,800,000 |
| | | Total: | **$1,991,000** |

Estimated expenditures this FY are: **$1,800,000**
Anticipated Allocations this FY are: **$1,800,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Lafayette Sewer Renovation - ph 8 / 1
*Project Number/Filename:* 8404 / csr_laf8
*Project Manager/% Expansion:* Seitz / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 1,000 | 190,000 | 1,800,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 1,000 | 190,000 | 1,800,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (1,000) | (190,000) | (1,800,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Lafayette Sewer Renovations, Phase 9

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Purpose:**
The Lafayette Sewer Renovations, Phase 9 project will replace/rehabilitate approximately 10,000 feet of 6 and 8-inch sewer in Lafayette. The design of this project will start in FY 2012-13 with construction scheduled for FY 2013-14.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2012 | 09/01/2012 | $0 |
| Design | 09/01/2012 | 07/01/2013 | $250,000 |
| Construction | 07/01/2013 | 06/30/2014 | $1,800,000 |
| | | Total: | **$2,050,000** |

Estimated expenditures this FY are: **$250,000**
Anticipated Allocations this FY are: **$250,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Lafayette Sewer Renovations - ph 9 / 1
*Project Number/Filename:* pCS36 / csr_Lafayette9
*Project Manager/% Expansion:* Seitz / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 250,000 | 1,800,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 250,000 | 1,800,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (250,000) | (1,800,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Martinez Sewer Renovations, Phase 4

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Description:**
The Martinez Sewer Renovations, Phase 4 project will replace or rehabilitate approximately 10,000 feet of 6 and 8-inch sewer pipe located in the public right of way and easements. Design will start in FY 2012-13 with major construction in FY 2014-15.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2012 | 07/01/2014 | $210,000 |
| Construction | 07/01/2014 | 06/30/2015 | $1,800,000 |
| | | Total: | **$2,010,000** |

Estimated expenditures this FY are: **$10,000**
Anticipated Allocations this FY are: **$10,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Martinez Sewer Renovations Phase 4 / 1
*Project Number/Filename:* pCS26 / csr_Martinez4
*Project Manager/% Expansion:* Seitz / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 10,000 | 200,000 | 1,800,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 10,000 | 200,000 | 1,800,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (10,000) | (200,000) | (1,800,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# North Orinda Sewer Renovations, Phase 4

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Purpose:**
The North Orinda Sewer Renovations, Phase 4 project will replace/rehabilitate approximately 13,000 feet of 6 and 8-inch sewers predominately in the El Toyonal and Claremont areas of North Orinda. The design started in FY 2010-11 with construction scheduled for FY 2012-13.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 08/01/2010 | 07/01/2012 | $450,000 |
| Construction | 07/01/2012 | 06/15/2013 | $1,806,000 |
| | | Total: | **$2,256,000** |

Estimated expenditures this FY are: **$1,806,000**
Anticipated Allocations this FY are: **$1,806,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* North Orinda Sewer Renovations - ph 4 / 1
*Project Number/Filename:* 5973 / csr_no_orinda4
*Project Manager/% Expansion:* Seitz / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 50,000 | 400,000 | 1,806,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 50,000 | 400,000 | 1,806,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (50,000) | (400,000) | (1,806,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# North Orinda Sewer Renovations, Phase 5

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Purpose:**
The North Orinda Sewer Renovations, Phase 5 project will replace/rehabilitate approximately 10,000 feet of 6 and 8-inch line in North Orinda. The design will start in FY 2012-13 with construction scheduled for FY 2013-14.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2012 | 09/01/2012 | $0 |
| Design | 09/01/2012 | 07/01/2013 | $264,000 |
| Construction | 07/01/2013 | 06/30/2014 | $1,800,000 |
| | | Total: | **$2,064,000** |

Estimated expenditures this FY are: **$264,000**
Anticipated Allocations this FY are: **$264,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* North Orinda Sewer Renovations - ph 5 / 1
*Project Number/Filename:* pCS37 / csr_NOrinda5
*Project Manager/% Expansion:* Seitz / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 264,000 | 1,800,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 264,000 | 1,800,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (264,000) | (1,800,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Pleasant Hill Sewer Renovations, Phase 2

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Description:**
The Pleasant Hill Sewer Renovations, Phase 2 project will replace/rehabilitate approximately 10,000 feet of 6 and 8-inch sewer pipe in the public right of way and easements throughout the city Pleasant Hill. Design of this project will start in FY 2010-11 with construction scheduled in FY 2013-14.

This project will be coordinated with the Grayson Creek trunk sewer project, which is in the Expansion subprogram.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 12/01/2008 | 07/01/2011 | $0 |
| Design | 07/01/2011 | 07/01/2013 | $393,300 |
| Construction | 07/01/2013 | 06/30/2014 | $1,800,000 |
| | | Total: | **$2,193,300** |

Estimated expenditures this FY are: **$250,000**
Anticipated Allocations this FY are: **$233,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Pleasant Hill Sewer Renovations - ph 2 / 1
*Project Number/Filename:* 5991 / csr_ph2
*Project Manager/% Expansion:* Seitz / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 27,000 | 17,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 160,000 | 0 | 233,000 | 1,800,000 | 0 | 0 |
| **C. Authorized this Year** | 160,000 | 27,000 | 250,000 | 1,800,000 | 0 | 0 |
| **D. Estimated Expenditures** | (133,000) | (10,000) | (250,000) | (1,800,000) | 0 | 0 |
| **E. Estimated Carry-over** | 27,000 | 17,000 | 0 | 0 | 0 | 0 |

# Pleasant Hill Sewer Renovations, Phase 3

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Description:**
The Pleasant Hill Sewer Renovations, Phase 3 project will replace/rehabilitate approximately 10,000 feet of 6 and 8-inch sewer pipe in the public right of way and easements throughout the city Pleasant Hill. Design of this project will start in FY 2012-13 with construction scheduled in FY 2014-15.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2012 | 08/01/2014 | $260,000 |
| Construction | 08/01/2014 | 06/30/2015 | $1,800,000 |
| | | Total: | **$2,060,000** |

Estimated expenditures this FY are: **$10,000**
Anticipated Allocations this FY are: **$10,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Pleasant Hill Sewer Renovations - ph 3 / 1
*Project Number/Filename:* pCS32 / csr_PH3
*Project Manager/% Expansion:* Seitz / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 10,000 | 250,000 | 1,800,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 10,000 | 250,000 | 1,800,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (10,000) | (250,000) | (1,800,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# 2012 CIPP Lining Project

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Description:**
This project will renovate approximately 2,600 feet of existing large diameter deteriorated corrugated metal and reinforced concrete pipeline located in South Main between Hill Road and Lilac Drive in Walnut Creek utilizing cured in place pipe (CIPP). Approximately 1450 feet of large diameter deteriorated corrugated metal pipe will also be renovated in Lancaster Road between Westwood Court and Orchard Lane using CIPP. An additional 3800 feet of large diameter reinforced concrete pipe will be renovated on the Shell Refinery Property and east along Marina Vista to Highway I-680. Thirty-two hundred feet of 42-inch RCP will also be lined on the District's plant site.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2010 | 06/30/2011 | $0 |
| Design | 06/30/2011 | 04/30/2012 | $55,000 |
| Construction | 05/01/2012 | 06/17/2013 | $2,105,000 |
| | | Total: | **$2,160,000** |

Estimated expenditures this FY are: **$2,000,000**
Anticipated Allocations this FY are: **$2,000,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* South Main/I-680 Martinez Trunk Line / 1
*Project Number/Filename:* 8405 / csr_SouthMainSlip
*Project Manager/% Expansion:* Antkowiak / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 5,000 | 155,000 | 2,000,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 5,000 | 155,000 | 2,000,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (5,000) | (155,000) | (2,000,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Walnut Creek Renovations, Phase 9

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Purpose:**
The Walnut Creek Sewer Renovations, Phase 9 project will replace/rehabilitate approximately 12,000 feet of 6 and 8-inch sewer pipes predominately in the Rudgear Road, Hawthorne Drive and Mountain View Blvd. areas. The project is scheduled for construction in FY 2012-13.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2009 | 01/01/2011 | $0 |
| Design | 01/01/2011 | 07/01/2012 | $320,000 |
| Construction | 07/01/2012 | 06/15/2014 | $1,801,000 |
| | | Total: | **$2,121,000** |

Estimated expenditures this FY are: **$1,800,000**
Anticipated Allocations this FY are: **$1,800,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Walnut Creek Sewer Renovations - ph 9 / 1
*Project Number/Filename:* 8401 / csr_wc9
*Project Manager/% Expansion:* Seitz / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 8,000 | 8,000 | 1,000 | 1,000 | 0 |
| **B. Anticipated Allocations** | 10,000 | 1,000 | 310,000 | 1,800,000 | 0 | 0 |
| **C. Authorized this Year** | 10,000 | 9,000 | 318,000 | 1,801,000 | 1,000 | 0 |
| **D. Estimated Expenditures** | (2,000) | (1,000) | (317,000) | (1,800,000) | (1,000) | 0 |
| **E. Estimated Carry-over** | 8,000 | 8,000 | 1,000 | 1,000 | 0 | 0 |

# Walnut Creek Renovations, Phase 10

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Purpose:**
The Walnut Creek Sewer Renovations, Phase 10 project will replace/rehabilitate approximately 10,000 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 will start in FY 2012-13 with construction scheduled for FY 2013-14.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2012 | 09/01/2012 | $0 |
| Design | 09/01/2012 | 07/01/2013 | $229,000 |
| Construction | 07/01/2013 | 06/30/2014 | $1,800,000 |
| | | Total: | **$2,029,000** |

Estimated expenditures this FY are: **$229,000**
Anticipated Allocations this FY are: **$229,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Walnut Creek Sewer Renovations - ph 10 / 1
*Project Number/Filename:* pCS35 / csr_WC10
*Project Manager/% Expansion:* Seitz / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 229,000 | 1,800,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 229,000 | 1,800,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (229,000) | (1,800,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Collection System Urgent Projects
# FY 2012-13 through 21-22

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project 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.

**Project 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.

**Project Location:**
Throughout the District.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2012 | 06/17/2023 | $500,000 |
| | | Total: | **$500,000** |

Estimated expenditures this FY are: **$50,000**
Anticipated Allocations this FY are: **$50,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Collection System Urgent Projects / 1
*Project Number/Filename:* none / csu_
*Project Manager/% Expansion:* Seitz / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 |
| **C. Authorized this Year** | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 |
| **D. Estimated Expenditures** | (50,000) | (50,000) | (50,000) | (50,000) | (50,000) | (50,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Blanket Contract for Pipebursting

**Project Manager:**
Paul Seitz, Engineering/Capital Projects

**Project Description:**
Urgent pipeline projects which require immediate repairs may arise anytime during current fiscal year.

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

Projects included in this category are those that cannot be completed by the District's Collection System Operations Department, 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.

**Project Location:**
Throughout the service area.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2010 | 03/01/2011 | $0 |
| Construction | 03/01/2011 | 06/30/2015 | $520,000 |
| | | Total: | **$520,000** |

Estimated expenditures this FY are: **$100,000**
Anticipated Allocations this FY are: **$100,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Pipeburst Blanket Contract / 1
*Project Number/Filename:* 5982 / csu_burst
*Project Manager/% Expansion:* Seitz / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 2,000 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 52,000 | 168,000 | 100,000 | 100,000 | 100,000 | 0 |
| **C. Authorized this Year** | 52,000 | 170,000 | 100,000 | 100,000 | 100,000 | 0 |
| **D. Estimated Expenditures** | (50,000) | (170,000) | (100,000) | (100,000) | (100,000) | 0 |
| **E. Estimated Carry-over** | 2,000 | 0 | 0 | 0 | 0 | 0 |

# Blanket Contract for CIPP

**Project Manager:**
Paul Seitz, Engineering/Capital Projects

**Project Description:**
Urgent pipeline projects which require immediate repairs may arise anytime during current fiscal year.

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

Projects included in this category are those that cannot be completed by the District's Collection System Operations Department, 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.

**Project Location:**
Throughout the service area.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2010 | 08/14/2013 | $10,000 |
| Construction | 08/14/2013 | 06/30/2015 | $226,000 |
| | | Total: | **$236,000** |

Estimated expenditures this FY are: **$10,000**
Anticipated Allocations this FY are: **$110,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* CIPP Blanket Contract / 1
*Project Number/Filename:* 5999 / csu_CIPP
*Project Manager/% Expansion:* Seitz / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 1,000 | 0 | 100,000 | 0 | 0 |
| **B. Anticipated Allocations** | 26,000 | 0 | 110,000 | 0 | 100,000 | 0 |
| **C. Authorized this Year** | 26,000 | 1,000 | 110,000 | 100,000 | 100,000 | 0 |
| **D. Estimated Expenditures** | (25,000) | (1,000) | (10,000) | (100,000) | (100,000) | 0 |
| **E. Estimated Carry-over** | 1,000 | 0 | 100,000 | 0 | 0 | 0 |

# Suspended Pipe Support Evaluation and Repair

**Project Manager:**
Paul Seitz, Engineering/Capital Projects

**Project Description:**
The Suspended Pipe Support Evaluation and Repair project identifies 12 pipes suspended from bridges that need repairs and modifications necessary to the support systems. The project is scheduled for construction in FY 2012-13. Sites are located throughout the District.

**Project History:**
The supports for the 16-inch Recycled Water line suspended from the Imhoff Place bridge over Grayson creek failed in September 2009. Due to this failure it was determined that it would be prudent to investigate, evaluate, and repair as necessary the other pipes suspended from bridges or similar structures.

**Project Location:**
Throughout the service area.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2010 | 05/01/2011 | $0 |
| Design | 05/01/2011 | 05/01/2012 | $0 |
| Construction | 05/01/2012 | 06/30/2013 | $129,500 |
| | | Total: | **$129,500** |

Estimated expenditures this FY are: **$100,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Suspended Pipe Support / 1
*Project Number/Filename:* 5955 / suspended_pipe_support
*Project Manager/% Expansion:* Seitz / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 100,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 25,000 | 104,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 25,000 | 104,000 | 100,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (25,000) | (4,000) | (100,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 100,000 | 0 | 0 | 0 | 0 |

# Concrete Pipe Renovation

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Purpose:**
Identify concrete pipe that will require remedial action.

**Project History:**
Large diameter sewers are usually made of concrete. This project will identify and schedule concrete sewers requiring remedial action.

**Project Description:**
The ongoing corrosion inspection and TV inspection programs will identify additional reaches of concrete pipe that will need some level of remedial action. This information will be used to identify and schedule needed projects.

**Project Location:**
Locations throughout the District.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2012 | 06/17/2022 | $10,000 |
| Construction | - | - | $0 |
| | | Total: | **$10,000** |

Estimated expenditures this FY are: **$1,000**
Anticipated Allocations this FY are: **$1,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Concrete Pipe Renovation Program / 1
*Project Number/Filename:* pCS22 / con_co
*Project Manager/% Expansion:* Seitz / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| **C. Authorized this Year** | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| **D. Estimated Expenditures** | (1,000) | (1,000) | (1,000) | (1,000) | (1,000) | (1,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# TV Inspection Program, Phase 2

**Project Manager, Department/Division:**
Alex Rozul, Engineering/Capital Projects

**Project Purpose:**
Inspect all existing sewers and develop a comprehensive assessment of the District's collection system.

**Project History:**
Phase 1 of the TV Inspection Program has completely inspected sewers in Orinda, Walnut Creek, Lafayette, Danville, Diablo, Pleasant Hill, Martinez, Moraga, and San Ramon.

Phase 2 of the TV inspection program will inspect all sewers in the District's service area where initial inspections or maintenance records indicate follow-up inspection work would be useful. Additionally sewers such as tunnels/force mains requiring specialty contractors will be included. The inspection data will be used to organize and prioritize sewer renovation projects as well as add to the District's data regarding pipe type performance.

**Project Description:**
The TV Inspection Program is a large scale, multi-year effort to CCTV inspect the entire CCCSD collection system. A publicly-bid CCTV inspection contract utilizing digital imaging and database software is awarded for each year. The contractor's data will be integrated with existing CCTV inspection data and existing sewer information databases. Sewers identified as in fair or poor condition in Phase 1 but not yet renovated will be re-inspected. The initial emphasis of Phase 2 will be placed on sewers in Lafayette, Orinda and Walnut Creek. Phase 2 is a 10 year program that started in FY 2010-11.

**Project Location:**
The entire collection system

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2010 | 06/17/2020 | $9,000,000 |
| | | Total: | **$9,000,000** |

Estimated expenditures this FY are: **$1,000,000**
Anticipated Allocations this FY are: **$1,000,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* TV Inspection Program - ph 2 / 1
*Project Number/Filename:* 5948 / TVI_2
*Project Manager/% Expansion:* Rozul / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 500,000 | 500,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 |
| **C. Authorized this Year** | 500,000 | 500,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 |
| **D. Estimated Expenditures** | (500,000) | (500,000) | (1,000,000) | (1,000,000) | (1,000,000) | (1,000,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Watershed 44 Creek Crossing Stabilization

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Description:**
This project will evaluate/construct stabilization of approximately 250 feet of an existing 39-inch reinforced concrete gravity sewer pipe crossing the Walnut Creek Channel near the District's North Concord Metering Station, north of State Highway 4.

The design of the project will start in FY 2010-11 with major construction, if needed, in FY 2012-13.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 01/01/2010 | 07/01/2010 | $0 |
| Design | 07/01/2010 | 07/01/2011 | $37,000 |
| Construction | 07/01/2011 | 06/30/2013 | $127,000 |
| | | Total: | **$164,000** |

Estimated expenditures this FY are: **$81,000**
Anticipated Allocations this FY are: **$5,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Watershed 44 Creek Xing Stabilization / 1
*Project Number/Filename:* pCS99 / wat44_creek
*Project Manager/% Expansion:* Seitz / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 127,000 | 122,000 | 76,000 | 0 | 0 |
| **B. Anticipated Allocations** | 159,000 | 0 | 0 | 5,000 | 0 | 0 |
| **C. Authorized this Year** | 159,000 | 127,000 | 122,000 | 81,000 | 0 | 0 |
| **D. Estimated Expenditures** | (32,000) | (5,000) | (46,000) | (81,000) | 0 | 0 |
| **E. Estimated Carry-over** | 127,000 | 122,000 | 76,000 | 0 | 0 | 0 |

# Concord Naval Weapons Station Facilities Plan

**Project Manager, Department/Division:**
Justin Waples, Engineering/Environmental Services

**Project Purpose:**
This project will be used to identify sewer system capacity deficiencies, and wastewater facilities necessary to serve the extensive development being planned at the Concord Naval Weapons Station (CNWS) site as part of the Concord Community Reuse Project (CCRP). This analysis is required to ensure that projects are identified for timely inclusion in the Capital Plan and that the CCRP's appropriate contribution to the cost of such facilities can be determined.

**Project History:**
When the CNWS was an active military facility, tens of thousands of gallons per day of wastewater collected by its private collection system flowed into CCCSD facilities in North Concord, passing through three pumping stations and several miles of sewer, before reaching the treatment plant for cleaning and disposal. For several years since the Federal government identified its intent to close most of the CNWS and transfer control of the property to the City of Concord, the City has been conducting an extensive planning process for reuse of the CNWS as a new community on the northeast side of Concord. Current plans call for 28,900 people, 12,300 housing units and more than 8.5 million square feet of commercial, institutional, and other community facilities. Through that planning process, CCCSD has been identified as the agency that would provide wastewater and recycled water services to the project. A preferred development option has been chosen and staff has begun planning the pipe network that will convey an estimated 2.7 million gallons per day (mgd) ADWF of sewage from the project area to the treatment plant and convey recycled water from the Treatment Plant back to the project.

**Project Description:**
Preliminary evaluations are being made to determine the most appropriate off-site network solutions to the sewerage needs of the new community. Consideration will be given to the quantity of wastewater likely to flow directly into CCCSD's North Concord facilities versus the flow expected to be conveyed through City of Concord sewers and their connection to CCCSD facilities near the former Concord Pumping Station. Planning level cost estimates will be presented for recommended improvements and a division of financial responsibilities will be suggested. On-site planning and development of sewerage will be done by the City of Concord and its project developer(s), with CCCSD staff reviewing to assure compliance with our requirements and specifications.

A separate project is included in the District's Capital Improvement Plan for consideration of the recycled water aspects of this project.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $43,000 |
| Design | - | - | $0 |
| Construction | 07/01/2010 | 10/30/2012 | $40,000 |
| | | Total: | **$83,000** |

Estimated expenditures this FY are: **$0**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* CNWS Facility Plan / 2
*Project Number/Filename:* 5997 / CNWS_fac
*Project Manager/% Expansion:* Waples / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 60,000 | 17,000 | 17,000 | 17,000 | 17,000 |
| **B. Anticipated Allocations** | 100,000 | 0 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 100,000 | 60,000 | 17,000 | 17,000 | 17,000 | 17,000 |
| **D. Estimated Expenditures** | (40,000) | (43,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 60,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 |

# Collection System Modeling Upgrade

**Project Manager, Department/Division:**
Justin Waples, Engineering/Environmental Services

**Project Purpose:**
Complete the implementation of ArcSNAP (the District's Sewer Network Analysis Program). Training will be provided for rotating staff or assistant engineers.

**Project History:**
At the completion of the 1985-86 Collection System Master Plan, the District obtained and continued to use the hydraulic modeling software used by the consultant. Over the years, it was used frequently to assess impacts from large developments and to predict flows in sewers and pumping stations during design.

In 2004, the District completed the revision of the software that performs these functions. A completed version of the ArcSNAP model has been used productively since early 2004. Hydraulic grade line functionality was added in FY 2004-05, and additional user training provided. In FY 2005-06, in FY 2007-08, and again in FY 2009-10, the data was updated by electronically extracting the pipe network and parcel data from in-house Geomedia and HTE databases. The HTE data was not updated in the FY 2009-10 iteration and will have been included in FY 2010-11. The Geomedia database contains the pipe and node locations and HTE provides flow and consumption information. These are the primary sources of raw data used by ArcSNAP to predict and route flows.

**Project Description:**
An on-going task in this project is incorporation of data from the District's Flow Monitoring Program within the ArcSNAP's flow analysis. The hydraulic model has been exercised to confirm that flows were accurately predicted. In addition, analysis of these results is incorporated in an allied project, the Collection System Master Plan Update.

This project has implemented a new version of the large set of sequentially-linked HTE queries that has been recoded using revised file and field identifiers. During FY 2011-12, the data will again be reloaded. A new process using native-mode SHP files was implemented in FY 2010-11; a process for accomplishing this reload every four months will be initiated. An ongoing problem related to the greater need for slope information will be addressed. Research into alternative hydraulic modeling systems is also an integral component of this project.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2012 | 06/30/2013 | $100,000 |
| Design | - | - | $0 |
| Construction | - | - | $0 |
| | | Total: | **$100,000** |

Estimated expenditures this FY are: **$100,000**
Anticipated Allocations this FY are: **$100,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Collection System Modeling Upgrade 12-13 thru 17-18 / 2
*Project Number/Filename:* pCS03 / cs_model
*Project Manager/% Expansion:* Waples / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 100,000 | 0 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 100,000 | 0 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (100,000) | 0 | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Collection System Planning

**Project Manager, Department/Division:**
Justin Waples, Engineering/Environmental Services

**Project Purpose:**
To identify, evaluate, and schedule short and long-term sewer improvement projects and to provide design flow rates for major facility plans.

**Project History:**
Staff performs on-going Collection System Planning and project priority analyses to ensure that District goals for collection system performance are met.

**Project 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 six major activities:

***Local Capacity Studies (LCS)***

1. ***LCS in response to proposed developments***. Upon receipt of a proposed development plan, staff performs an LCS to determine the existing sewer system capacity and capacity required to serve future proposed developments. If additional sewer capacity is required to serve the proposed developments, staff takes steps to ensure that capacity is provided.

2. ***LCS to identify and define existing deficiencies in the sewer main system***. A capacity analysis of the trunk sewer system was completed as part of the Collection System Master Plan (2010). A capacity analysis may be performed when one of the following situations occurs:

    - When there is a structural failure in a pipe.
    - When there has been a wet-weather overflow from the system.
    - When there has been a dry-weather overflow from the system.
    - When Collection System Operations maintenance requests indicate a persistent and continuous problem.

3. ***Land Use and Collection System Database Management***. As new development is connected to the District's sewerage system and sewer improvement projects are completed, those sewers are incorporated into the Mapping database. This information is periodically provided as downloads of data for the Sewer Network Analysis Program (ArcSNAP). Computer hardware and software may be purchased under this project to provide the capability to use County and District records for more comprehensive updating of the land use database.

4. ***Flow Rates for Facility Plans***. Upon receipt of a request for flow rates for a collection system facilities plan, staff updates the land use data and the sewer network in the computer, based upon current and proposed land use plans.

5. ***Special Studies***. Special studies are required to assure District sewer renovation plans and priorities are consistent with capacity, routing, and acceptable service level guidelines. Capacity studies determine flow limits for release of water from water district reservoirs to the District's sewer system.

6. ***Pumping Stations Master Plan:*** Develop a living document for guiding the future management of Pumping Station assets and to provide a road map for methodically integrating pumping station related Planning activities

**Project Location:**
Throughout the collection system

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2006 | 06/17/2009 | $1,253,000 |
| Design | - | - | $0 |
| Construction | 06/17/2009 | 06/17/2013 | $0 |
| | | Total: | **$1,253,000** |

Estimated expenditures this FY are: **$170,000**
Anticipated Allocations this FY are: **$163,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Collection System Planning / 2
*Project Number/Filename:* 5965 / CS_plng
*Project Manager/% Expansion:* Waples / 20

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 102,000 | 7,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 910,000 | 180,000 | 163,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 910,000 | 282,000 | 170,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (808,000) | (275,000) | (170,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 102,000 | 7,000 | 0 | 0 | 0 | 0 |

# Force Main Assessment

**Project Manager, Department/Division:**
Justin Waples, Engineering/Environmental Services

**Project Purpose:**
The District owns and operates approximately 18 pumping stations (PS), which pump flow into a series of force mains. Nearly all pumping stations have more than one force main to carry flow onward toward the treatment plant. This project will document the condition and issues of the inventory of force mains. Spin-off projects to fix whatever issues are found will be initiated.

**Project History:**
In some prior collection system projects, force main condition assessments are reported to have been conducted. Examples are the Moraga Pumping Station and Orinda Crossroads Pumping Station. These are likely more than 10 years old, and whatever records could be located have been reported in the initial document (2010).

**Project Description:**
In the current project, the physical inventory of force mains has been completed. In FY 2010-11, field methods were evaluated that could be used to conduct assessments of the force mains found to be of greatest interest or greatest risk. The available methods are expensive, so an initial phase of CCTV was conducted. Poor results were achieved because of the amount of debris that kept CCTV from working.

Investigations using CCTV after the storms of winter will be conducted to confirm or deny the flushing of debris from Moraga and Orinda Crossroads PSs. It is possible that a better CCTV sled (with big tires) might make it possible to examine the force mains. The project will be pursued until a satisfactory method of examining the force mains has been found.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2009 | 06/30/2013 | $74,000 |
| Design | - | - | $0 |
| Construction | - | - | $0 |
| | | Total: | **$74,000** |

Estimated expenditures this FY are: **$14,000**
Anticipated Allocations this FY are: **$29,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Forcemain Assessment / 2
*Project Number/Filename:* 5993 / FM_assessment
*Project Manager/% Expansion:* Waples / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | (5,000) | 0 | (15,000) | 0 | 0 |
| **B. Anticipated Allocations** | 15,000 | 15,000 | 15,000 | 29,000 | 0 | 0 |
| **C. Authorized this Year** | 15,000 | 10,000 | 15,000 | 14,000 | 0 | 0 |
| **D. Estimated Expenditures** | (20,000) | (10,000) | (30,000) | (14,000) | 0 | 0 |
| **E. Estimated Carry-over** | (5,000) | 0 | (15,000) | 0 | 0 | 0 |

# Manhole Remote Level Monitoring

**Project Manager, Department/Division:**
Bill Echols, Collection System Operations Department

**Project Description:**
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.

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.

**Project Location:**
Throughout the service area

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2009 | 10/01/2009 | $0 |
| Design | 10/01/2009 | 07/01/2010 | $10,000 |
| Construction | 07/01/2010 | 06/30/2015 | $500,000 |
| | | Total: | **$510,000** |

Estimated expenditures this FY are: **$100,000**
Anticipated Allocations this FY are: **$100,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Manhole Remote Level Monitoring / 2
*Project Number/Filename:* 5962 / manhole_rem_mon
*Project Manager/% Expansion:* Waples / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 |
| **B. Anticipated Allocations** | 50,000 | 100,000 | 100,000 | 100,000 | 100,000 | 60,000 |
| **C. Authorized this Year** | 50,000 | 140,000 | 140,000 | 140,000 | 140,000 | 100,000 |
| **D. Estimated Expenditures** | (10,000) | (100,000) | (100,000) | (100,000) | (100,000) | (100,000) |
| **E. Estimated Carry-over** | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 | 0 |

# A-Line Easement Acquisition, Phase 2

**Project Manager, Department/Division**:
Stephanie Gronlund, Engineering/Environmental Services

**Project Purpose:**
This project will secure property rights for existing and future segments of the A-Line Relief Interceptor, Walnut Creek Bypass, existing A-Line and Main Trunk No. 1, and the San Ramon Valley Trunk Sewer. A majority of the proposed easement alignment is within the Ironhorse Trail, formerly known as the Southern Pacific Railroad corridor, and the Walnut Creek channel.

**Project History:**
Easement Amendments within Iron Horse Corridor:
Right of way was acquired for the A-Line Relief Interceptor and San Ramon Trunk Sewer along the Southern Pacific Railroad corridor in 1985 from Contra Costa County. At that time the exact locations of existing sewers along this alignment were not known and the alignments of the future A-Line Relief Interceptor and San Ramon Trunk Sewer were not determined. The easement documents were written so that the property descriptions could be modified when the exact location of existing sewers and sufficient engineering had been done to determine the future alignments. The pre-design was completed in 2003, and on November 6, 2008, the District, Contra Costa County and Contra Costa County Redevelopment Agreement entered into a Memorandum of Understanding (MOU) detailing the process for recording the amended grants of easements. The current project work includes physically locating the existing sewers along the Southern Pacific Railroad corridor and creating new legal descriptions for the amended grants of easements. The field survey and mapping work are nearly complete, and easement amendments will be recorded per the MOU process.

Easement Purchase Agreement - Walnut Creek Channel:
The future A-Line Relief Interceptor for Phases 2B and 2C will be located within the Walnut Creek Channel, which is owned by Contra Costa County Flood Control District (Flood Control). Although pre-design is done and alignment is set, construction work is not scheduled within the next ten years. Since this is a long-term project, County staff has requested District not to pursue easements at this time, since their staffing levels and resources are limited; instead, the District will purse an easement purchase agreement with Flood Control, which is less onerous for County staff to administer, and will grant the District the right of first refusal in the event another utility company desires to encroach upon the future alignment.

**Project Description:**
This project will complete the amended grants of easements for the Southern Pacific Railroad corridor purchased form the County in 1985, and will reserve the alignment for the future relief interceptor within the Walnut Creek Channel.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2006 | 12/31/2008 | $1,573,000 |
| Construction | 12/31/2008 | 06/30/2013 | $0 |
| | | Total: | **$1,573,000** |

Estimated expenditures this FY are: **$9,000**
Anticipated Allocations this FY are: **$9,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* A-Line Easement Acquisition - ph 2 / 3
*Project Number/Filename:* 5967 / A-Line_ease_acq2
*Project Manager/% Expansion:* Gronlund / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 1,000 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 1,564,000 | 0 | 9,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 1,564,000 | 1,000 | 9,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (1,563,000) | (1,000) | (9,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 1,000 | 0 | 0 | 0 | 0 | 0 |

# Alhambra Valley Assessment Districts

**Project Manager, Department/Division:**
Jarred Miyamoto-Mills, Engineering/Environmental Services

**Project Purpose:**
To provide a financing mechanism for the extension of public sewers into areas of Alhambra Valley currently served by septic tanks.

**Project History:**
In 2008, the District completed construction of the Alhambra Valley Trunk Sewer project, which not only serves as the backbone of a future wastewater collection system in Alhambra Valley, but also directly serves more than 65 residential parcels situated along its alignment. In a late 2006 meeting, the Board of Directors approved an Alhambra Valley Sewer Financing Program to assist direct and indirect connectors to the CCCSD-constructed Alhambra Valley Trunk Sewer project to connect to the trunk sewer and build main extensions from it into their adjoining neighborhoods. The financing program was based on CCCSD's successful Contractual Assessment District (CAD) program, which allows for the formation of voluntary sewer construction assessment districts. In 2007, 243 Alhambra Valley parcels tributary to the trunk sewer were annexed into CCCSD's service area. Approximately 16,000 linear feet of sewer main extensions from the trunk sewer will be needed to serve the potential near-term, indirect customers. By the end of FY 2009-10, six Alhambra Valley Assessment Districts (AVADs) have been approved: one is financing direct connections to the trunk sewer and five are financing construction of more than 7,700 linear feet of sewer main extensions.

**Project Description:**
The goals of the AVAD Program are to assist property owners with septic tanks to finance the cost of extending and connecting to the public sewer; to avoid future use of septic systems and sewage pumping systems in Alhambra Valley; and to facilitate direct and indirect connections to the Alhambra Valley trunk sewer so that CCCSD can be reimbursed more quickly for its planning, design, and construction expenditures associated with the trunk sewer extension. In many 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 group of owners, especially when compounded by the need to reimburse CCCSD for construction of the Alhambra Valley trunk sewer. The AVAD process provides property owners a means to finance the cost of sewer improvements over time at a fixed interest rate. Each property owner's share of the cost of a sewer extension, trunk sewer reimbursement and/or capacity fee can be spread over time instead of requiring a lump-sum payment following construction.

**Project Location:**
Throughout Alhambra Valley, unincorporated Martinez

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $127,400 |
| Design | 11/01/2007 | 02/01/2008 | $129,500 |
| Construction | 02/01/2008 | 06/17/2013 | $1,417,000 |
| | | Total: | **$1,673,900** |

Estimated expenditures this FY are: **$3,000**
Anticipated Allocations this FY are: **($326,000)**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Alhambra Vly Assmt Dist / 3
*Project Number/Filename:* 5937 / AVAD
*Project Manager/% Expansion:* Miyamoto-Mills / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 485,000 | 329,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 2,000,000 | 0 | (326,000) | 0 | 0 | 0 |
| **C. Authorized this Year** | 2,000,000 | 485,000 | 3,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (1,515,000) | (156,000) | (3,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 485,000 | 329,000 | 0 | 0 | 0 | 0 |

# Contractual Assessment Districts

**Project Manager, Department/Division**:
Jarred Miyamoto-Mills, Engineering/Environmental Services

**Project 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.

**Project 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. Each property owner's share of the cost of a sewer extension project can be spread over time instead of a lump sum payment being made by the owner at the time of construction. CADs are applicable to small groups of properties. A minimum of five properties are required to initiate the formation of a CAD.

The District offered CADs to finance sewer main extensions from 1997 to 2004. During this seven-year period, the District financed 23 CADs at a cost of $3,630,000. The participants of each CAD are repaying the District over a ten-year term at interest rates ranging from 5.5% to 7.5%. By mid-2010, $2,510,000 had been repaid and the outstanding principal was $1,120,000.

In 2004, District's budget constraints and the availability of homeowner credit alternatives led the Board to discontinue forming new CADs. In 2010, renewed interest in a CAD program led the District to reestablish it on a case-by-case basis, with the Board directing use of the District's Sewer Construction Fund reserves for financing CADs. Staff has also investigated the use of loans to fund some of the potential CADs or refinancing of the outstanding principal owed on past CADs to use as funds for financing future CADs. Given the varying level of interest in CADs, whether to use District reserves or loans also will be evaluated on a case-by-case basis. The first CAD of the new program was formed on Sunnybrook Road in Alamo.

**Project Description:**
A number of CADs will likely be proposed during the budget year.

**Project Location:**
To be determined. CADs are currently being considered in neighborhoods in Alamo, Danville, Lafayette and Orinda.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2011 | 06/30/2021 | $5,000,000 |
| | | Total: | **$5,000,000** |

Estimated expenditures this FY are: **$500,000**
Anticipated Allocations this FY are: **$500,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Contractual Assessment Districts / 3
*Project Number/Filename:* 8402 / CAD
*Project Manager/% Expansion:* Miyamoto-Mills / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 |
| **C. Authorized this Year** | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 |
| **D. Estimated Expenditures** | (500,000) | (500,000) | (500,000) | (500,000) | (500,000) | (500,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Trunk Sewer Capacity Program

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Purpose:**
To achieve the Collection System Program goal of reducing sanitary sewer overflows by increasing the capacity of trunk sewers to accommodate planned growth by the municipalities served by CCCSD and repairing any structural deficiencies in the District's trunk sewer system (pipelines between 12-inches and 24-inches in diameter).

**Project History:**
In 1986, the Wastewater Collection System Master Plan identified and prioritized trunk sewer capacity deficiencies. Since then, a significant investment in the highest priority projects, particularly in Martinez, Lafayette, Walnut Creek, Pleasant Hill, and Orinda have been completed. At many locations where overflows had been routine during wet weather, wastewater and infiltration/inflow is conveyed without overflow even during severe storms.

An update of the Collection System Master Plan was completed in March 2010 and the program was modified to reflect the new priorities established by the Master Plan Update.

**Project Description:**
Project work is projected to take place in Pleasant Hill during fiscal year 2012-13 and 2013-14, as described on the following page on which the specific projects are described.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2009 | 06/17/2010 | $0 |
| Construction | 06/17/2010 | 06/17/2019 | $10,000 |
| | | Total: | **$10,000** |

Estimated expenditures this FY are: **$1,000**
Anticipated Allocations this FY are: **$1,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Trunk Sewer Capacity Program / 3
*Project Number/Filename:* pCS33 / trunk
*Project Manager/% Expansion:* Seitz / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| **C. Authorized this Year** | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| **D. Estimated Expenditures** | (1,000) | (1,000) | (1,000) | (1,000) | (1,000) | (1,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Pleasant Hill – Grayson Creek Trunk Sewer

**Project Manager, Department/Division:**
Paul Seitz, Engineering/Capital Projects

**Project Description:**
The Collection System Master Plan 2010 Update analyzed the District's entire sewer system using an updated ArcSNAP hydraulic model. The design flows to the sewers in this project corridor were calculated at 130% to 270% of full pipe capacity. The capacity deficient sewers includes a 12-inch pipe that runs along Mercury Way from Pleasant Hill Rd. and connects into a 15-inch sewer that runs parallel to Grayson Creek to Milburn Dr.

The recommended project involves installing approximately 5,000 feet of 18-inch and 24-inch relief sewers and diverting the sewage away from the capacity deficient sewers. The relief sewer alignment is within city streets and extends from Pleasant Hill Rd. along Westover Dr., then Maureen Ln and Elinora Dr. The relief sewer will connect to a 36-inch trunk sewer at Elinora Dr. and Ardith Lane.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2012 | 04/01/2013 | $100,000 |
| Construction | 04/01/2013 | 06/30/2014 | $3,000,000 |
| | | Total: | **$3,100,000** |

Estimated expenditures this FY are: **$500,000**
Anticipated Allocations this FY are: **$500,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Pleasant Hill Grayson Creek / 3
*Project Number/Filename:* 6002 / trunk_Ph_graysoncrk
*Project Manager/% Expansion:* Seitz / 0

| | 2012-13 | 2013-14 | 2014-15 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 500,000 | 2,600,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 500,000 | 2,600,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | 500,000 | (2,600,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Buchanan Airfield Pumping Station Replacement

**Project Manager, Department/Division:**
Jarred Miyamoto-Mills, Engineering/Environmental Services

**Project Purpose:**
This project will replace both (North and South) Buchanan Pumping Stations with new gravity main sewers.

**Project History:**
The two pumping stations serving the Buchanan Field Airport are nearing the end of their useful service lives. It would be relatively expensive to replace the stations in-kind, and ongoing operations and maintenance are resource intensive, particularly staff effort and electrical energy. Replacing the two stations with new gravity sewers would reduce the District's carbon footprint by about 9.4 metric tons of CO2eq per year.

The Buchanan South Pumping Station once served several properties in the vicinity of the airport, however, all but one of these properties are now served by City of Concord sewers and the pumping station serves only a single customer, the Crowne Plaza Hotel. The location of the station is difficult to access for operations and above-ground equipment is vulnerable to damage from vehicle traffic.

The Buchanan North Pumping Station serves a number of businesses on and adjacent to the airport. It discharges to a gravity sewer that crosses the airfield at about the midpoint of the main runway. According to airport management, it is possible that runway refurbishment will damage or disrupt this line in the future.

Staff prepared a technical and economic feasibility study of alternatives available for replacement of the two pumping stations. Among the alternatives studied were: 1) replacement of the two stations in-kind with new facilities meeting the District's current pumping station criteria; and 2) abandonment and removal of one or both stations and replacement with new gravity sewers. The study concluded that replacement of both stations with new gravity sewers is the most favorable alternative from both the technical and cost perspectives.

**Project Description:**
This project will replace both North and South Buchanan Pumping Stations with new gravity main sewers.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 02/01/2011 | 03/01/2011 | $0 |
| Design | 03/01/2011 | 07/01/2012 | $75,000 |
| Construction | 07/01/2012 | 12/31/2013 | $775,000 |
| | | Total: | **$850,000** |

Estimated expenditures this FY are: **$400,000**
Anticipated Allocations this FY are: **$400,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Buchanan South PS Replacement Sewer / 4
*Project Number/Filename:* 8403 / Buchanan_south_removal
*Project Manager/% Expansion:* Miyamoto-Mills / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 25,000 | 25,000 | 400,000 | 400,000 | 0 | 0 |
| **C. Authorized this Year** | 25,000 | 25,000 | 400,000 | 400,000 | 0 | 0 |
| **D. Estimated Expenditures** | (25,000) | (25,000) | (400,000) | (400,000) | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Fairview / Maltby Upgrades

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Environmental Services

**Project Purpose:**
This project will repair/prevent corrosion of the underground steel structures housing the Fairfiew and Maltby Pump Stations.

**Project History:**
The Maltby and Fairview pump station were installed over 40 years ago. Staff has recently identified internal corrosion of the underground steel structure housing the Fairview and Maltby Pumping Station.

**Project Description:**
Repair/prevent corrosion of the underground steel structures housing the Fairview and Maltby Pump Station.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 03/01/2012 | 07/01/2012 | $25,000 |
| Construction | 07/01/2012 | 06/30/2013 | $150,000 |
| | | Total: | **$175,000** |

Estimated expenditures this FY are: **$150,000**
Anticipated Allocations this FY are: **$150,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Fairview / Maltby Upgrades / 4
*Project Number/Filename:* pCS29 / fairview_maltby_upg
*Project Manager/% Expansion:* Antkowiak / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 25,000 | 150,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 25,000 | 150,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (25,000) | (150,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Flush Kleen Pumping Station Improvements

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Environmental Services

**Project Purpose:**
This project will replace existing valves and pipes at the Flush Kleen Pump Station.

**Project History:**
The original pump station was installed in 1950. The current pumps were brought over from the Clyde pump station in 1991. The pipes and valves have reached the end of their useful lives.

**Project Description:**
The project will replace the existing pipes and valves, evaluate the pumps and replace if necessary. Ancillary equipment including the ventilation system will be evaluated and replaced if necessary.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2012 | 07/01/2013 | $50,000 |
| Construction | 07/01/2013 | 06/30/2014 | $250,000 |
| | | Total: | **$300,000** |

Estimated expenditures this FY are: **$50,000**
Anticipated Allocations this FY are: **$50,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Flush Kleen Pumping Station Improvements / 4
*Project Number/Filename:* pCS28 / flush_kleen_PS
*Project Manager/% Expansion:* Antkowiak / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 50,000 | 250,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 50,000 | 250,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (50,000) | (250,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Miscellaneous Force Main Improvements

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Environmental Services

**Project Purpose:**
Install improvements to force main to allow for a condition inspection/assessment and future cleaning.

**Project History:**
The District maintains 16 public owned pump stations with almost 21 miles of force mains ranging in size from 4 inches to 30 inches. Due to physical limitations, inspection for force main condition has been limited to TV inspection of short reaches at the downstream end. No cleaning of force main has been performed.

**Project Description:**
Evaluate and install, if practical, the ability to inspect, assess and clean force mains.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2012 | 07/01/2013 | $25,000 |
| Construction | 07/01/2013 | 06/30/2014 | $200,000 |
| | | Total: | **$225,000** |

Estimated expenditures this FY are: **$25,000**
Anticipated Allocations this FY are: **$25,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Misc. Force Main Improvements / 4
*Project Number/Filename:* pCS34 / misc_force_main
*Project Manager/% Expansion:* Antkowiak / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 25,000 | 200,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 25,000 | 200,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (25,000) | (200,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Moraga Pumping Station Grinder

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Environmental Services

**Project Purpose:**
This project will evaluate and install either a chopper pump or a grinder to eliminate rag and disposal wipe clogging issues.

**Project History:**
Since the installation of the new pumps at Moraga, the pumps have been subjected to clogging due to rags and disposal wipes in the wastewater.

**Project Description:**
Evaluate the necessity of a chopper pump or a grinder to deal with the rag/wipe issue. The preferred alternative will be constructed in FY 2013-14.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2012 | 07/01/2013 | $50,000 |
| Construction | 07/01/2013 | 06/30/2014 | $350,000 |
| | | Total: | **$400,000** |

Estimated expenditures this FY are: **$50,000**
Anticipated Allocations this FY are: **$50,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Moraga PS Grinder / 4
*Project Number/Filename:* pCS27 / moraga_ps_grinder
*Project Manager/% Expansion:* Antkowiak / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| A. Current Carry-over | 0 | 0 | 0 | 0 | 0 | 0 |
| B. Anticipated Allocations | 50,000 | 350,000 | 0 | 0 | 0 | 0 |
| C. Authorized this Year | 50,000 | 350,000 | 0 | 0 | 0 | 0 |
| D. Estimated Expenditures | (50,000) | (350,000) | 0 | 0 | 0 | 0 |
| E. Estimated Carry-over | 0 | 0 | 0 | 0 | 0 | 0 |

# Martinez Bypass Pump

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
The purpose of this project is to provide an emergency bypass pump to allow for pumping of dry weather flow during catastrophic pumping station failure.

**Project History:**
In 2009, a bypass pump connection was installed at the Martinez Pumping Station. Other stations in the Martinez, Concord, and Clyde area already have emergency bypass connections. A portable bypass pump will provide the means for emergency pumping in case of a catastrophic failure of any pumping station in the Concord, Martinez and Clyde area.

**Project Description:**
An emergency bypass pump will be purchased and stationed at the Martinez Pumping Station.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 04/01/2010 | 12/01/2010 | $0 |
| Design | 12/01/2010 | 07/01/2011 | $35,000 |
| Construction | 07/01/2011 | 07/30/2012 | $245,000 |
| | | Total: | **$280,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$80,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Martinez Bypass Pump / 4
*Project Number/Filename:* 8407 / Mtz_Bypass_Pump
*Project Manager/% Expansion:* Antkowiak / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | (25,000) | (175,000) | (75,000) | 0 | 0 |
| **B. Anticipated Allocations** | 0 | 0 | 200,000 | 80,000 | 0 | 0 |
| **C. Authorized this Year** | 0 | (25,000) | 25,000 | 5,000 | 0 | 0 |
| **D. Estimated Expenditures** | (25,000) | (150,000) | (100,000) | (5,000) | 0 | 0 |
| **E. Estimated Carry-over** | (25,000) | (175,000) | (75,000) | 0 | 0 | 0 |

# Pumping Stations Hazard Identification and Remediation

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
Increase personnel safety by identifying and reducing exposure to hazardous materials within District's pumping stations.

**Project History:**
Existing pumping stations may require some renovation in the near future. Knowledge of materials such as asbestos in pipe insulation, roofing materials, or lead paint ahead of time allows District staff, the design engineer, or the contractor to properly prepare and equip themselves with Personal Protective Equipment (PPE), monitors, or plan for medical surveillance. District staff may need to perform urgent, and sometimes unscheduled, work to maintain operation of the facility. This may hinder their ability to conduct testing in advance of their work to determine if hazardous materials are present and allow proper planning or mitigation to occur.

**Project Description:**
This project will investigate the presence of hazardous materials requiring abatement at pumping stations and will develop a plan for remediation efforts to reduce the potential for exposure within the plant to hazardous materials where feasible.

**Project Location:**
Pumping stations throughout the District service area.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2011 | 08/01/2012 | $39,000 |
| Construction | - | - | $0 |
| | | Total: | **$39,000** |

Estimated expenditures this FY are: **$20,000**
Anticipated Allocations this FY are: **$19,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Pump Station Hazard Identification / 4
*Project Number/Filename:* pCS31 / ps hazard ID
*Project Manager/% Expansion:* Antkowiak / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 1,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 5,000 | 15,000 | 19,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 5,000 | 15,000 | 20,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (5,000) | (14,000) | (20,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 1,000 | 0 | 0 | 0 | 0 |

# Pumping Stations Equipment and Piping Replacement

**Project Manager, Department/Division:**
Don Rhoads, Collection System Operations

**Project Purpose:**
The purpose of this project is to replace or recondition failed and obsolete pumps, piping, valves, electrical and instrumentation equipment, and other support 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.

**Project History:**
In the summer of 1997, a header at the Maltby Pumping Station failed due to external corrosion. Bypass pumping was required to maintain system flow, and the repair was made under an emergency declaration. Bypass pumping capability was added during the repairs. Similar repairs and modifications were made on a planned basis at a sister station, Fairview. In 2005-06, the main pumps at the Concord Industrial Pumping Station were replaced because the pumps were badly worn.

**Project 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, such as "pump-around" pumps and reliability test 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 the regulating community, such as the outgrowth of the Sewer System Management Plan (SSMP), potential federal CMOM regulations, or as promulgated by the BAAQMD or the California Air Resources Board

**Project Location:**
All pumping stations

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2007 | 06/30/2017 | $820,000 |
| | | Total: | **$820,000** |

Estimated expenditures this FY are: **$75,000**
Anticipated Allocations this FY are: **$75,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* PS Equip & Piping Repl / 4
*Project Number/Filename:* 5941 / PS_Equip
*Project Manager/% Expansion:* Rhoads / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 375,000 | 70,000 | 75,000 | 75,000 | 75,000 | 75,000 |
| **C. Authorized this Year** | 375,000 | 70,000 | 75,000 | 75,000 | 75,000 | 75,000 |
| **D. Estimated Expenditures** | (375,000) | (70,000) | (75,000) | (75,000) | (75,000) | (75,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Pumping Stations Master Plan

**Project Manager, Department/Division:**
Justin Waples, Engineering/Environmental Services Division

**Project Purpose:**
This project will document a comprehensive framework for strategic planning acitivities associated pumping stations.

**Project History:**
The District's Pumping Station Master Plan has not been updated since 1989. Subsequently various Planning activities associated with Pumping Stations have lacked continuity of strategic goals and have also been wanting in terms of attaining clearly defined objectives, in terms of a whole system approach.

**Project Description:**
To create a living document for guiding the future management of Pumping Station assets and to provide a road map for methodically integrating pumping station related Planning activities, including but not limited to, Force Main assessment, Hydrogen Sulfide control and Pumping Station Inventory. It will also provide a metric for measuring progress toward the defined goals.

**Project Location:**
Pumping stations throughout the District service area.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2012 | 06/30/2014 | $150,000 |
| Design | - | - | $0 |
| Construction | - | - | $0 |
| | | Total: | **$150,000** |

Estimated expenditures this FY are: **$80,000**
Anticipated Allocations this FY are: **$80,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Pumping Stations Master Plan / 4
*Project Number/Filename:* 8408 / ps_master_plan
*Project Manager/% Expansion:* Waples / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 80,000 | 70,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 80,000 | 70,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (80,000) | (70,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Pumping Station Safety and Security Improvements

**Project Manager, Department/Division:**
Don Rhoads, Collection System Operations

**Project Purpose:**
This project will provide funding for safety and security-related projects at the District's pumping stations.

**Project History:**
The District has active safety programs that are administered by both department/ division committees and a District committee. One of the many responsibilities of these committees is to address and support solutions for safety and security concerns that are identified by operations or maintenance personnel, and to respond to changes mandated by regulatory requirements in both these sectors. Recent security and compliance concerns have caused the District to identify projects that will increase security at pumping station facilities.

**Project Description:**
This project provides funding to install safety and security improvements in the District's pumping stations. These projects include miscellaneous upgrades at all pumping stations.

**Project Location:**
Potential locations are at all pumping stations.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2012 | 06/30/2021 | $600,000 |
| | | Total: | **$600,000** |

Estimated expenditures this FY are: **$60,000**
Anticipated Allocations this FY are: **$60,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Pump Station Safety Improvements / 4
*Project Number/Filename:* 8406 / PS_SafetyImprvs
*Project Manager/% Expansion:* Rhoads / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 |
| **C. Authorized this Year** | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 |
| **D. Estimated Expenditures** | (60,000) | (60,000) | (60,000) | (60,000) | (60,000) | (60,000) |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Pumping Station SCADA O&M Manual

**Project Manager and Department/Division:**
Don Rhoads, Collection Systems Operation Department

**Project Purpose:**
This project will provide an operations manual for use by the pumping station staff for the supervisory control and data acquisition (SCADA) system.

**Project History:**
The Pumping Station SCADA project is complete. Pumping Station staff has been trained in the use of the system. It is appropriate that, as experience is gained with the system, an operations manual be prepared to document the operation of the system, particularly for future staff members.

**Project Description:**
A consultant will be retained to prepare an operations manual.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2011 | 06/17/2013 | $20,000 |
| | | Total: | **$20,000** |

Estimated expenditures this FY are: **$10,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* PS SCADA O&M Manual / 4
*Project Number/Filename:* pCS13 / PS_SCADAMan
*Project Manager/% Expansion:* Rhoads / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| A. Current Carry-over | 0 | 10,000 | 0 | 0 | 0 | 0 |
| B. Anticipated Allocations | 20,000 | 0 | 0 | 0 | 0 | 0 |
| C. Authorized this Year | 20,000 | 10,000 | 0 | 0 | 0 | 0 |
| D. Estimated Expenditures | (10,000) | (10,000) | 0 | 0 | 0 | 0 |
| E. Estimated Carry-over | 10,000 | 0 | 0 | 0 | 0 | 0 |

# SCADA Master Plan

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
Evaluate the existing SCADA system and develop a Master Plan for upgrades and replacement.

**Project History:**
The current SCADA system was put into service over ten years ago. Staff has identified several improvements that would be beneficial to implement, such as uploading equipment run hours. In addition, minor quirks in the system have been noticed.

**Project Description:**
This project will evaluate and make recommendations for system improvements and will develop a long-term plan for upgrades and replacement.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2012 | 06/30/2014 | $50,000 |
| Design | - | - | $0 |
| Construction | - | - | $0 |
| | | Total: | **$50,000** |

Estimated expenditures this FY are: **$25,000**
Anticipated Allocations this FY are: **$50,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* SCADA Master Plan / 4
*Project Number/Filename:* pCS25 / SCADA_master_plan
*Project Manager/% Expansion:* Antkowiak / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 25,000 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 50,000 | 0 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 50,000 | 25,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (25,000) | (25,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 25,000 | 0 | 0 | 0 | 0 | 0 |

# San Ramon Pumping Station Upgrades

**Project Manager, Department/Division:**
Gary Rathunde, Engineering/Capital Projects

**Project Purpose:**
The purpose of this project is to replace existing pumps to provide capacity needed to handle increased flow from the Dougherty Valley development. Additional improvements identified by pumping station operators may be added to the project.

**Project History:**
In 2004 the San Ramon Pumping Station underwent a major renovation. At that time, smaller pumps appropriate for the initial stage of Dougherty Valley development were installed. Currently, due to the development, the pumping station receives increased flows and the pumps need to be replaced with larger pumps. The project construction is scheduled for FY 2012/13.

**Project Description:**
Replace one existing smaller dry weather pump with a larger pump sized to match the existing larger pumps.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 05/01/2011 | 09/01/2011 | $30,000 |
| Construction | 09/01/2011 | 06/30/2013 | $550,000 |
| | | Total: | **$580,000** |

Estimated expenditures this FY are: **$250,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* San Ramon Pumping Station Upgrades / 4
*Project Number/Filename:* 6003 / SR PS upgrades
*Project Manager/% Expansion:* Rathunde / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| A. Current Carry-over | 0 | 0 | 250,000 | 0 | 0 | 0 |
| B. Anticipated Allocations | 30,000 | 550,000 | 0 | 0 | 0 | 0 |
| C. Authorized this Year | 30,000 | 550,000 | 250,000 | 0 | 0 | 0 |
| D. Estimated Expenditures | (30,000) | (300,000) | (250,000) | 0 | 0 | 0 |
| E. Estimated Carry-over | 0 | 250,000 | 0 | 0 | 0 | 0 |

# San Ramon Bypass Pump Replacement

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
The purpose of this project is to provide emergency bypass of dry weather flow during catastrophic pumping station failure. Some additional improvements identified by pumping station operators may be added to the project.

**Project History:**
In 2004 the San Ramon Pumping Station underwent a major renovation. That same year, an overflow occurred which resulted in raw sewage entering the local creek. This event highlighted the need to have an emergency bypass system available to allow the pump station to be bypassed during an emergency. Staff has worked with the Dublin-San Ramon Services District to install a passive bypass to their system.

**Project Description:**
- Staff will evaluate the need for emergency bypass pumps.
- The pump station structure, wet well, controls and other systems will be modified to allow installation of the new pumps, if bypass pumping is installed.
- Restoration of the control gates at the pumping station and the Dougherty Tunnel portal will also be included in the project.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2010 | 07/01/2009 | $0 |
| Design | 07/01/2009 | 07/01/2011 | $50,000 |
| Construction | 07/01/2011 | 06/30/2013 | $250,000 |
| | | Total: | **$300,000** |

Estimated expenditures this FY are: **$200,000**
Anticipated Allocations this FY are: **$200,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* San Ramon Bypass Pump / 4
*Project Number/Filename:* 5995 / SR_Pump_repl
*Project Manager/% Expansion:* Antkowiak / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 50,000 | 50,000 | 200,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 50,000 | 50,000 | 200,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (50,000) | (50,000) | (200,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

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## GENERAL IMPROVEMENTS PROGRAM

This section includes detailed information for the General Improvements Program.

Table GI-1 presents project listings and detailed budget information. Detailed project information, schedules, and cash flow tables are presented in individual project data sheets. These data sheets are found at the appropriately numbered subprogram tab and are arranged in the same order in which they appear in Table GI-1. The numbered tabs represent the following:

| TAB NO. | SUBPROGRAM |
|---|---|
| 1 | Vehicles and Equipment |
| 2 | Information Systems |
| 3 | Projects |

### OVERVIEW

The General Improvements Program at $7.3 M comprises 22 percent of the total estimated capital expenditures for FY 2012-13. The General Improvements Program is primarily concerned with the property, administrative buildings, and equipment needs of the District.

The Vehicles and Equipment subprogram, at one million dollars or 13 percent of the General Improvements Program, comprises the items budgeted and purchased under the annual District Equipment Budget. The Capital Improvement Budget includes an allowance for the equipment budget. Specific equipment items are approved through the annual budget process.

The Information Systems subprogram, at $1.6 million, or 23 percent of the General Improvements Program, reflects the importance of information technology in the daily operation of the District. The District has developed an Information Technology Master Plan which envisions implementing specific improvements and extends five 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 GDI systems is included in the CIB.

The Projects subprogram, at $4.7 million, or 64 percent of the General Improvements Program, includes improvements to the Headquarters Office Building (HOB) and CSOD Facilities, CIB preparation, easement and right-of-way acquisition, seismic upgrades of certain buildings, and projects related to District property improvements.

In FY 2012-13, funds will be spent for seismic upgrades to the HOB, followed by painting and replacement of worn carpeting and furniture. HOB staff will be temporarily relocated to other areas in order to carry out the seismic upgrades. Money is also budgeted for seismic upgrades of various District rental properties.

## Table GI-1: General Improvements Subprogram/Project List

| Subprogram / Project No. / Project Title | | Project Manager | Estimated Total Project Expenditures | Anticipated Allocations To 06/30/12 | Estimated Expenditures To 06/30/12 | Anticipated Allocations FY 2012-13 | Estimated Expenditures FY 2012-13 |
|---|---|---|---|---|---|---|---|
| **1Vehicles & Equipment** | | | | | | | |
| 9999 | Cap Proj Clearing | Vassallo | 10,000 | 5,000 | 4,000 | 1,000 | 1,000 |
| 8513 | Vehicle and Equipment Acquisition FY2012/13 | Vassallo | 960,000 | 0 | 0 | 960,000 | 960,000 |
| | **Subprogram Total** | | 970,000 | 5,000 | 4,000 | 961,000 | 961,000 |
| **2Management Information** | | | | | | | |
| 8227 | GDI - Treatment Plant | Antkowiak | 923,100 | 500,000 | 323,100 | 200,000 | 200,000 |
| 8232 | GDI-SMMS Replacement | Knight | 950,000 | 200,000 | 350,000 | 750,000 | 345,000 |
| 8195 | Information Technology Development | Li | 5,671,000 | 4,095,000 | 4,076,000 | 1,095,000 | 1,095,000 |
| | **Subprogram Total** | | 7,544,100 | 4,795,000 | 4,749,100 | 2,045,000 | 1,640,000 |
| **3Projects** | | | | | | | |
| 8230 | Capital Legal Services - 2010 to 2018 | Leavitt | 560,000 | 210,000 | 140,000 | 0 | 70,000 |
| 8217 | Capital Improvement Plan and Budget | Miller | 1,118,000 | 663,000 | 698,000 | 190,000 | 90,000 |
| pGI06 | CSOD Facilities Improvements | Rozul | 384,000 | 100,000 | 34,000 | 0 | 30,000 |
| 8223 | District Property Safety Improvements | Deutsch | 124,000 | 30,000 | 44,000 | 94,000 | 80,000 |
| 8228 | District Easements | Gronlund | 432,500 | 445,000 | 332,500 | 0 | 100,000 |
| 8207 | General Security Access | Deutsch | 93,000 | 60,000 | 78,000 | 33,000 | 15,000 |
| 8219 | HOB Improvements | Musgraves | 1,144,000 | 795,000 | 1,133,000 | 349,000 | 11,000 |
| 8225 | Imhoff Triangle Development | Musgraves | 64,000 | 63,000 | 54,000 | 1,000 | 10,000 |
| 8210 | Kiewit Clean Fill Operation | Musgraves | 300,000 | 300,000 | 240,000 | 0 | 60,000 |
| 8229 | Martinez Easements | Hernandez | 216,000 | 130,000 | 185,000 | 86,000 | 31,000 |
| 8221 | POD Office Imprvs | Musgraves | 319,000 | 497,000 | 244,000 | 0 | 75,000 |
| 8224 | Rental Property Improvements | Musgraves | 98,000 | 45,000 | 68,000 | 53,000 | 30,000 |
| 8226 | Seismic Improvements for HOB | Hodges | 6,013,000 | 1,680,000 | 1,513,000 | 4,333,000 | 3,800,000 |
| 8231 | Rental Property Seismic Improvements | Hodges | 640,000 | 265,000 | 390,000 | 375,000 | 250,000 |
| | **Subprogram Total** | | 11,505,500 | 5,283,000 | 5,153,500 | 5,514,000 | 4,652,000 |
| | **Program Total** | | 20,019,600 | 10,083,000 | 9,906,600 | 8,520,000 | 7,254,000 |

# Capital Clearing Account

**Project Manager, Department/Division:**
Thea Vassallo, Administrative/Finance and Accounting

**Project Purpose:**
To provide Accounting with a mechanism within the Capital Improvement Budget to record transactions for projects that are currently not available.

**Project Description:**
This is the District's capital project clearing account used in Accounting for various reasons. Transactions are typically entered in this account under the following circumstances:

- During payroll timesheet entry when a capital project has not yet opened, has been closed, or the project number is transposed and cannot be identified at that time.
- To record purchases under projects that are not opened yet. For instance, purchases under the following year's equipment budget.
- To record unanticipated additional charges to closed projects.

The account is reconciled monthly, and transactions are re-classified to the appropriate project or asset accounts.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2008 | 07/01/2009 | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2009 | 06/17/2019 | $10,000 |
| | | Total: | **$10,000** |

Estimated expenditures this FY are: **$1,000**
Anticipated Allocations this FY are: **$1,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Cap Proj Clearing / 1
*Project Number/Filename:* 9999 / cap_proj_clearing
*Project Manager/% Expansion:* Vassallo / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| **B. Anticipated Allocations** | 4,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| **C. Authorized this Year** | 4,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 |
| **D. Estimated Expenditures** | (3,000) | (1,000) | (1,000) | (1,000) | (1,000) | (1,000) |
| **E. Estimated Carry-over** | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |

# Vehicles and Equipment Acquisition – 2012-13

**Project Manager, Department/Division:**
Thea Vassallo, Administrative/Finance and Accounting

**Project Purpose:**
To provide the District with safe and cost-effective vehicles and equipment.

**Project Description:**
This is the District's 2012-13 capital project for purchase of vehicles and equipment.

**Project Schedule and Cost:**

| | *Start Date* | *Completion* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2012 | 06/30/2013 | $960,000 |
| | | Total: | **$960,000** |

Estimated expenditures this FY are: **$960,000**
Anticipated Allocations this FY are: **$960,000**

**Project Fiscal Year Allocation/Expenditure Table:**

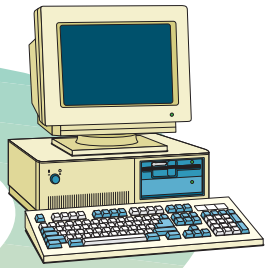
*Project Title/Subprogram:* Vehicles & Equipment Acquisition - 2013 / 1
*Project Number/Filename:* 8513 / veh_equip13
*Project Manager/% Expansion:* Vassallo / 0

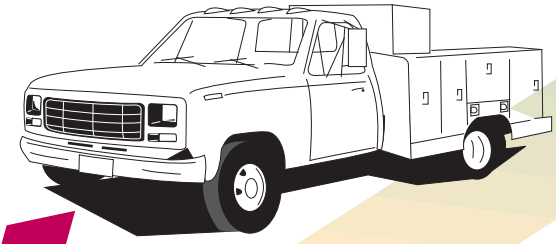
| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 960,000 | 0 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 960,000 | 0 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (960,000) | 0 | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

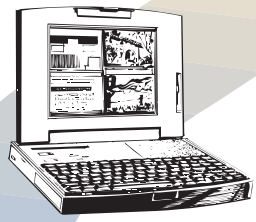
2012-2013

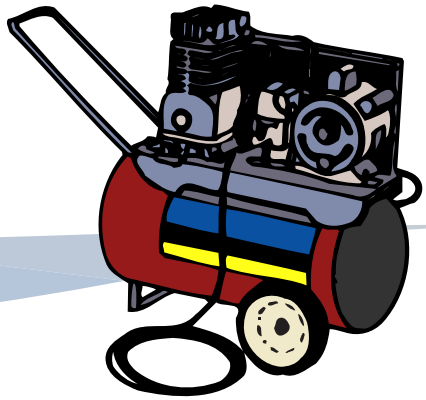
# EQUIPMENT BUDGET

Central Contra Costa Sanitary District









1127B-2/12

Central Contra Costa Sanitary District
Protecting public health and the environment
5019 Imhoff Place, Martinez, CA 94553-4392

# 2012 - 2013 EQUIPMENT BUDGET

Introduction/Routine Procedures: The following tables show items anticipated to be purchased via the 2012 - 2013 Equipment Budget. In addition to the specific purchases, a $100,000 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 $100,000. Equipment purchased over $100,000 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 $100,000, the additional funds may be requested through contingency. If the dollar overrun is more than $100,000, 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 $100,000) 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 $100,000 additional cost must be requested by a position paper to the Board.

Summarized below is a comparison of the 2012 2013 Equipment Budget with the approved budgets of the four prior years

| | 2012-2013 | 2011-2012 | 2010-2011 | 2009-2010 | 2008-2009 |
|---|---|---|---|---|---|
| Administrative | 0 | 0 | 30,000 | 9,000 | 0 |
| Engineering | 0 | 34,867 | 0 | 0 | 0 |
| Collection System Operations | 0 | 0 | 0 | 57,500 | 329,000 |
| Plant Operations | 0 | 154,163 | 0 | 84,400 | 44,650 |
| Pump Stations | 0 | 0 | 0 | 0 | 0 |
| *All Others between $5,000-$100,000 | 370,654 | 30,930 | 31,500 | | |
| Subtotal | 370,654 | 219,930 | 61,500 | 150,900 | 373,650 |
| | | | | | |
| Vehicles | | | | | |
| New | | | 290,000 | 0 | 0 |
| Replacement | 333,000 | 619,000 | 35,200 | 141,500 | 294,000 |
| *All Others between $5,000-$100,000 | 153,000 | | | | |
| Subtotal | 486,000 | 619,000 | 325,200 | 141,500 | 294,000 |
| | | | | | |
| Equipment Request Total | 856,654 | 838,930 | 386,700 | 292,400 | 667,650 |
| | | | | | |
| Contingency | 100,000 | 60,000 | 60,000 | 60,000 | 60,000 |
| | | | | | |
| District Total | $956,654 | $898,930 | $446,700 | $352,400 | $727,650 |
| | | | | | |
| Contingency as a % of Total Budget | 10.45% | 6.67% | 13.43% | 17.03% | 8.25% |

*Per approval of the Capital Budget Committee, any equipment request between $5,000 and $100,000 will not be detailed as a separate request, but will be combined as a one-line item. However, any equipment $5,000 and over must still be capitalized. Any item $100,000 or less can be approved by the General Manager

For 2012-2013 fiscal year "All Others" are comprised of

| | | |
|---|---|---|
| **General Equipment:** | | |
| Rotary mobile column lift | $70,000 | |
| Construction equipment trailer | $26,250 | |
| Respirator fit test system | $8,000 | |
| Micro electron capture detector (ECD) | $15,000 | |
| Sample introduction system | $11,000 | |
| Microwave Accelerated Digestion system (MARS) | $39,500 | |
| Environmental analysis system spectrophotometer | $15,000 | |
| Fluorometer | $29,504 | |
| Primary current injection test system | $44,500 | |
| Universal remote racking system (2) | $76,500 | |
| Mining machine | $11,000 | |
| AC/DC welder | $7,500 | |
| Electric cart | $13,500 | $370,654 |
| **Vehicles:** | | |
| 3/4-ton 4 X 4 truck with storage system | $47,000 | |
| 2 1/2 ton 4 X 4 trucks | $72,000 | |
| 1/2-ton 4 X 4 mid-size truck | $34,000 | $153,000 |
| | $523,654 | $523,654 |

**CENTRAL CONTRA COSTA SANITARY DISTRICT**
**2012 – 2013 EQUIPMENT BUDGET**
**VEHICLES**

| Quantity | Item Description | Replacement | Productivity Office | Productivity Field | Safety | Total |
|---|---|---|---|---|---|---|
| | **FLEET SERVICES** | | | | | |
| 1 | Multi-conductor CCTV Van | 333,000 | | | | 333,000 |
| 1 | Vehicle Total | 333,000 | | | | 333,000 |

# CENTRAL CONTRA COSTA SANITARY DISTRICT
## EQUIPMENT BUDGET REQUEST

| FISCAL YEAR 2012-2013 | DEPARTMENT/DIVISION/COST CENTER | | | |
|---|---|---|---|---|
| QUANTITY | DESCRIPTION | CATEGORY (1) | PER UNIT COST | TOTAL COST |
| 1 | Multi-conductor CCTV Van with on board multi-conductor camera and transporter systems | R, PF, V | $333,000 | $333,000 |

(1) R Replacement, PO Productivity-Office, PF Productivity Field, S Safety, V Vehicle

ANTICIPATED ACQUISITION DATE: July 2012

STATEMENT OF NECESSITY AND COST

This purchase is intended to replace CCTV Van # 198 which is now 11 years old and has over 80,000 miles on the drive train. Though the mileage is not excessive, the on-board CCTV system is outdated and has had on-going repair issues that have increased CCTV system repair costs and created unscheduled, unproductive downtime.

This will be the first of the three CCTV vehicles to transition to the newer CCTV multi-conductor technology which is now the industry standard for sewer inspection equipment. Though still supported, the single conductor system is being phased out, and parts and service will become obsolete in the next couple of years. By making the transition with the first of the three CCTV vehicles now, some of the on-board CCTV equipment can be utilized as a "spare parts" inventory for the other two vans as future replacement CCTV vans can be worked into the budget process. Vehicle #198 will then be disposed of at auction.

CCTV Van #198 was purchased in 2001 and is a box van with dual rear wheels. There are many tight access roads in the hills of our service area where this van is too wide creating congestion and clearance problems for the staff and the general public. The new van is a streamlined design that will help improve vehicle access and maneuverability.

It is recommended vehicle #198 be replaced at this time versus outfitting the existing van. The replacement of the on-board equipment comprises 70% of the replacement cost of this vehicle. Therefore, it is prudent to replace the transport vehicle now since it would otherwise be scheduled for replacement in the next 2-3 years.

| SUBMITTED BY | DATE | RECOMMENDED APPROVAL | DATE |
|---|---|---|---|
| Department Director | 2/1/2012 | General Manager | 2-23-12 |

WECO INDUSTRIES

Quote No. 12712

670 Lubanko Court Suite K
Vacaville, CA 95688

(888) 677-6661 Fax (707) 446-7933

# QUOTATION

| Customer | | | |
|---|---|---|---|
| STEVE SAUTER | | | 1/27/2012 |
| CCCSD | | | BUDGET |
| 1266 SPRINGBROOK | | | GORDON WHITE |
| | | | N-30 |
| WALNUT CREEK | CA | 94596 | DESTINATION |
| 1-925 260-2046 | 1 925 938 2050 | | DESTINATION |

| Item | Qty | UM | Part No. | Description | Unit Price | TOTAL |
|---|---|---|---|---|---|---|
| 1 | 1 | EA | | **MULTI-CONDUCTOR TV VAN<br>MOUNTED IN A SPRINTER VAN<br>AS PER ATTACHED SPECIFICATIONS<br>DATED 01-27-12** | $280,000.00 | |

| | |
|---|---|
| SUB-TOTAL | $280,000.00 |
| FREIGHT | $0.00 |
| CA STATE SALES TAX @ 8.25% | $23,100.00 |
| **GRAND TOTAL** | **$303,100.00** |

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Subtotal
Shipping & Handling
Taxes
Other
TOTAL

# GDI – Treatment Plant

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
To improve the effectiveness of treatment plant operations and maintenance and facilitate design of treatment plant projects by providing an interactive map of treatment plant facilities linked to various existing and proposed data sets. This tool will provide easier access to varied data sets, reducing geographic data redundancy and conflicts, and by improving data accuracy. This will improve productivity, reduce costs, and improve internal and external customer service.

**Project History:**
The successful implementation of the collection system graphics device interface (GDI) has indicated that a similar implementation of a GDI for the treatment plant could provide faster and more efficient access to existing and/or hard to access asset data. A treatment plant GDI concept has been developed that will link most of these existing and proposed datasets and allow user access through a common GDI like interface. A pilot treatment plant GDI has been completed, and is currently being used by staff.

**Project Description:**
The GDI – Treatment Plant project will implement a geographically based asset management tool for the treatment plant. The GDI – Treatment Plant will be modeled on the collection system GDI; mirroring the graphic interface and functionality but accessing and delivering treatment plant related data sets.

The District currently maintains a multitude of treatment plant work group databases that have a locational component, that is, they can be mapped. There are a number of data sets related to the Treatment Plant that are distinct work group databases, are geographically oriented, and are not currently integrated or linked. These data sets include Mainsaver, DARS, LIMS, PIMS, PCS, and TP orthophotography.

These databases are not currently integrated or linked in such a way that users can efficiently share data or have knowledge of the information that is available. As a result, individual users are maintaining duplicate datasets which contain various levels of accuracy and completeness. The accuracy and availability of data have a direct impact on the efficiency and effectiveness of the District and its ability to serve its customers. Implementation tasks and schedule will be based on linking and/or creating the easiest data sets first balanced by consideration of biggest ROI. Integration of additional treatment plant data sets is expected to occur in subsequent phases.

**Project Location:**
Treatment Plant

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2008 | 09/01/2008 | $0 |
| Design | 09/01/2008 | 07/01/2009 | $293,100 |
| Construction | 07/01/2009 | 06/30/2014 | $630,000 |
| | | Total: | **$923,100** |

Estimated expenditures this FY are: **$300,000**
Anticipated Allocations this FY are: **$300,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* GDI - Treatment Plant / 2
*Project Number/Filename:* 8227 / GDI_tp
*Project Manager/% Expansion:* Antkowiak / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 257,000 | 177,000 | 277,000 | 0 | 0 |
| **B. Anticipated Allocations** | 500,000 | 0 | 300,000 | 123,000 | 0 | 0 |
| **C. Authorized this Year** | 500,000 | 257,000 | 477,000 | 400,000 | 0 | 0 |
| **D. Estimated Expenditures** | (243,000) | (80,000) | (200,000) | (400,000) | 0 | 0 |
| **E. Estimated Carry-over** | 257,000 | 177,000 | 277,000 | 0 | 0 | 0 |

# GDI/SMMS Replacement

**Project Manager, Department/Division:**
Carolyn Knight, Engineering/Capital Projects

**Project Purpose:**
To improve the effectiveness of the collection system operations and maintenance by updating and integrating the District's GDI software, replacing the existing Accela asset management tool, providing field crews with data/map hardware tools, integrating the District's hydraulic analysis tools, and implementing a GPS capability. This will improve productivity, reduce costs, provide better data for management decisions, and improve internal and external customer service.

**Project History:**
A number of different collection system-related, computer-based management information systems have substantially improved the ability of District staff to manage the collection system. These systems include the collection system digital mapping system (GDI), the CSO asset management system (Accela), the collection system hydraulic analysis program (ArcSNAP), and the pilot implementation of a GPS system for utility locating.

Each one of these systems has programming that duplicates the functionality found in the other systems. Each one of these systems has a different user interface that users must learn, and many District staff must become proficient with several of the different interfaces to do their jobs. Often data output from one system must be integrated with data from another system even though it is a different incompatible data type, forcing the user to convert the data and integrate it at a higher cost. In several instances duplicate data is updated into and stored in the other systems.

The disparate software programs that these systems operate on have kept staff from further improving operations by integrating these systems. Several of these software programs have reached the end of their useful life and must be replaced due to improvements in the hardware platform and operating system environment that the programs operate on. The software manufacturers "time-out" these various versions of their programs and cease to support the software, forcing users to upgrade.

Different staff must become proficient on each of the individual operating systems, database programs, underlying mapping system programs, District-specific custom consultant-written programs and interfaces, etc. The alternative to consolidating these systems is to spend significant sums upgrading the different systems individually as required.

**Project Description:**
The project involves initially conducting a very detailed analysis of existing systems and functionality, resulting in an initial list of user requirements. Research will be simultaneously conducted to determine what enhancements can be made to add value to the existing systems and procedures, then researching existing asset management,

mapping, and data analysis programs to determine the optimal platform. Once the most flexible and technologically up-to-date program/platform is determined, detailed specifications will be developed for hardware, software, programming, and training to provide a single interface, database, underlying map and modular application functionality to the asset management functions that support collection system maintenance, assessment, and renovation. As this effort will be providing a cross departmental system, current users of all the relevant systems will be involved from the beginning.

**Project Location:**
District-wide

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2010 | 07/01/2011 | $125,000 |
| Construction | 07/01/2011 | 06/30/2014 | $825,000 |
| | | Total: | **$950,000** |

Estimated expenditures this FY are: **$500,000**
Anticipated Allocations this FY are: **$550,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* GDI-SMMS Replacement / 2
*Project Number/Filename:* 8232 / GDI-SMMS_repl
*Project Manager/% Expansion:* Knight / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 50,000 | 255,000 | 0 | 0 |
| **B. Anticipated Allocations** | 200,000 | 200,000 | 550,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 200,000 | 200,000 | 600,000 | 100,000 | 0 | 0 |
| **D. Estimated Expenditures** | (200,000) | (150,000) | (345,000) | (255,000) | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 50,000 | 255,000 | 0 | 0 | 0 |

# Information Technology Development

**Project Manager, Department/Division:**
Roy Li, Administration / Information Technology Administrator

**Project Purpose:**
An Information Technology Development Plan has been developed by Information Technology staff to centralize efforts and funding in the development of computer and telecommunication technology within the District.

**Project History:**
Input for the development plan was gathered through information technology survey results, management project lists, and Information Technology staff, along with management and staff focus groups. The original master plan, created in 2001, contained over 50 various projects and policies that were determined by District staff. Each year, information on technology projects are gathered and updated from District staff by the Information Technology Administrator, and reviewed by District Management and the Board of Directors for approval.

**Project Description:**
Due to competing funding and staffing priorities, the Information Technology Development Plan expenditure requests are being spread over more than a three year period. The prioritization of these expenditures will be revisited on an ongoing basis and some adjustments may be made to allow funding of higher priority projects.

The Information Technology Development project will provide funding for the development 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
- Remote and wireless access
- Telecommunications improvements
- Information Technology customer service and support
- Cost savings, power conservation & green alternatives

**Project Location:**
District wide

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2004 | 06/30/2014 | $5,671,000 |
| | | Total: | **$5,671,000** |

Estimated expenditures this FY are: **$1,095,000**
Anticipated Allocations this FY are: **$1,095,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Information Technology Development / 2
*Project Number/Filename:* 8195 / INF_Tech
*Project Manager/% Expansion:* Li / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 38,000 | 14,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 3,488,000 | 602,000 | 1,081,000 | 500,000 | 0 | 0 |
| **C. Authorized this Year** | 3,488,000 | 640,000 | 1,095,000 | 500,000 | 0 | 0 |
| **D. Estimated Expenditures** | (3,450,000) | (626,000) | (1,095,000) | (500,000) | 0 | 0 |
| **E. Estimated Carry-over** | 38,000 | 14,000 | 0 | 0 | 0 | 0 |

Central Contra Costa Sanitary District

# INFORMATION TECHNOLOGY DEVELOPMENT

## CAPITAL IMPROVEMENT BUDGET PLAN
## 2012 – 2013

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## EXECUTIVE SUMMARY

The Information Technology (IT) Master Plan was developed by Information Technology staff in 2000 to centralize efforts in the development of computer and telecommunication technology within the District. Input for the Master Plan was gathered through survey results, management project lists, and IT staff, along with management and staff focus groups. The Information Technology Master Plan contains projects and policies that have been applied over time to develop the District's standards, practices and policies with information technology. The Information Technology Development CIB was created to provide funding for these projects.

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 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

**2012-2013 IT DEVELOPMENT CIB PLAN**
**Proposed 2012-2013 Projects Expenditures**

| Project Description | In Thousands |
|---|---|
| 1. PC Replacement - Replace approx 60 PCs/Laptops | $100 |
| 2. Engineering Support - Upgrades | $50 |
| 3. MainSaver Integration with SunGard | $50 |
| 4. IT Related Upgrades for Pumping Stations – Moraga, Martinez | $15 |
| 5. Internet Online Forms - Source Control, Permits | $35 |
| 6. Laserfiche Backlog – Permits | $15 |
| 7. District Wireless Network | $90 |
| 8. Investigate Board Portal and Mobile Tablets | $50 |
| 9. Server Replacements | $85 |
| 10. Microsoft Office 2010 Software, Installation, and Training | $95 |
| 11. Help Desk Work Order System and Monitoring System | $100 |
| 12. District Server Replication, Backup, and Redundancy | $260 |
| 13. CSO – PA System | $95 |
| 14. Miscellaneous / Contingency | $55 |
| **Total Proposed Budget** | **$1,095** |

## PROPOSED 2012-2013 PROJECTS SUMMARY

- PC Replacement
  This is a standard four (4) year life cycle replacement for approximately sixty (60) desktop and laptop computers. Monitors and printers are replaced as needed.

- Engineering Support Upgrades
  Engineering is due for a scheduled life cycle replacements for three (3) CAD/GIS workstations, one (1) GDI development laptop, and a network printer for 4737 Imhoff Place.

  Due to the large file size used by numerous CAD/GIS workstations, having an external hard drive that can be shared and expanded is more cost effective that internal hard drives.

  Replacement of an old server that is hosting virtual machines (VM), memory upgrades for two (2) VM host servers, and adding a disk-to-disk backup storage for VM servers.

- MainSaver Integration with SunGard
  Currently, POD staff work between SunGard and MainSaver screens when accessing and processing purchase requests. Allowing users to access purchasing data from SunGard within MainSaver software will streamline MainSaver processes, improve functionality, and productivity.

- IT Related Upgrades for Pumping Stations – Moraga, Martinez
  PC upgrades for two (2) units with mirrored drives and Wonderware software (SCADA) located in Moraga and Martinez.

- Internet Online Forms - Source Control, Permits
  Improve existing online forms for District customers

- Laserfiche Backlog - Permits
  Continue Laserfiche work in Permits

- District Wireless Network
  Provide Wi-Fi access throughout HOB, POD and CSO offices. This involves assessment, design, acquisition, programming, installation, and support for enterprise grade Wi-Fi system. This service will be available within our buildings and nearby areas for work-related activities and for guest use.

- Investigate Board Portal and Mobile Tablets
  This is a pilot project that allows secure online access of Board related materials using tablets or computers. Some benefits included reduction in

paper and courier cost, increased productivity, and flexible online and offline access. Depending on the product selected, consolidation of existing audio recording, minutes taking system and Board preparation processes into a single system may result in additional savings with increased benefits.

- Server Replacements
  Replacement of AS/400 (SunGard) and Dell IT Servers.

- Microsoft Office 2010 Software, Installation, and Training
  Upgrade from MS Office 2003 to 2010, software licensing, installation, and user training

- Help Desk Tracking/Ticketing System and Hardware Monitoring System
  Currently, a centralized help desk tracking system does not exist. An IT help desk ticketing system keeps track of support issues and allows for root cause analysis to reduce or eliminate recurring issues. Additional benefits include the ability to allow a user to submit their support request online, view its status anytime, improve documentation, and user communication.

  The hardware monitoring system facilitates IT to move from a break–fix reactionary mode to one that proactively mitigate issues through trend analysis and real time monitoring of networks and servers.

- District Server Replication, Backup & Redundancy
  To improve business continuity and address existing risks in our current IT infrastructure, a two (2) year project encompassing gap assessment, design, planning, implementation and training to improve District core network replication, data backup and redundancy is needed. Part of this project will include sub-projects such as upgrading the fiber network connection between CSO and HOB; upgrading the backup system; setting up fail-over system for HOB's network core switch; implement redundant database, virtual servers, and storage systems at CSO and/or other site.

- CSO – PA system
  Work with CSO and Safety & Risk Management on the business analysis, design, planning, installation, and training of the PA system.

- Miscellaneous / Contingency
  - (2) Projection screens, (1) ceiling mounted hardware, (2) projectors for POD and MRC conference rooms
  - CSO EOC – (8) Laptops, software, (3) printers

## FUTURE PROJECTS

**CLOUD TECHNOLOGY**

Investigate software as a service (SaaS), cloud services that allows District to share data with other government agencies, disaster recovery (DR), and provide users with access to online collaboration tools.

**USER COLLABORATION TOOLS**

Potential application of interactive boards for conference rooms and online document collaboration tools such as Google Apps, Google Site, etc.

**DATAWAREHOUSE**

District currently has multiple silos of databases. Technologies such as datawarehouse may allow bridging access to disparate information into a single interface or repository.

**EASY ACCESS FOR USER TRAINING**

Improve access by offering self-paced online training courses in MS Office Word, Excel, PowerPoint, Access, etc.

**INVESTIGATE ONLINE TIMESHEETS SUBMISSION PROCESS**

Work with payroll department to possibly automate manual timesheet submission processes

**TEST LABS**

Set up a test lab for testing new software, upgrades or configuration changes before rolling out changes District wide

**VOLUME LICENSING OF MICROSOFT SOFTWARE LICENSES**

Investigate volume licensing of various MS software into a single cost effective program

# Capital Legal Services

**Project Manager, Department/Division:**
Russell Leavitt, Engineering/Environmental Services

**Project Purpose:**
To streamline the processing of legal bills.

**Project 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.

**Project 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 from Treatment Plant, Collection System, General Improvements, and Recycled Water Program projects. This change has relieved the Engineering Department's project managers from having to code the legal bill with project account numbers each month. This process also reduces the amount of time all parties must spend processing the legal bill.

Projects for which the District will receive reimbursement still have legal expense charges coded directly to those projects. Examples of such projects are HHW and any future Caltrans-related projects.

Engineering Department Operations and Maintenance legal expenses are charged to Environmental Services Division accounts, since this division generates most of these expenses.

**Project Location:**
Not applicable

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $560,000 |
| Design | - | - | $0 |
| Construction | 07/01/2010 | 06/30/2018 | $0 |
| | | Total: | **$560,000** |

Estimated expenditures this FY are: **$70,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Capital Legal Services - 2010 to 2018 / 3
*Project Number/Filename:* 8230 / CapLegal_2010
*Project Manager/% Expansion:* Leavitt / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 140,000 | 70,000 | 0 | 140,000 | 70,000 |
| **B. Anticipated Allocations** | 210,000 | 0 | 0 | 210,000 | 0 | 0 |
| **C. Authorized this Year** | 210,000 | 140,000 | 70,000 | 210,000 | 140,000 | 70,000 |
| **D. Estimated Expenditures** | (70,000) | (70,000) | (70,000) | (70,000) | (70,000) | (70,000) |
| **E. Estimated Carry-over** | 140,000 | 70,000 | 0 | 140,000 | 70,000 | 0 |

# Capital Improvement Budget and Plan

**Project Manager, Department/Division:**
Earlene Millier, Engineering/Environmental Services

**Project Purpose:**
This project provides for the capitalization of a portion of the staff time necessary for the data gathering and production of the Capital Improvement Budget and Plan.

**Project History:**
Custom software is used to maintain a database to hold capital project budget information and produce the annual CIB and CIP, and the Executive Summary. A number of interim reports and cash flow analyses are also produced.

**Project Description:**
Facility planning and master planning have traditionally been capital activities. It is appropriate that the resources required to produce the District's capital planning document, the CIB/CIP, also be classified as capital expenditures. Staff time charged to this capital project will be mainly from the capital improvement budget coordinator. Other costs include printing of the actual CIB/CIP documents.

Opportunities to streamline the process will be identified and implemented, as well as new ways sought to present the information through the year to increase its clarity and usefulness.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2006 | 06/30/2015 | $1,118,000 |
| Design | 06/30/2015 | 01/30/2016 | $0 |
| Construction | 01/30/2016 | 06/30/2016 | $0 |
| | | Total: | **$1,118,000** |

Estimated expenditures this FY are: **$90,000**
Anticipated Allocations this FY are: **$90,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Capital Improvement Plan and Budget / 3
*Project Number/Filename:* 8217 / CIB_CIP
*Project Manager/% Expansion:* Millier / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 75,000 | 69,000 | 69,000 | 49,000 | 39,000 |
| **B. Anticipated Allocations** | 663,000 | 104,000 | 90,000 | 90,000 | 100,000 | 71,000 |
| **C. Authorized this Year** | 663,000 | 179,000 | 159,000 | 159,000 | 149,000 | 110,000 |
| **D. Estimated Expenditures** | (588,000) | (110,000) | (90,000) | (110,000) | (110,000) | (110,000) |
| **E. Estimated Carry-over** | 75,000 | 69,000 | 69,000 | 49,000 | 39,000 | 0 |

# CSOD Facility Improvements

**Project Manager, Department/Division:**
Alex Rozul, Engineering/Capital Projects

**Project Purpose:**
The purpose of the project is to provide capital improvements to the Collection System Operations Department facilities in Walnut Creek, including the vehicle maintenance shop.

**Project History:**
none

**Project Description:**
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, and replacement of the permeable concrete in the middle yard, if needed.

**Project Location:**
1250 Springbrook Road, Walnut Creek.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 01/01/2012 | 01/01/2021 | $384,000 |
| | | Total: | **$384,000** |

Estimated expenditures this FY are: **$30,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* CSOD Facilities Improvements / 3
*Project Number/Filename:* pGI06 / CSOD_Fac_LT
*Project Manager/% Expansion:* Rozul / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 66,000 | 36,000 | 106,000 | 76,000 | 146,000 |
| **B. Anticipated Allocations** | 100,000 | 0 | 100,000 | 0 | 100,000 | 0 |
| **C. Authorized this Year** | 100,000 | 66,000 | 136,000 | 106,000 | 176,000 | 146,000 |
| **D. Estimated Expenditures** | (34,000) | (30,000) | (30,000) | (30,000) | (30,000) | (30,000) |
| **E. Estimated Carry-over** | 66,000 | 36,000 | 106,000 | 76,000 | 146,000 | 116,000 |

# District Property Safety Improvements

**Project Manager, Department/Division:**
Shari Deutsch, Administrative Department

**Project Purpose:**
To implement projects necessary to meet worker health and safety requirements.

**Project History:**
Each year a number of urgent safety improvements are made to District facilities and equipment. These improvements are generally triggered by equipment failures, accidents and near misses. Improvements also are made based on results of safety audits and suggestions received by the District's Safety Committee and the various department-level safety teams. The issues addressed in any given year vary widely in scope and location.

**Project Description:**
This project is a multi-year program to install safety improvements. The project encompasses safety improvements to the District's buildings, surrounding parking lots and grounds, District-owned buffer properties, general use vehicles and equipment, and other safety improvements that are not included in treatment plant or collection system projects. Studies of workstation ergonomics may require the purchase of furniture and/or equipment to address identified issues.

Ultimately, the Annex building will be used to house the Pumping Stations Operations group.

**Project Location:**
Improvements could be made on any of the District-owned properties or easements including the treatment plant, CSO office and yard, pumping stations or buffer properties. The specific locations will be determined throughout the course of the project.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2007 | 06/17/2013 | $124,000 |
| | | Total: | **$124,000** |

Estimated expenditures this FY are: **$80,000**
Anticipated Allocations this FY are: **$49,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* District Property Safety Improvements / 3
*Project Number/Filename:* 8223 / DistPropSafety
*Project Manager/% Expansion:* Deutsch / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 46,000 | 31,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 75,000 | 0 | 49,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 75,000 | 46,000 | 80,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (29,000) | (15,000) | (80,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 46,000 | 31,000 | 0 | 0 | 0 | 0 |

# District Easement Acquisition

**Project Manager and Department/Division:**
Stephanie Gronlund, Engineering/Environmental Services

**Project Purpose:**
To perfect 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.

**Project 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.

**Project 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

Projects included in the Collection System Program generally have funds budgeted specifically for right of way acquisition within the project budget.

**Project Location:**
District-wide.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $432,500 |
| Construction | 01/01/2010 | 06/17/2013 | $0 |
| | | Total: | **$432,500** |

Estimated expenditures this FY are: **$100,000**
Anticipated Allocations this FY are: **$82,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* District Easements / 3
*Project Number/Filename:* 8228 / distr_easements
*Project Manager/% Expansion:* Gronlund / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 18,000 | 18,000 | 18,000 | 0 | 0 |
| **B. Anticipated Allocations** | 150,000 | 100,000 | 100,000 | 82,000 | 0 | 0 |
| **C. Authorized this Year** | 150,000 | 118,000 | 118,000 | 100,000 | 0 | 0 |
| **D. Estimated Expenditures** | (132,000) | (100,000) | (100,000) | (100,000) | 0 | 0 |
| **E. Estimated Carry-over** | 18,000 | 18,000 | 18,000 | 0 | 0 | 0 |

# General Security Access

**Project Manager, Department/Division:**
Shari Deutsch, Administrative Department

**Project Purpose:**
Improve public and employee safety; meet reliability/safety standards; reduce the District's exposure to liability; reduce loss of District's property; and reduce Operations and Maintenance expenses.

**Project History:**
The District has experienced property losses in the past and improvements to the security system are continually identified and refined. Also, the current national security situation may soon require additional security measures for essential public services.

**Project Description:**
This project will improve the security of the public and District personnel and property. This project could include, but would not be limited to, installing alarm systems at critical sites on District property, adding gates in the perimeter security fencing to allow more efficient access for District personnel and equipment, upgrading security cameras, improving general area lighting, fencing and signage. This project focuses on non-Treatment Plant (including Collection System Operation facilities) security improvements. Treatment Plant security projects are budgeted under the Treatment Plant Program to clarify billing for reimbursement by the City of Concord.

**Project Location:**
District properties.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2007 | 06/17/2013 | $93,000 |
| | | Total: | **$93,000** |

Estimated expenditures this FY are: **$15,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* General Security Access / 3
*Project Number/Filename:* 8207 / GenSec
*Project Manager/% Expansion:* Deutsch / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 30,000 | 15,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 93,000 | 0 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 93,000 | 30,000 | 15,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (63,000) | (15,000) | (15,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 30,000 | 15,000 | 0 | 0 | 0 | 0 |

# HOB Improvements 2012-13 to 2021-22

**Project Manager, Department/Division:**
Randy Musgraves, Administrative Department

**Project Purpose:**
This project will renovate portions of the interior and exterior of the Headquarters Office Building (HOB).

**Project History:**
The HOB was completed in 1983. After 27 years of use, the interior needs upgrading. This multi-year project will provide an allowance to renovate and upgrade the interior and exterior of the HOB offices. Anticipated projects include conditioning and painting the exterior, renovating interior wall finishes and ceilings, replacing flooring and carpeting, upgrading electrical and lighting systems, reconfiguring offices and workstations, and upgrading kitchens and lunch areas. Changes are needed to bring the building's interior and exterior into compliance with the Americans with Disabilities Act (ADA) requirements. In addition, structural improvements may be required to accommodate interior office changes or comply with seismic building codes.

**Project Description:**
Under this project, the HOB interior walls will be painted, repaired or replaced, along with the replacement of damaged ceiling tiles, and carpeting. In addition, lighting systems will be upgraded and some office spaces will be reconfigured. Interior and exterior changes will be made to bring the building into compliance with ADA requirements. Improvements will also be made to resist inclement weather.

**Project Location:**
Headquarters Office Building.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2012 | 08/01/2012 | $460,000 |
| Design | 08/01/2012 | 10/01/2012 | $225,000 |
| Construction | 10/01/2012 | 06/17/2022 | $0 |
| | | Total: | **$685,000** |

Estimated expenditures this FY are: **$10,000**
Anticipated Allocations this FY are: **$60,000)**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* HOB Improvements / 3
*Project Number/Filename:* pGI04 / HOB_imprvs
*Project Manager/% Expansion:* Musgraves / 0

| | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 50,000 | 0 | 50,000 | 0 | 95,000 |
| **B. Anticipated Allocations** | 60,000 | 0 | 100,000 | 0 | 145,000 | 0 |
| **C. Authorized this Year** | 60,000 | 50,000 | 100,000 | 50,000 | 145,000 | 95,000 |
| **D. Estimated Expenditures** | (10,000) | (50,000) | (50,000) | (50,000) | (50,000) | (95,000) |
| **E. Estimated Carry-over** | 50,000 | 0 | 50,000 | 0 | 95,000 | 0 |

# Imhoff Triangle Development

**Project Manager, Department/Division:**
Randy Musgraves/Administrative Department

**Project Purpose:**
The purpose of this project is to develop the District's property located on Imhoff Drive.

**Project History:**
The District declared this land surplus on August 9, 2007. Prospective lessees have shown interest, but before the land can be leased, various surveys and permitting will be required along with culverting a seasonal channel that bisects the property. This property serves as a buffer zone between the treatment plant/Household Hazardous Waste Collection Facility and nearby residential and commercial neighborhoods.

**Project Description:**
This project will be a multi-year program for initial development costs associated with the triangular property located off of Imhoff Drive. The scope of work includes: a) engineering services connected with the rerouting or relocation of the seasonal creek bed, b) other in-house engineering services, and c) in-house survey services.

**Project Location:**
The triangular property is approximately 1.1 acres and is located south of Imhoff Drive and northwest of the District's Household Hazardous Waste Collection Facility.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $44,000 |
| Design | - | - | $0 |
| Construction | 12/15/2007 | 06/17/2013 | $20,000 |
| | | Total: | **$64,000** |

Estimated expenditures this FY are: **$10,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Imhoff Triangle Development / 3
*Project Number/Filename:* 8225 / Imhoff_tri
*Project Manager/% Expansion:* Musgraves / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 10,000 | 10,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 64,000 | 0 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 64,000 | 10,000 | 10,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (54,000) | 0 | (10,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 10,000 | 10,000 | 0 | 0 | 0 | 0 |

# Kiewit Clean Fill Operation

**Project Manager, Department/Division:**
Randy Musgraves, Administrative Department

**Project Purpose:**
This project will bring clean fill to the Kiewit parcel and will raise the elevation approximately five feet.

**Project History:**
The Kiewit property was purchased by CCCSD from the Kiewit Construction Group in 1981. It lies to the east of the CCCSD treatment plant site. The site is an approximately 33-acre, polygon shaped piece of land bounded by Imhoff Drive on the north, Highway 4 on the south, the Walnut Creek Flood Control Channel on the east and Grayson Creek on the west. The site has been used as a buffer zone for the treatment plant.

**Project Description:**
As available sites for disposal of clean fill within central Contra Costa County have diminished, the District has an opportunity to use the Kiewit property as a source of revenue by leasing it as a clean fill site. County Quarry was contracted with to oversee the leasing agreement and operate the clean fill site for an anticipated net revenue to the District of $1,000,000 over five years. During the operation, staff, and possibly the District's environmental consultants, will be required to review, analyze and/or validate County Quarry's data for permits, hazardous materials testing, grading, drainage and compaction.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 09/01/2004 | 07/01/2005 | $176,000 |
| Construction | 07/01/2005 | 06/17/2013 | $81,000 |
| | | Total: | **$257,000** |

Estimated expenditures this FY are: **$60,000**
Anticipated Allocations this FY are: **($9,000)**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Kiewit Clean Fill Operation / 3
*Project Number/Filename:* 8210 / Kiewit
*Project Manager/% Expansion:* Musgraves / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 99,000 | 69,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 266,000 | 0 | (9,000) | 0 | 0 | 0 |
| **C. Authorized this Year** | 266,000 | 99,000 | 60,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (167,000) | (30,000) | (60,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 99,000 | 69,000 | 0 | 0 | 0 | 0 |

# Martinez Easement Acquisition

**Project Manager and Department/Division:**
Ricardo Hernandez, Engineering/Environmental Services

**Project Purpose:**
Over the next ten years the District will be renovating or replacing many of the older sewer pipes within the City of Martinez. This project will acquire up to 125 missing or insufficient sewer easements required to support this planned renovation work. The City of Martinez will reimburse CCCSD for the costs associated with acquisition of these easements.

**Project History:**
CCCSD became responsible for the City of Martinez sewers pursuant to an Annexation Agreement dated September 13, 1967. Under this agreement, the City agreed to the annexation and to transfer ownership and responsibility for existing sewer facilities to CCCSD. One of the conditions is that the City would convey adequate easements, fee title or other property rights for the sewers and other facilities that were transferred to CCCSD. Also the agreement further stated that in the event that it later appeared that the City did not possess all such necessary easements, the District will acquire the same and that all costs for acquisition will be paid for by the City of Martinez. District staff is currently researching the property rights available and preliminary findings are that the 125 needed easements may be significantly reduced.

**Project 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

**Project Location:**
City of Martinez

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 08/20/2009 | 12/01/2000 | $171,000 |
| Design | 12/01/2000 | 12/01/2009 | $45,000 |
| Construction | 12/01/2009 | 06/17/2013 | $0 |
| | | Total: | **$216,000** |

Estimated expenditures this FY are: **$31,000**
Anticipated Allocations this FY are: **$31,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Martinez Easements / 3
*Project Number/Filename:* 8229 / mtz_easements
*Project Manager/% Expansion:* Hernandez / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 20,000 | 10,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 65,000 | 65,000 | 55,000 | 31,000 | 0 | 0 |
| **C. Authorized this Year** | 65,000 | 85,000 | 65,000 | 31,000 | 0 | 0 |
| **D. Estimated Expenditures** | (45,000) | (75,000) | (65,000) | (31,000) | 0 | 0 |
| **E. Estimated Carry-over** | 20,000 | 10,000 | 0 | 0 | 0 | 0 |

# POD Office Improvements Project

**Project Manager, Department/Division:**
Randy Musgraves, Administrative Department

**Project Purpose:**
The project purpose is to make improvements to the interior and exterior of the Plant Operations Department (POD) Administration offices.

**Project History:**
The POD Administration building and offices are 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, and to incorporate new office technologies.

**Project 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 conditioning and painting of the exterior, renovation of interior wall finishes and ceilings, replacement of the flooring and carpeting, upgrading of electrical and lighting systems, reconfigurations of offices and workstations, and upgrading of kitchens and lunch areas. Exterior improvements that may be undertaken include replacement of sidewalks, retaining walls, light fixtures, and landscaping. When specific projects are identified, separate project budgets, including labor, equipment, and materials for small office renovations, will be established in the Capital Improvement Budget.

**Project Location:**
The location of the improvements will be the POD Administration and POD Maintenance and Reliability Center.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 10/01/2006 | 11/01/2006 | $190,000 |
| Construction | 11/01/2006 | 06/17/2013 | $129,000 |
| | | Total: | **$319,000** |

Estimated expenditures this FY are: **$75,000**
Anticipated Allocations this FY are: **($55,000)**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* POD Office Imprvs / 3
*Project Number/Filename:* 8221 / POD_imprvs
*Project Manager/% Expansion:* Musgraves / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 150,000 | 130,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 374,000 | 0 | (55,000) | 0 | 0 | 0 |
| **C. Authorized this Year** | 374,000 | 150,000 | 75,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (224,000) | (20,000) | (75,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 150,000 | 130,000 | 0 | 0 | 0 | 0 |

# Rental Property Improvements

**Project Manager, Department/Division:**
Randy Musgraves/Administrative Department

**Project Purpose:**
The purpose of this project is to protect and enhance the District's rental property through additions, improvements, betterments, replacements, and extraordinary repairs.

**Project History:**
The District has owned the property at 4849 Imhoff Place since November 1999. The property was leased to Contra Costa County for the Animal Services operation for many years, and is currently used to house District employees displaced by the work being done in the HOB, and will be used as rental property when that work is complete. The District has owned the property at 4737 Imhoff Place since May 1991. This property is currently rented to several commercial tenants. Both properties serve as a buffer zone between the treatment plant and nearby residential and commercial neighborhoods.

**Project Description:**
This will be a multi-year project to install needed improvements to the District's rental properties, surrounding parking lots and grounds. These improvements would typically be triggered by equipment or building failure, or a need to improve the property. A five-year improvement plan has been developed and will be reviewed at least annually identifying future needed projects.

**Project Location:**
Improvements could be made on any of the District-owned rental properties including 4737 Imhoff Place and 4849 Imhoff Place.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | - | - | $0 |
| Construction | 07/01/2007 | 06/17/2013 | $98,000 |
| | | Total: | **$98,000** |

Estimated expenditures this FY are: **$30,000**
Anticipated Allocations this FY are: **($39,000)**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Rental Property Improvements / 3
*Project Number/Filename:* 8224 / RentalProp
*Project Manager/% Expansion:* Musgraves / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 69,000 | 69,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 137,000 | 0 | (39,000) | 0 | 0 | 0 |
| **C. Authorized this Year** | 137,000 | 69,000 | 30,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (68,000) | 0 | (30,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 69,000 | 69,000 | 0 | 0 | 0 | 0 |

# Seismic Improvements for HOB

**Project Manager, Department/Division:**
Nathan Hodges, Engineering/Capital Projects

**Project Purpose:**
Seismic improvements will be made to the Headquarters Office Building (HOB).

**Project 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.

HOB is a relatively lightweight and flexible structure. In terms of seismic performance this is helpful in dissipating seismic energy, but can be detrimental in that large displacements can lead to failure of the structural system. The HOB utilizes a steel moment frame system to resist earthquake forces. Steel moment frames constructed before the Northridge earthquake are likely to weaken during an earthquake and be unable to carry the forces they were designed to resist. These steel moment frame problems in combination with the building's flexibility are the primary reasons for the HOB's seismic vulnerability.

CPS' analysis of HOB included 2007 CBC and FEMA 351 calculations. These calculations show issues with the building columns and the steel moment frames. Additional analysis was also done based upon ASCE 41, a standard used for analysis of existing buildings. This analysis also shows issues with the columns. 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. The flexibility of the building and the wood floors are unique to a steel moment frame structure. 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.

**Project Description:**
The HOB will be seismically retrofitted 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.

**Project Location:**
Headquarters Office Building

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/16/2008 | 03/01/2012 | $258,000 |
| Construction | 03/01/2012 | 12/31/2013 | $5,755,000 |
| | | Total: | **$6,013,000** |

Estimated expenditures this FY are: **$3,800,000**
Anticipated Allocations this FY are: **$4,333,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Seismic Improvements for HOB / 3
*Project Number/Filename:* 8226 / seismic_HOB
*Project Manager/% Expansion:* Hodges / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 167,000 | 167,000 | 700,000 | 0 | 0 |
| **B. Anticipated Allocations** | 680,000 | 1,000,000 | 4,333,000 | 0 | 0 | 0 |
| **C. Authorized this Year** | 680,000 | 1,167,000 | 4,500,000 | 700,000 | 0 | 0 |
| **D. Estimated Expenditures** | (513,000) | (1,000,000) | (3,800,000) | 700,000 | 0 | 0 |
| **E. Estimated Carry-over** | 167,000 | 167,000 | 700,000 | 0 | 0 | 0 |

# Seismic Improvements for Rental Property

**Project Manager, Department/Division:**
Nathan Hodges, Engineering/Capital Projects

**Project Purpose:**
The purpose of the project is to improve the seismic performance of the District's rental property buildings.

**Project History:**
It is estimated that the District's warehouse building at 4737 Imhoff Place was constructed in the early 1970's. No existing drawings of the building, which is a tilt-up concrete structure, have been found. Seismic evaluation of this structure revealed that there could be significant damage to the walls and roof-wall connections, and a risk to occupants of the building. A report by Complete Project Solutions Inc. submitted in October of 2008 identified serious structural deficiencies when analyzed using the 2007 California Building Code. There have been considerable advances in designing structures to resist earthquake forces since the building was constructed. There is also new information about seismic events along nearby earthquake faults including the Concord Fault.

**Project Description:**
The warehouse building will be seismically retrofitted to provide basic life safety for building occupants. Work will include structural building modifications to bring the building up to current seismic codes. In addition, other modifications may be required (such as ADA or other improvements) as determined during the plan check procedure (to be performed by Contra Costa County).

**Project Location:**
District-owned rental structures located at 4737 and 4849 Imhoff Place, Martinez

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 02/01/2010 | 03/01/2010 | $0 |
| Design | 03/01/2010 | 09/01/2010 | $20,000 |
| Construction | 09/01/2010 | 06/30/2013 | $620,000 |
| | | Total: | **$640,000** |

Estimated expenditures this FY are: **$250,000**
Anticipated Allocations this FY are: **$250,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Rental Property Seismic Improvements / 3
*Project Number/Filename:* 8231 / Seismic_rentalProp
*Project Manager/% Expansion:* Hodges / 0

| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 20,000 | 320,000 | 50,000 | 250,000 | 0 | 0 |
| **C. Authorized this Year** | 20,000 | 320,000 | 50,000 | 250,000 | 0 | 0 |
| **D. Estimated Expenditures** | (20,000) | (320,000) | (50,000) | (250,000) | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

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## RECYCLED WATER PROGRAM

This section includes detailed information for the Recycled Water Program.

Table RW-1 presents project listings and detailed budget information. Detailed project information, schedules, and cash flow tables are presented in individual project data sheets.

### OVERVIEW

The District currently delivers almost 200 million gallons per year of recycled water to about 34 customers located within the Zone One 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 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 Recycled Water Program, at $3.9 million, represents twelve percent of the total estimated capital expenditures for FY 2012-13. The major emphasis of the Recycled Water Program for the next fiscal year will be pursuing development of a large industrial re-use project and construction of the Concord Landscape PRoject. The District will also continue efforts to add new cost-effective customers in the District's Zone One service area, and pursue outside funding assistance, such as federal and state grants.

### Table RW-1: Recycled Water Subprogram/Project List

| Subprogram / Project No. / Project Title | | Project Manager | Estimated Total Project Expenditures | Anticipated Allocations To 06/30/12 | Estimated Expenditures To 06/30/12 | Anticipated Allocations FY 2012-13 | Estimated Expenditures FY 2012-13 |
|---|---|---|---|---|---|---|---|
| **1Urban Landscaping** | | | | | | | |
| pRW03 | Zone 1 Recycled Water - ph 1C - LT | Berger | 3,091,000 | 0 | 0 | 315,000 | 315,000 |
| 7299 | Concord Landscape Project | Gronlund | 4,100,000 | 540,000 | 600,000 | 3,560,000 | 3,300,000 |
| 7300 | Refinery Recycled Water Project | Berger | 480,000 | 150,000 | 80,000 | 100,000 | 100,000 |
| 7259 | Recycled Water Planning | Berger | 1,401,000 | 1,009,500 | 865,000 | 105,000 | 105,000 |
| 7279 | Concord Naval Weapons REW | Berger | 250,000 | 260,000 | 215,000 | 0 | 5,000 |
| 7261 | REW - Cathodic Prot Sys Repl | Antkowiak | 38,000 | 20,000 | 18,000 | 5,000 | 5,000 |
| 7303 | REW Line to Conco & Maltby PS Replacement | Antkowiak | 110,000 | 25,000 | 10,000 | 85,000 | 100,000 |
| | **Subprogram Total** | | 9,470,000 | 2,004,500 | 1,788,000 | 4,170,000 | 3,930,000 |
| | **Program Total** | | 9,470,000 | 2,004,500 | 1,788,000 | 4,170,000 | 3,930,000 |

# Concord Landscape Project

**Project Manager, Department/Division:**
Stephanie Gronlund, Engineering/Environmental Services

**Project Purpose:**
Design and construct the extension of the District's existing recycled water distribution system from the Buchanan Fields Golf Course to the Diamond/Meridian Park Blvd area of Concord for landscape irrigation purposes at businesses and roadway medians.

**Project History:**
Completion of this project will provide up to 190 acre-feet per year (AFY) of recycled water for landscape irrigation services in the Diamond/Meridian Park Blvd area of Concord. This area is part of the Zone One Project area and is included in the 1995 Zone One Project Agreement with the Contra Costa Water District.

**Project Description:**
The project would consist of construction of about 2.5 miles of new recycled water distribution piping and approximately 34 customer connections. Total project cost, including design and construction, is $4,200,000. The project will be partially funded by grants from the Federal and State governments.

**Project Location:**
Concord, Zone One Project area

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $300,000 |
| Design | 07/01/2011 | 09/01/2011 | $300,000 |
| Construction | 09/01/2011 | 06/30/2014 | $3,500,000 |
| | | Total: | **$4,100,000** |

Estimated expenditures this FY are: **$3,300,000**
Anticipated Allocations this FY are: **$3,560,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Concord Landscape Project / 1
*Project Number/Filename:* 7299 / Concord_LS
*Project Manager/% Expansion:* Gronlund / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | (60,000) | 200,000 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 540,000 | 3,560,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 540,000 | 3,500,000 | 200,000 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (600,000) | (3,300,000) | (200,000) | 0 | 0 | 0 |
| **E. Estimated Carry-over** | (60,000) | 200,000 | 0 | 0 | 0 | 0 |

# Refinery Recycled Water Project

**Project Manager, Department/Division:**
Don Berger, Engineering/Environmental Services

**Project Purpose:**
Develop and implement a project to provide recycled water to the Shell and Tesoro refineries in Martinez.

**Project History:**
The two refineries use a combined total of approximately 22,500 acre feet per year (AFY) of Delta water for cooling towers and boiler feedwater applications. CCCSD discharges over 40,000 AFY of secondary effluent to Suisun Bay that could be recycled and reused at the refineries to replace Delta water. Some of the infrastructure required for this project, including the storage tanks and distribution pipelines to the refineries, already exists. Implementation of the project would require construction of new filtration facilities at CCCSD's treatment plant and ammonia removal (nitrification) facilities to meet refinery water quality requirements. The project could be cost-effective compared to other water supply alternatives if outside funding assistance could be obtained.

**Project Description:**
This project would construct new recycled water treatment facilities including ammonia removal, filtration, and disinfection facilities to provide up to 22,500 acre feet per year of ammonia free (nitrified) recycled water to the Shell and Tesoro refineries. The total estimated project cost is $100 million. The existing distribution pipelines owned by the Contra Costa Water District would be used if available to distribute recycled water into the refineries, which would reduce the estimated cost of the project. In 2011, CCCSD was awarded a federal Title XVI grant from the U.S. Bureau of Reclamation to prepare a feasibility study and environmental documentation for the proposed project. The feasibility study is expected to be completed in 2013. At this time, budget is only included for project planning activities and to pursue funding assistance and project partners.

**Project Location:**
Treatment Plant, Martinez

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2011 | 07/01/2014 | $480,000 |
| Design | - | - | $0 |
| Construction | 07/01/2014 | 06/17/2016 | $0 |
| | | Total: | **$480,000** |

Estimated expenditures this FY are: **$100,000**
Anticipated Allocations this FY are: **$100,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Refinery Recycled Water Project / 1
*Project Number/Filename:* 7300 / refinery ReW
*Project Manager/% Expansion:* Berger / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 80,000 | 100,000 | 100,000 | 100,000 | 100,000 | 0 |
| **C. Authorized this Year** | 80,000 | 100,000 | 100,000 | 100,000 | 100,000 | 0 |
| **D. Estimated Expenditures** | (80,000) | (100,000) | (100,000) | (100,000) | (100,000) | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# Recycled Water Planning

**Project Manager, Department/Division:**
Don Berger, Engineering/Environmental Services

**Project Purpose:**
To develop and implement a comprehensive long-term Recycled Water Program that provides recycled water for landscape irrigation, industrial reuse, and other feasible applications.

**Project History:**
The District has worked with the Contra Costa Water District (CCWD) and the East Bay Municipal Utility District (EBMUD) on various recycled water feasibility studies over the years. In 2000, the District's Recycled Water Master Plan was completed. It identified potential recycled water customers and demands for irrigation and industrial uses throughout the District. Costs and benefits were developed for various recycled water projects.

Recent planning efforts have focused on developing an industrial recycled water project; evaluating the use of recycled water at potential new power plants in the area; and evaluating the use of satellite treatment facilities to provide recycled water to landscape irrigation customers in areas remote to the District's recycled water filtration plant in Martinez.

**Project Description:**
This project provides funds for planning studies related to the development of the District's recycled water program. The Recycled Water Planning Project will also address implementation issues such as funding, state and federal regulations, public education, and gaining political support from federal, state, and local agencies. Documents to comply with State Water Resources Control Board (SWRCB) requirements for salt and nutrient management plans will be prepared as part of this project.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $1,401,000 |
| Design | - | - | $0 |
| Construction | 01/01/2008 | 06/17/2017 | $0 |
| | | Total: | **$1,401,000** |

Estimated expenditures this FY are: **$105,000**
Anticipated Allocations this FY are: **$105,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Recycled Water Planning / 1
*Project Number/Filename:* 7259 / rew_01planning
*Project Manager/% Expansion:* Berger / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 10,000 | (10,000) | (10,000) | (10,000) | (10,000) |
| **B. Anticipated Allocations** | 671,000 | 184,000 | 105,000 | 105,000 | 105,000 | 63,000 |
| **C. Authorized this Year** | 671,000 | 194,000 | 95,000 | 95,000 | 95,000 | 53,000 |
| **D. Estimated Expenditures** | (661,000) | (204,000) | (105,000) | (105,000) | (105,000) | (63,000) |
| **E. Estimated Carry-over** | 10,000 | (10,000) | (10,000) | (10,000) | (10,000) | (10,000) |

# Concord Naval Weapons Station Recycled Water Planning

**Project Manager, Department/Division:**
Don Berger, Engineering/Environmental Services

**Project Purpose:**
To identify recycled water infrastructure necessary to serve the extensive development being planned at the Concord Naval Weapons Station (CNWS) site as part of the Concord Community Reuse Project.

**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 (Clustered Villages concept) consisting of a mixture of commercial, residential, institutional, and recreational uses interspersed between parks and open space. In 2010, the Concord Community Reuse Project Final Environmental Impact Report (EIR) was completed; it includes recycled water demand scenarios of up to 2,749 AFY for landscape irrigation. In 2011, 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.

**Project Description:**
As CNWS redevelopment plans proceeds forward, the Recycled Water Facilities Plan will form the basis of future work to ensure that appropriate recycled water projects are identified for timely inclusion in the District's capital budget and that Concord Community Reuse Project's appropriate contribution to the cost of such infrastructure can be ascertained. The District will continue with efforts to coordinate with the City of Concord regarding providing recycled water to the CNWS redevelopment site.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | 07/01/2010 | 07/01/2012 | $250,000 |
| Design | 07/01/2012 | 07/01/2015 | $0 |
| Construction | 07/01/2015 | 06/30/2019 | $0 |
| | | Total: | **$250,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* Concord Naval Weapons REW / 1
*Project Number/Filename:* 7279 / rew_03CNWS
*Project Manager/% Expansion:* Berger / 0

| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 75,000 | 35,000 | 30,000 | 25,000 | 20,000 |
| **B. Anticipated Allocations** | 230,000 | 20,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 230,000 | 95,000 | 35,000 | 30,000 | 25,000 | 20,000 |
| **D. Estimated Expenditures** | (155,000) | (60,000) | (5,000) | (5,000) | (5,000) | (5,000) |
| **E. Estimated Carry-over** | 75,000 | 35,000 | 30,000 | 25,000 | 20,000 | 15,000 |

# Cathodic Protection System Replacement - ReW

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/Capital Projects

**Project Purpose:**
A master plan for treatment plant, reclaimed water and collection systems cathodic protection was prepared in 2006/07. Based on the master plan, adequate cathodic protection on all reclaimed water facilities will be provided by replacing existing expended facilities and installing new systems where required.

**Project History:**
To extend the useful life of the District reclaimed water facilities, structures and pipelines, cathodic protection systems need to be monitored and maintained. Recently a cathodic protection survey of the reclaimed water system was performed and identified facilities that needed replacement and improvements over the next five-year period. The report also identified existing facilities requiring further investigations. The current project will implement high priority recommendations from the master plan. Other less urgent improvements will be scheduled for renovation in the future years.

**Project Description:**
Based on the recommendations from the master plan, cathodic protection systems that are not providing adequate protection will be repaired and/or replaced, and any other facilities that may require cathodic protection will be identified. It is anticipated that some systems may require refurbishment in the near future.

**Project Location:**
Throughout the recycled water distribution system

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 07/01/2006 | 02/01/2007 | $38,000 |
| Construction | 02/01/2007 | 06/01/2016 | $0 |
| | | Total: | **$38,000** |

Estimated expenditures this FY are: **$5,000**
Anticipated Allocations this FY are: **$0**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* REW - Cathodic Prot Sys Repl / 1
*Project Number/Filename:* 7261 / rew_cathodic
*Project Manager/% Expansion:* Antkowiak / 0

| | Prior to 7/01/11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 10,000 | 7,000 | 2,000 | 6,000 | 2,000 |
| **B. Anticipated Allocations** | 25,000 | 0 | 0 | 9,000 | 1,000 | 3,000 |
| **C. Authorized this Year** | 25,000 | 10,000 | 7,000 | 11,000 | 7,000 | 5,000 |
| **D. Estimated Expenditures** | (15,000) | (3,000) | (5,000) | (5,000) | (5,000) | (5,000) |
| **E. Estimated Carry-over** | 10,000 | 7,000 | 2,000 | 6,000 | 2,000 | 0 |

# REW Line to Conco & Maltby PS Repair

**Project Manager, Department/Division:**
Andrew Antkowiak, Engineering/ Capital Projects

**Project Purpose:**
The purpose of this project is to repair failed portions of the recycled water line that serves Conco and the District's Maltby Pumping Station.

**Project History:**
Several leaks have developed over the last ten years on the recycled water line serving Conco and the Maltby Pumping Station. More recently, a small leak was discovered in Basin C. Staff has identified failing glued joints as the source of the leaks.

**Project Description:**
This project will evaluate, design and repair the active leak(s), and replace pipe at risk of future failure. A flow meter to monitor for future leaks will be installed.

**Project Schedule and Cost:**

| | *Start Date* | *Completion Date* | *Total Cost* |
|---|---|---|---|
| Planning | - | - | $0 |
| Design | 03/01/2012 | 07/01/2012 | $25,000 |
| Construction | 07/01/2012 | 06/30/2013 | $85,000 |
| | | Total: | **$110,000** |

Estimated expenditures this FY are: **$100,000**
Anticipated Allocations this FY are: **$100,000**

**Project Fiscal Year Allocation/Expenditure Table:**

*Project Title/Subprogram:* REW Line to Conco & Maltby PS Repair / 1
*Project Number/Filename:* pRW04 / REW_conco_repl
*Project Manager/% Expansion:* Antkowiak / 0

| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|---|---|---|---|---|---|---|
| **A. Current Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |
| **B. Anticipated Allocations** | 10,000 | 100,000 | 0 | 0 | 0 | 0 |
| **C. Authorized this Year** | 10,000 | 100,000 | 0 | 0 | 0 | 0 |
| **D. Estimated Expenditures** | (10,000) | (100,000) | 0 | 0 | 0 | 0 |
| **E. Estimated Carry-over** | 0 | 0 | 0 | 0 | 0 | 0 |

# CENTRAL CONTRA COSTA SANITARY DISTRICT
# 2012 CAPITAL IMPROVEMENT PLAN
# TEN YEARS ENDING JUNE 30, 2022

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# 2012 CAPITAL IMPROVEMENT PLAN
# TEN YEARS ENDING JUNE 30, 2022

## PURPOSE

The Central Contra Costa Sanitary District (District) is responsible for the collection, treatment and disposal of wastewater for a population of approximately 462,000 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, 2) a discussion of potential, unbudgeted future projects, and 3) a cash flow discussion.

## CAPITAL IMPROVEMENT EXPENDITURES

This plan covers the ten-year period from Fiscal Year (FY) 2012-13 through FY 2021-22. The plan includes projected expenditures totaling $358,037,000 (2012 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 2012-13 Capital Improvement Budget (CIB) (the first year of the CIP).

The following discussion gives an overview of the plan's goals and the programs proposed to meet these goals. A description of the District's guiding financial principles and a brief summary of the CIP's cash flow are also presented.

## Capital Improvement Program Objectives

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

- Support the District's mission to protect public health and the environment by:
  - Collecting and treating wastewater
  - Recycling high quality water
  - Promoting pollution prevention

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

- 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

## Programs

Capital improvement projects are grouped into four programs: Treatment Plant, Collection System, General Improvements, and Recycled Water. A summary of the ten years of planned expenditures by program, without inflation, is contained in Table 1. Below is a brief discussion of each ten-year program.

### *Treatment Plant*

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 capacity. The Treatment Plant Program will require $159.2 million (2012 dollars), comprising 44.5 percent of the District's capital improvements over the next ten years. 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. Capacity improvements will be primarily limited to those needed for the solids handling processes and to handle wet weather flows. One large regulatory project faces the District in the next ten years: the $70 million Nutrient Removal project.

### *Collection System*

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 upgrading the system where necessary to address capacity needs, improving the reliability of the District's pumping stations, and implementing projects to address renovation needs. At $168.7 million (2012 dollars), the Collection System Program comprises 47 percent of the District's capital improvements over the next ten years. The District wide TV inspection program, 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 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.

### *General Improvements*

This program addresses the property and equipment needs of the District. Specific projects include property acquisition, improvements to the Headquarters Office Building and other District properties, information system and data management upgrades (computer hardware and software) and other miscellaneous equipment, including vehicles. The General Improvements Program will require $21.3 million (2012 dollars); representing six percent of the District's anticipated capital expenditures over the next ten years. This program includes seismic upgrades to general use District buildings.

### *Recycled Water*

The District's Recycled Water Program includes projects which will require $8.9 million (2012 dollars), comprising 2.5 percent of the District's capital improvements over the next ten years. 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. District staff will also continue to pursue financial partners for the Refinery Recycled Water project, although this project is not currently budgeted except for small expenditures to cover planning activities.

## Table 1 - Ten-year Program Expansion-Upgrade/Replacement

| Program/Subprogram | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Treatment Plant** | | | | | | | | | | | |
| Reg. Compliance/Planning/Safety | 590,000 | 960,000 | 271,000 | 421,000 | 4,720,000 | 5,165,000 | 10,915,000 | 27,165,000 | 23,785,000 | 26,975,000 | 100,967,000 |
| One-Time Renovation | 5,338,000 | 7,727,000 | 5,600,000 | 4,542,000 | 7,745,000 | 4,020,000 | 80,000 | 80,000 | 80,000 | 280,000 | 35,491,000 |
| Recurring Renovation | 1,508,000 | 402,000 | 1,460,000 | 2,460,000 | 2,470,000 | 2,600,000 | 3,050,000 | 3,050,000 | 2,800,000 | 2,800,000 | 22,600,000 |
| Expansion | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100,000 | 101,000 |
| **Subtotal** | **7,436,000** | **9,089,000** | **7,331,000** | **7,423,000** | **14,935,000** | **11,785,000** | **14,045,000** | **30,295,000** | **26,665,000** | **30,155,000** | **159,159,000** |
| **Collection System** | | | | | | | | | | | |
| Renovation | 10,321,000 | 11,702,000 | 10,501,000 | 12,551,000 | 12,151,000 | 14,044,000 | 14,451,000 | 12,151,000 | 13,851,000 | 12,830,000 | 124,553,000 |
| Reg. Compliance/Planning/Safety | 384,000 | 270,000 | 270,000 | 270,000 | 270,000 | 270,000 | 270,000 | 270,000 | 170,000 | 170,000 | 2,614,000 |
| Expansion | 1,694,000 | 4,467,000 | 5,343,000 | 2,974,000 | 3,401,000 | 1,301,000 | 2,101,000 | 4,251,000 | 3,651,000 | 2,669,000 | 31,852,000 |
| Pumping Stations | 1,325,000 | 1,430,000 | 135,000 | 135,000 | 255,000 | 1,635,000 | 610,000 | 1,635,000 | 635,000 | 1,915,000 | 9,710,000 |
| **Subtotal** | **13,724,000** | **17,869,000** | **16,249,000** | **15,930,000** | **16,077,000** | **17,250,000** | **17,432,000** | **18,307,000** | **18,307,000** | **17,584,000** | **168,729,000** |
| **General Improvements** | | | | | | | | | | | |
| Vehicles & Equipment | 961,000 | 501,000 | 501,000 | 501,000 | 501,000 | 501,000 | 500,000 | 500,000 | 500,000 | 500,000 | 5,006,000 |
| Management Information Systems | 1,640,000 | 900,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 6,300,000 |
| Projects | 4.652,000 | 440,000 | 440,000 | 470,000 | 485,000 | 855,000 | 480,000 | 480,000 | 480,000 | 480,000 | 9,962,000 |
| **Subtotal** | **7,253,000** | **1,841,000** | **1,441,000** | **1,471,000** | **1,486,000** | **1,856,000** | **1,480,000** | **1,480,000** | **1,480,000** | **1,480,000** | **21,268,000** |
| **Recycled Water** | | | | | | | | | | | |
| Urban Landscaping | 3,930,000 | 551,000 | 550,000 | 550,000 | 550,000 | 550,000 | 550,000 | 550,000 | 550,000 | 550,000 | 8,881,000 |
| **Subtotal** | **3,930,000** | **551,000** | **550,000** | **550,000** | **550,000** | **550,000** | **550,000** | **550,000** | **550,000** | **550,000** | **8,881,000** |
| **Total** | **32,343,000** | **29,350,000** | **25,571,000** | **25,374,000** | **33,048,000** | **31,441,000** | **33,507,000** | **50,632,000** | **47,002,000** | **49,769,000** | **358,037,000** |

## Potential Future Projects Not Included in 2012 Capital Plan

The projects listed in this CIP are those that are reasonably certain to be undertaken by the District. However, when evaluating project priority and cash flow impacts, consideration must be given to potential projects that are uncertain and not currently included in the plan. If some or all of these potential projects listed below are required to be undertaken, there could be a significant impact on the financial forecasts contained in the plan.

**Table 2 - Potential Projects Not in 2012 Capital Improvement Plan**

| **Description** | Time frame | Estimated total project cost | Estimated probability |
|---|---|---|---|
| Treatment Plant | | | |
| *Greenhouse Gas Reduction* – Regulations are under development that will require significant reductions in greenhouse gas emissions. The appropriate reduction plan may include diversifying our energy portfolio by adding a renewable energy source, such as solar or wind. Alternatively, the requirements may be satisfied by buying carbon dioxide allowances on the open market or shutting down or cogeneration facility. | 2-5 yrs | $15 - $30 million | Medium |
| *Nutrient Removal* – Construct facilities for nitrogen and phosphorus removal to address more stringent receiving water standards. | 10-20 yrs | $70 million | Low |
| *Mercury Removal From Furnace Emission* - Although the 129 Regulations relaxed the Mercury emissions to a level that could be met with the District's current emission control systems, the Bay Area Air Quality District has indicated that it may impose a more stringent emission requirement for mercury which may necessitate the addition of new emission control systems for the furnaces. | 3-6 yrs | $25-35 million | Medium |
| Recycled Water Projects | | | |
| *Martinez Refinery Recycled Water Project* - Construct new treatment and distribution facilities to supply up to 20 MGD to the Shell and Tesoro refineries for cooling tower makeup and boiler feed water. Money for planning activities only is budgeted. | 3-10 yrs | $100 million | Medium |

## CAPITAL IMPROVEMENT REVENUE

Current revenue sources for funding capital improvements have been identified for the four programs of capital improvement projects and are shown in Table 3.

**Table 3 - Capital Improvement Program Revenue Sources**

| PROGRAM | SUBFUND | REVENUE SOURCE |
|---|---|---|
| Treatment Plant | **Expansion -** Additional capacity to serve new customers | ◦ Capacity Fees<br>◦ City of Concord |
| | **Upgrading/Replacement -** Improvement of existing facilities to serve current customers | ◦ Property Taxes(c)<br>◦ City of Concord<br>◦ Sewer Service Charge(d)<br>◦ Debt Financing |
| Collection System(a) | **Expansion -** Additional capacity to serve new customers | ◦ Capacity Fees<br>◦ Pumped Zone Fees<br>◦ Developer Fees |
| | **Upgrading/Replacement -** Improvement of existing facilities to serve current customers | ◦ Property Taxes(c)<br>◦ Sewer Service Charge(d)<br>◦ Debt Financing |
| General Improvements (b) | ---------- | ◦ Property Taxes(c)<br>◦ Sewer Service Charge(d) |
| Recycled Water | ---------- | ◦ Property Taxes(c)<br>◦ City of Concord<br>◦ Sewer Service Charge(d)<br>◦ Customer Revenue<br>◦ Loans(e)<br>◦ Debt Financing<br>◦ 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

## Revenue Sources

Capital Improvement revenue sources include the following:

*Property Tax Revenue*

Beginning in FY 1992-93, the State of California reduced District's historic property tax revenues by 40 percent to help meet the state's educational funding obligations. As a result, property tax revenue that would have been received in the 11 years from FY 1992-93 through FY 2002-03 was reduced by about $38,000,000. The 40 percent decrease in property tax is now considered permanent and is not considered in any projections of future property tax revenues. 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. The State elected to borrow approximately $1 million of our property tax in 2009-10 and this must be repaid with interest by 2012-13.

*Sewer Service Charge Revenue (SSC)*

The Sewer Service Charge (SSC) is the District's only discretionary source of revenue. It has traditionally been used to supplement all other sources of revenue as needed to fund Operations and Maintenance. When the District lost 40 percent of the property tax revenue in 1992-93, it compensated by adding a capital project component to the SSC. Until FY 2000-01, $31 per Residential Unit Equivalent (RUE) of the SSC was for capital projects. In 2000-01, the capital component of the SSC was reduced from $31 per RUE to $15 per RUE. This resulted in a significant shortage of revenue as compared to expenditures in the capital program and Sewer Construction Fund reserves were used to cover the shortfall. In 2001-02, 2002-03, 2003-04 and 2004-05, the capital component of the SSC was gradually increased and more recently it has varied each year, depending on the capital revenue available from other sources and the planned expenditures. Since 2006-07, the capital component has been reduced from $76 to $11 in order to continue to fund operations and maintenance while not raising rates for 2009-10 and 2010-11. The Capital component was raised to $39 in 2011-12 but is reduced to $27 in 2012-13 due to higher O&M reserves required to meet the 10 percent requirement for 2013-14. This increase in reserves is due primarily to a $2.8 million increase in UAAL related to CCCERA assumptions.

*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 areas of investment are United States Treasury Bills and Notes and the Local Agency Investment Fund of the State of California. The weighted average of interest on investments for the sewer construction investment portfolio for 2012-13 is projected to be 0.75 percent. It is anticipated that interest rates will begin to climb again in the future.

*Capacity Fee Revenue/Number of New Connections*

A capacity fee is paid by each new connector to the District. This fee is recalculated each year and represents the cost of buying into the existing assets of the District. Capacity fee revenue projections from new connections have been adjusted downward from the figures reported in the last several years to account for the continuing and worsening downturn in the housing market. Unfortunately, the housing market is difficult to predict and can have a substantial impact on the available revenues for the capital program. The housing market also drives revenue from rates and charges for developer services, and SSCs from new connections. All these revenues are reduced along with capacity fee revenues when the housing market cools. The revenue model assumes that the housing market will not fully recover until FY 2015-16.

*Debt Financing*

The District has on occasion used debt financing to fund projects. 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, $30 million in debt was issued to fund some large, needed one-time projects. In addition, current debt was refinanced to take advantage of the favorable bond interest rates. 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.

## FINANCIAL PRINCIPLES

The District has developed and maintained a capital 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.

## SEWER CONSTRUCTION FUND CASH FLOW

District investments are recorded in the Sewer Construction Fund. Sewer Construction Funds are utilized during the year as the District bank to meet short-term cash flow needs created by the receipt of revenue from the County only twice per year. The minimum balance required to meet cash flow needs over a six month period ranges from $30 to $40 million over the ten year period. Each year a comprehensive Ten-Year Financial Plan, which incorporates both Capital and O&M expense and revenue, is prepared and presented to the Board to inform that year's decisions on sewer service charge rate increases.

Table 4 on the following page contains the ten-year cash flow projection for the CIP and assumes that sewer service charge rates will be raised as needed to fund the plan. Table 5 contains the basic assumptions used to develop the cash flow projection.

**Table 4 - Ten-Year Plan Recommended Scenario: Cash Flow Projection**
**(Rev. 3-22-11)**

# CENTRAL CONTRA COSTA SANITARY DISTRICT
# TEN-YEAR CAPITAL IMPROVEMENT PLAN

| | | ($) thousands | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SEWER CONSTRUCTION FUND** | **FY** | **12-13** | **13-14** | **14-15** | **15-16** | **16-17** | **17-18** | **18-19** | **19-20** | **20-21** | **21-22** |
| **INCOME** | | | | | | | | | | | |
| INTEREST ON INVESTMENTS | | 350 | 361 | 437 | 603 | 826 | 1,002 | 1,399 | 1,942 | 2,395 | 2,790 |
| FACILITIES CAPACITY FEE | | 4,417 | 4,463 | 4,605 | 5,949 | 6,069 | 6,177 | 6,320 | 6,508 | 6,748 | 6,900 |
| PUMPED ZONE FEE | | 637 | 566 | 564 | 715 | 716 | 740 | 530 | 148 | 145 | 140 |
| AD VALOREM TAXES | | 7,534 | 6,501 | 6,534 | 10,114 | 8,550 | 8,785 | 9,384 | 9,790 | 10,217 | 10,637 |
| SEWER SERVICE CHARGES | | 4,430 | 7,089 | 12,093 | 9,194 | 14,344 | 20,273 | 23,902 | 29,331 | 35,207 | 36,235 |
| REIMBURSEMENTS FROM OTHERS: | | | | | | | | | | | |
| CITY OF CONCORD | | 3,833 | 3,148 | 2,638 | 2,754 | 5,412 | 4,490 | 5,383 | 11,678 | 10,670 | 12,396 |
| BOND PROCEEDS | | | | | | | | | | | |
| DEVELOPER FEES AND CHARGES, MISC | | 586 | 600 | 618 | 636 | 655 | 675 | 695 | 716 | 737 | 760 |
| **Subtotal** | | 21,787 | 22,728 | 27,489 | 29,965 | 36,572 | 42,141 | 47,614 | 60,113 | 66,119 | 69,858 |
| **EXPENDITURES** | | | | | | | | | | | |
| TREATMENT PLANT PROGRAM | | 7,436 | 9,225 | 7,590 | 7,916 | 16,404 | 13,332 | 16,366 | 36,360 | 32,957 | 38,402 |
| COLLECTION SYSTEM PROGRAM | | 13,723 | 18,066 | 16,824 | 16,987 | 15,574 | 19,515 | 20,312 | 21,972 | 22,755 | 22,517 |
| GENERAL IMPROVEMENTS PROGRAM | | 7,254 | 1,869 | 1,492 | 1,569 | 1,632 | 2,100 | 1,725 | 1,776 | 1,830 | 1,885 |
| RECYCLED WATER PROGRAM | | 3939 | 559 | 569 | 586 | 604 | 622 | 641 | 660 | 680 | 700 |
| **Subtotal** | | 32,343 | 29,719 | 26,475 | 27,058 | 36,214 | 35,569 | 39,044 | 60,768 | 58,221 | 63,504 |
| **NET INCREASE (DECREASE)** | | (10,556) | (6,991) | 1,014 | 2,907 | 358 | 6,572 | 8,571 | (655) | 7,897 | 6,354 |

**Table 5 - Assumptions Used to Calculate Cash Flow Tables**

| Fiscal Year | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 |
|---|---|---|---|---|---|---|---|---|---|---|
| Interest % | 0.75% | 1.00% | 1.50% | 2.00% | 2.50% | 3.00% | 3.50% | 4.00% | 5.00% | 5.00% |
| Inflation % | 1.0% | 1.5% | 2.0% | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% |
| # of New Connections | 800 | 800 | 800 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| Ad Valorem Tax Escalation* | 0.0% | 0.0% | 0.0% | 1.0% | 1.0% | 2.0% | 3.0% | 3.0% | 3.0% | 3.0% |
| Total Sewer Service Charge (SSC) | $ 371 | $ 409 | $ 447 | $ 485 | $ 521 | $ 557 | $ 593 | $ 629 | $ 665 | $ 701 |
| SSC Capital Component | $ 27 | $ 43 | $ 73 | $ 55 | $ 85 | $ 119 | $ 139 | $ 169 | $ 201 | $ 205 |
| Sewer Service Charge | Assumes sufficient SSC rate increases to fully fund the capital component needed. | | | | | | | | | |

*Debt Service is funded first, any remaining property tax funds Capital.

## COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The CIP is exempt from CEQA because it is a planning study (District Guidelines Section 15262). Projects included in this plan could have construction-related, air quality, water quality, land use, and growth-inducing impacts. The impacts of projects not exempt from CEQA will be addressed in the appropriate CEQA documentation after each project is initiated but prior to project approval.

## SPECIFIC PROJECTS IN THE TEN-YEAR PLAN

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 Capital Improvement Plan assumes that funds will be available to support the plan. These funds come from all the sources of revenue previously discussed. 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 increase SSC revenues or sell bonds to fund this planned program. The plan is funded on a year-by-year basis when the Capital Improvement Budget for the upcoming fiscal year is formally authorized and adopted by the Board. Changes in capital revenue forecasts or changes in recommended expenditures may result in changes to this ten-year plan.

# TREATMENT PLANT PROGRAM

This section is a listing of the projects in the ten-year Capital Improvement Plan (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.

The treatment plant program for the CIP is broken down into four areas: 1) Regulatory Compliance and Safety, 2) One-Time Renovation, 3) Recurring Renovation, and 4) Expansion.

## Regulatory Compliance and Safety

The goals of the Regulatory Compliance 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 optimize energy use and reduce emissions of pollutants to the environment, and meet future regulatory requirement. Budgeted projects to address regulatory requirements include nitrification (ammonia toxicity issues), alternative energy (Green House Gas), and multiple hearth furnaces (MHF) improvements (emissions requirements). The CIP estimate for Regulatory Compliance and Safety projects is $101 million or 63 percent of the Treatment Plant Program budget over the next ten years.

## One-Time Renovation

One-Time Renovation projects address major renovation needs that are well defined and expected to occur infrequently. These projects include Burner Upgrades (Furnace Renovation), Primary Treatment Renovation, Wet & Dry Scrubber Replacement, Pump and Blower Building Seismic Upgrade, Alternative Energy Facilities, Outfall Improvements phase 6, Aeration System Renovations, and Centrifuge & Cake Pump Upgrades. The CIP estimates that one-time renovations will cost approximately $35 million or 22 percent of the total ten-year program budget.

## Recurring Renovation

The goals of the Recurring Renovation Program are to provide for ongoing or future renovation activities. This subprogram provides capital funds for replacement or rehabilitation of aging treatment plant infrastructure. The categories include Equipment Replacement, Piping Renovations and Replacement, Electrical and Instrumentation Replacement, Cathodic Protection System Replacement, and the development of an Asset Management Plan. Projects in these areas will cost approximately $23 million or about 14 percent of the treatment plant program budget over the next ten years.

## 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. There are two wet weather capacity issues that will be addressed, i.e., addition of increased primary treatment capacity and the installation of a new bar screen. Pre-design work will be completed for primary treatment expansion while the design and construction is projected to take place beyond the ten-year CIP window. Projects in the Expansion Program are approximately $.2 million or less than 1 percent of the Treatment Plant Program budget.

## Summary

The Treatment Plant Program of the 2012 Capital Improvement Plan will require approximately $159 million over the next ten years, which represents 44.5 percent of the total CIP budget. The projects proposed in the CIP are required to meet regulatory mandates, reliability needs, safety concerns, and capacity needs.

| **Regulatory Compliance and Safety:** | | | |
|---|---|---|---|
| **Project Title** | **Year** | **Location** | **Description** |
| TP Hazard Identification and Remediation | 2012 -19 | Entire Treatment Plant | This project will remediate hazardous materials within the treatment plant. The purpose is to minimize exposure of District employees to hazardous materials during the course of their work. |
| Standby Effluent Pump Refurbishment – Ph 2 | 2013 | Pump & Blower Building | The effluent pumps have been in operation for many years. As they reach the end of their service life wear components will require replacement. Also, with new energy efficiency regulations motor replacement or other efficiency related work may be required. |
| Alternative Energy Source | 2016 | Solids Conditioning Building | Greenhouse gas (GHG) regulations are expected to have a significant impact on District operations. This project includes evaluation and replacement of the District's existing cogeneration unit with a new more efficient power generation unit or use of another alternate energy source. Replacement of the existing cogeneration unit could provide GHG credits to keep the District under the GHG cap. |
| Soil Remediation | 2018 | Area east of existing aeration tanks | The soil east of 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 at a significant cost. |
| Nitrification | 2020 | 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. |
| Ozone Disinfection | 2021 | Area north of existing aeration tanks | Depending on future regulatory requirements and necessary modifications to the treatment plant an alternative disinfection method may be required. |
| New Solids Handling | 2022 | 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 Hearts 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. |

| One-Time Renovation: | | | |
|---|---|---|---|
| **Project Title** | **Year** | **Location** | **Description** |
| Switchgear Replacement | 2012 thru 2018 | Throughout the Treatment Plant | This project will refurbish older circuit breakers and replace trip units to enhance the reliability of the treatment plant electrical distribution system. |
| Aeration System Renovation | 2013 | Pump and Blower Building | This project will design and construct small electric blowers for the grit chambers and 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. |
| Instrumentation & Control – PLC System Upgrades (Long Term) | 2013 thru 2020 | Throughout the Treatment Plant | This project will identify deficiencies in the electrical, control and instrumentation systems in the treatment plant and rectify the issues. |
| Furnace Burner | 2014 | Solids Conditioning Building | Modifications will be implemented 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 add the ability to co-fire natural and landfill gases for the furnaces. |
| Centrifuge & Cake Pumps Upgrades | 2015 | Solids Conditioning Building | This project will review and implement modifications to improve the reliability and performance of the sludge dewatering system. |
| POB Seismic Upgrades | 2015 | Plant Operations Building | This project will design and construct seismic improvements based upon the recommendations provided in work done under the Treatment Plant Seismic Evaluation Project (DP 7267). The improvements will meet requirements of the latest building codes. |
| Secondary Process Improvements | 2016 | 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. |
| Wet & Dry Scrubber Replacement | 2016 | Solids Conditioning Building | This project will replace the wet and dry scrubbers on each of the furnaces since they are at the end of their useful lives. |
| Laboratory Seismic Upgrade | 2016 | Laboratory | This project will design and construct seismic improvements based upon the recommendations provided in work done under the Treatment Plant Seismic Evaluation Project (DP 7267). The improvements will meet requirements of the latest building codes. |

| One-Time Renovation (Continued): | | | |
|---|---|---|---|
| **Project Title** | **Year** | **Location** | **Description** |
| Warehouse Seismic Upgrade | 2016 | Warehouse/Mechanic Shop | This project will design and construct seismic improvements based upon the recommendations provided in work done under the Treatment Plant Seismic Evaluation Project (DP 7267). The improvements will meet requirements of the latest building codes. |
| SCB Seismic Upgrades | 2021 | Solids Conditioning Building | This project will design and construct seismic improvements based upon the recommendations provided in work done under the Treatment Plant Seismic Evaluation Project (DP 7267). 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. |

| **Recurring Renovation:** | | | |
|---|---|---|---|
| **Project Title** | **Year** | **Location** | **Description** |
| Electrical Cable Replacement – LT | 2013 thru 2022 | Entire Treatment Plant | The objective of this project is to improve the reliability of the plant's electrical distribution system. The Treatment Plant Asset Management Plan Project (DP 7269) is documenting the condition of District facilities and equipment and will be used to recommend cable replacement. |
| TP Facilities Renovation Program – LT | 2013 thru 2022 | Entire Treatment Plant | This project provides the long-term funding for replacement of plant structures, roadways, and other similar components of plant facilities as they deteriorate. |
| Piping Renovation and Replacement - LT | 2013 thru 2022 | 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 Treatment Plan Asset Management Project (DP 7269) is documenting recent renewal and replacement projects as well as nondestructive testing of existing piping systems and will ultimately be used to provide recommendations for additional renewal and replacement needs of other major piping systems. |
| Treatment Plant Protective Coating Renovation - LT | 2016 | Entire Treatment Plant | The Treatment Plant Asset Management Plan Project (DP 7269) is documenting the condition of District facilities and equipment and will be used to recommend needed coating projects. |
| TP Cathodic Protection System Replacement – LT | 2016 thru 2022 | Entire Treatment Plant | The plant's cathodic protection system is a critical component to ensure the longevity of the treatment plant infrastructure. This project provides the long-term maintenance and replacement of the cathodic protection system. |
| TP Equipment Replacement - LT | 2017 thru 2022 | Entire Treatment Plant | Much of the treatment plant's equipment was installed over 30 years ago. This project will 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. |

| **Expansion:** | | | |
|---|---|---|---|
| **Project Title** | **Year** | **Location** | **Description** |
| Bar Screen for Third Wet Well | 2021 | Headworks | This project will install a new bar screen on the third wet well in the headworks facilities. Installing a new automatic bar screen on the third wet well will protect plant treatment facilities, in addition to providing plant operators additional flexibility in routing incoming plant flows. |

## Ten-year Program Estimated Expenditures

| #Project | Title | Start Year | Manage | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Treatment Plant** | | | | | | | | | | | | | | |
| ***1 - Reg. Compliance/Planning/Safety*** | | | | | | | | | | | | | | |
| 7256 | Alternative Energy & Greenhouse | 07/07 | LaBella | 10,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,000 |
| 7287 | TP Master Plan Update | 07/09 | Seitz | 95,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 95,000 |
| 7284 | TP Hazard Identification & | 10/09 | Morales | 75,000 | 75,000 | 75,000 | 100,000 | 100,000 | 100,000 | 250,000 | 0 | 0 | 0 | 775,000 |
| pTP22 | Incinerator Emissions Compliance | 07/11 | Mizutani | 75,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75,000 |
| pTP12 | Standby Effluent Pumps Refurb - ph | 07/11 | Mizutani | 10,000 | 550,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 560,000 |
| pTP21 | Alternative Energy Facilities | 07/11 | Antkowiak | 25,000 | 25,000 | 25,000 | 150,000 | 4,400,000 | 2,400,000 | 0 | 0 | 0 | 0 | 7,025,000 |
| pTP08 | TP Safety Improvements FY 2011- | 07/11 | Antkowiak | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 0 | 0 | 40,000 |
| 7301 | Treatment Plant Planning | 07/11 | Seitz | 230,000 | 240,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 0 | 1,520,000 |
| pTP20 | Nitrification | 01/12 | Antkowiak | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 2,000,000 | 3,000,000 | 15,000,000 | 23,500,000 | 0 | 43,525,000 |
| none | Nitrification - Phase 2 | 07/21 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23,400,000 | 23,400,000 |
| pTP33 | Treatment Plant Soil Remediation | 07/12 | Antkowiak | 25,000 | 25,000 | 1,000 | 1,000 | 50,000 | 500,000 | 7,500,000 | 12,000,000 | 25,000 | 20,000 | 20,147,000 |
| pTP31 | Permitting Study for New Furnace | 07/12 | Antkowiak | 25,000 | 25,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50,000 |
| pTP23 | Treatment Plant Security Upgrade - | 07/12 | Deutsch | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 0 | 0 | 80,000 |
| none | TP Safety Improvements Program | 07/20 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,000 | 5,000 | 10,000 |
| pTP34 | Ozone Disinfection | 07/20 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50,000 | 1,500,000 | 1,550,000 |
| pTP07 | New Solids Handling Facilities | 07/20 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50,000 | 2,000,000 | 2,050,000 |
| none | Future Regulatory Projects | 07/20 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,000 | 25,000 | 30,000 |
| none | Primary Treatment Covers | 07/21 | Hodges | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25,000 | 25,000 |
| ***2 - One-Time Renovation*** | | | | | | | | | | | | | | |
| 7241 | Wet Weather Bypass Improvements | 09/04 | Shima | 10,000 | 10,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20,000 |
| 6169 | Instr & Control - PLC System | 07/06 | McEach | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7272 | Aeration System Renovation | 01/07 | Shima | 100,000 | 1,500,000 | 5,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,605,000 |
| 7255 | Primary Structures Demo | 10/07 | Penny | 5,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,000 |
| 7292 | Switchgear Replacement - ph 2 | 01/10 | Shima | 90,000 | 190,000 | 440,000 | 1,020,000 | 490,000 | 140,000 | 0 | 0 | 0 | 0 | 2,370,000 |
| 7294 | Secondary Process Improvements | 02/10 | Antkowiak | 5,000 | 5,000 | 100,000 | 500,000 | 750,000 | 0 | 0 | 0 | 0 | 0 | 1,360,000 |
| 7297 | Wet and Dry Scrubber Replacement | 07/10 | Hodges | 1,000 | 1,000 | 200,000 | 500,000 | 3,000,000 | 2,800,000 | 0 | 0 | 0 | 0 | 6,502,000 |
| 7285 | Primary Treatment Renovation | 07/10 | Rathunde | 1,000,000 | 5,000,000 | 3,500,000 | 165,000 | 0 | 0 | 0 | 0 | 0 | 0 | 9,665,000 |
| 7289 | POB Seismic Upgrade | 07/10 | Penny | 1,000 | 1,000 | 150,000 | 1,000,000 | 25,000 | 0 | 0 | 0 | 0 | 0 | 1,177,000 |
| 7291 | Pump & Blower Bldg Seismic | 07/10 | Hodges | 3,000,000 | 5,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,005,000 |
| 7295 | Auxiliary Boiler Burner Upgrade | 07/10 | Mizutani | 5,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,000 |
| 7290 | Outfall Improvements, Phase 6 | 01/11 | Shima | 815,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 815,000 |
| 7286 | Centrifuge & Cake Pump Upgrades | 07/11 | Rathunde | 0 | 0 | 280,000 | 720,000 | 2,500,000 | 1,000,000 | 0 | 0 | 0 | 0 | 4,500,000 |
| pTP03 | Plant Cyber Security | 07/11 | Morales | 25,000 | 25,000 | 25,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75,000 |
| pTP35 | Solids Handling Equipment | 07/12 | Antkowiak | 50,000 | 50,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100,000 |
| pTP24 | Instr & Control - PLC System | 07/12 | McEach | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 | 800,000 |

## Ten-year Program Estimated Expenditures

| #Project | Title | Start Year | Manage | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pTP18 | Warehouse Seismic Upgrade | 07/12 | Hodges | 0 | 5,000 | 10,000 | 80,000 | 800,000 | 0 | 0 | 0 | 0 | 0 | 895,000 |
| pTP15 | Furnace Burner | 07/12 | Shima | 50,000 | 50,000 | 800,000 | 400,000 | 0 | 0 | 0 | 0 | 0 | 0 | 1,300,000 |
| pTP19 | Laboratory Seismic Upgrade | 07/12 | Hodges | 0 | 5,000 | 10,000 | 77,000 | 100,000 | 0 | 0 | 0 | 0 | 0 | 192,000 |
| 7302 | Primary Effl Pumps Refurb - ph 2 | 07/12 | Rathunde | 100,000 | 800,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 900,000 |
| pTP36 | SCB Seismic Improvements | 07/21 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200,000 | 200,000 |
| ***3 - Recurring Renovation*** | | | | | | | | | | | | | | |
| 7268 | TP Facilities Renovations | 07/04 | Antkowiak | 12,000 | 12,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24,000 |
| 7269 | TP Asset Management | 12/05 | Lawson | 50,000 | 50,000 | 50,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150,000 |
| 7254 | TP Cathodic Prot Sys Repl | 07/06 | Antkowiak | 5,000 | 5,000 | 10,000 | 10,000 | 0 | 0 | 0 | 0 | 0 | 0 | 30,000 |
| 7265 | TP Equipment Replacement | 07/07 | Antkowiak | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 0 | 0 | 0 | 0 | 0 | 500,000 |
| 7288 | Piping Renovations - ph 6 | 02/10 | Penny | 526,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 526,000 |
| pTP29 | Pavement Renovation | 07/10 | Penny | 5,000 | 5,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 0 | 0 | 310,000 |
| pTP06 | Plant Electrical and Instrumentation | 07/10 | Antkowiak | 25,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25,000 |
| pTP30 | Concrete Renovation | 07/10 | Penny | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 0 | 0 | 0 | 0 | 300,000 |
| pTP32 | Plant Energy Optimization | 07/11 | Hodges | 25,000 | 25,000 | 25,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75,000 |
| 7298 | Piping Renovations Phase 7 | 09/11 | Rathunde | 700,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 700,000 |
| pTP16 | Coating Renovation | 07/12 | Rathunde | 5,000 | 25,000 | 50,000 | 500,000 | 500,000 | 450,000 | 500,000 | 500,000 | 500,000 | 500,000 | 3,530,000 |
| pTP27 | Electrical Cable Replacement - | 07/12 | Antkowiak | 5,000 | 50,000 | 50,000 | 250,000 | 250,000 | 250,000 | 500,000 | 500,000 | 500,000 | 500,000 | 2,855,000 |
| none | Piping Renov and Repl - LT | 07/13 | Antkowiak | 0 | 5,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 8,005,000 |
| none | TP Facilities Renov Pgm - LT | 07/13 | Antkowiak | 0 | 75,000 | 75,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 3,650,000 |
| none | TP Cathodic Prot Sys Repl - LT | 01/17 | Antkowiak | 0 | 0 | 0 | 0 | 20,000 | 200,000 | 200,000 | 200,000 | 0 | 0 | 620,000 |
| none | TP Equipment Replacement - LT | 01/18 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 100,000 | 300,000 | 300,000 | 300,000 | 300,000 | 1,300,000 |
| ***4 - Expansion*** | | | | | | | | | | | | | | |
| none | Bar Screen for Third Wetwell | 07/21 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100,000 | 100,000 |
| | | **Program Total:** | | 7,436,000 | 9,089,000 | 7,331,000 | 7,423,000 | 14,935,000 | 11,785,000 | 14,045,000 | 30,295,000 | 26,665,000 | 30,155,000 | 159,159,000 |
| | | **Report Total:** | | 7,436,000 | 9,089,000 | 7,331,000 | 7,423,000 | 14,935,000 | 11,785,000 | 14,045,000 | 30,295,000 | 26,665,000 | 30,155,000 | 159,159,000 |

# COLLECTION SYSTEM PROGRAM

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 and Urgent

The renovation program goal is to address recurring renovation needs and is budgeted at $124.5 million for the next ten years or 74 percent of the collection system CIP. 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 proceeding within the Plan years at an approximate cost of $10.0 million. This information is being utilized to develop improved estimates of the short and long term recurring 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.

## 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. This subprogram is budgeted at $2.8 million over the next ten years or nearly two percent of the collection system CIP.

## Expansion

As part of the ongoing Collection System Master Plan Update (2010), the District's sewer system hydraulic model was updated; capacity deficiencies were identified and prioritized. Implementation of the full set of recommendations has a projected cost of $31.8 million (2012 dollars) over the ten years or 19 percent of the collection system CIP. Large capacity projects that are 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. Expenditures of $9.6 million are budgeted for pumping stations and force mains over the next ten years, approximately six percent of the total collection system CIP.

At $168.7 million (2012 dollars), the Collection System Program represents approximately 47 percent of the anticipated capital funding needs of the District over the next ten years.

| **Renovation:** | | | |
|---|---|---|---|
| **Project Title** | **Year** | **Location** | **Description** |
| 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. |
| Cathodic Protection System | ongoing | Throughout the collection system | Survey, evaluate and rehabilitate cathodic protection systems throughout the collection system |
| 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 | Urgent projects are included in this category of projects. |
| Mount Diablo Boulevard Main Improvements | 2018 | Mount Diablo Blvd. | Rehabilitate or replace sewers within the Mount Diablo Blvd corridor in Walnut Creek, as identified in the Downtown Walnut Creek Facilities Plan, and complete the necessary sewer improvements. |
| Walnut Creek Civic Center Main Improvements | 2018 | Walnut Creek Civic Center area | Rehabilitate or replace sewers within the Civic Center/Main Street corridor in Walnut Creek, as identified in the Downtown Walnut Creek Facilities Plan, and complete the necessary sewer improvements. |
| North Main Trunk improvements | 2019 | North Main between Civic Drive and Carlback Avenue in Walnut Creek | 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, and complete the necessary sewer improvements. |
| 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, and complete the necessary sewer improvements. |

| Renovation (Continued): | | | |
|---|---|---|---|
| **Project Title** | **Year** | **Location** | **Description** |
| 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 39-inch Old Main Trunk No. 1. |
| TV Inspection Program | ongoing | Throughout the collection system | The work completed under this project provides the data needed to prioritize the renovation program projects. |

| Regulatory Compliance/Planning/Safety: | | | |
|---|---|---|---|
| **Project Title** | **Year** | **Location** | **Description** |
| Manhole Remote Level Monitoring | ongoing | Throughout the collection system | This project will include the 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 | This project will identify, evaluate, and schedule short and long-term sewer improvement projects and provide 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.

| **Expansion:** | | | |
|---|---|---|---|
| **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 Capacity 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. |
| Pleasant Hill Grayson Creek | 2013 | This 12 and 15 inch trunk sewer is a continuation of the Pleasant Hill Road Trunk sewer from the intersection of Pleasant Hill Road and Mercury Way to the Pleasant Hill Relief Interceptor in Taylor Boulevard | Approximately 5,600 feet of 18 and 24-inch trunk sewer to provide capacity relief to the existing trunk. The new line will be constructed in streets and will tie into the Pleasant Hill Relief Interceptor in Ardith Drive |
| Pleasant Hill Road Corridor | 2014 | In Pleasant Hill Road between Mercury Way and near Virginia Hills Drive | Approximately 2,800 feet of the existing trunk sewer with an 18-inch line |
| San Ramon Schedule C, Interceptor – Phase 2 | 2014 | San Ramon, between Norris Canyon Drive and St. James Court | Approximately 2 miles of 36-inch gravity sewer |
| Lancaster Road, Walnut Creek, TR 13-600 | 2015 | In Lancaster Road and Meadow Road | Approximately 5,100 feet of the existing trunk sewer with 15 and 18-inch lines |
| Moraga Way, Orinda TR10-200/300 | 2016 | In El Camino Moraga, Del Rey School, Moraga Way, Orinda | Approximately 3,400 feet of 12 to 15-inch sewers |

| **Expansion (Continued):** | | | |
|---|---|---|---|
| **Project Title** | **Year** | **Location** | **Description** |
| Walnut Blvd, Walnut Creek, TR 29-200 - phase1 | 2019 | In Walnut Boulevard from Homestead Avenue to Norlyn Drive | Approximately 7,000 feet of the existing trunk sewer with 18 to 22-inch sewers |
| Martinez Alhambra Avenue Trunks | 2020 | In Alhambra Avenue from Highway 4 to C Street | Approximately 5,700 feet of the existing trunk sewer with 18 and 21-inch lines |
| Lafayette – Happy Valley Road | 2021 | In Happy Valley Road from Baker to Franklin | Approximately 3200 feet of the existing trunk sewer with 15 and 18-inch lines |
| Walnut Creek –Palmer Road | 2021 | In Palmer Road between Sylvan Road and Hawthorne Drive | Approximately 1000 feet of the existing trunk sewer with 15 inch line |
| A-line Relief Interceptor – phase 2B | 2022 | From Galaxy Way to Willow Pass Road along the bank of Walnut Creek. | Approximately 4,000 feet of new 72-inch RCP |

| **Pumping Stations:** | | |
|---|---|---|
| **Project Title** | **Year** | **Description** |
| Lower Orinda Pumping Station Force Mains | 2017 | The Lower Orinda Pump Station is located in an EBMUD watershed. The existing force mains are quite old and need to be evaluated. This project will evaluate the condition of the existing force mains, implement any needed rehabilitation and may install a third force main for reliability. |
| Orinda Crossroads Pumping Station Force Mains | 2019 | The Orinda Crossroads Pumping Station is located in an EBMUD watershed. The existing force mains are quite old and need to be evaluated. This project will evaluate the condition of the existing force mains and implement any needed rehabilitation. |
| Moraga Pumping Station Force Mains | 2021 | The existing force mains are old and will have been evaluated in a study. The existing force mains are quite old and need to be evaluated. This project will evaluate the condition of the existing force mains and implement any needed rehabilitation. |
| Concord Industrial Pumping Station Replacement | 2022 | This project will evaluate the flows from the North Concord service area and additional flows that may come from the development of the Concord Naval Weapons Center. This information will be utilized to situate a new station in the same or different location. Elimination of the Clyde and Bates Avenue Pumping Stations will also be evaluated. |
| Clyde Parallel Force Main | 2022 | Staff will evaluate the potential to eliminate this station as the Concord Naval Weapons Station is developed. If the station cannot be eliminated, a new parallel force main will be constructed to insure reliable operation of the Clyde Pumping Station. |

## Ten-year Program Estimated Expenditures

| #Project | Title | Start Year | Manage | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Collection System** | | | | | | | | | | | | | | |
| ***1 - Renovation*** | | | | | | | | | | | | | | |
| 5991 | Pleasant Hill Sewer Renovations - | 12/08 | Antkowiak | 200,000 | 1,800,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,000,000 |
| 5990 | Lafayette Sewer Renovation - ph 7 | 07/09 | Mestetsk | 10,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,000 |
| 8401 | Walnut Creek Sewer Renovations - | 07/09 | Antkowiak | 1,800,000 | 1,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,801,000 |
| 5976 | Diablo Renovations - ph 2 | 08/09 | Antkowiak | 300,000 | 2,000,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,300,000 |
| pCS99 | Watershed 44 Creek Xing | 01/10 | Antkowiak | 81,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81,000 |
| 5999 | CIPP Blanket Contract | 07/10 | Antkowiak | 10,000 | 100,000 | 100,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 210,000 |
| 8404 | Lafayette Sewer Renovation - ph 8 | 07/10 | Antkowiak | 1,800,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,800,000 |
| 8405 | South Main/I-680 Martinez Trunk | 07/10 | Mestetsk | 2,000,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,000,000 |
| 5948 | TV Inspection Program - ph 2 | 07/10 | Rozul | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 1,000,000 | 0 | 0 | 8,000,000 |
| 5982 | Pipeburst Blanket Contract | 07/10 | Antkowiak | 100,000 | 100,000 | 100,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300,000 |
| 5955 | Suspended Pipe Support | 07/10 | Antkowiak | 100,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100,000 |
| 5973 | North Orinda Sewer Renovations - | 08/10 | Mestetsk | 1,806,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,806,000 |
| pCS16 | Collection System Renovation | 07/12 | Antkowiak | 100,000 | 100,000 | 1,000,000 | 2,500,000 | 1,600,000 | 3,300,000 | 3,200,000 | 4,300,000 | 10,500,000 | 9,850,000 | 36,450,000 |
| pCS05 | Cathodic Protection System | 07/12 | Antkowiak | 200,000 | 200,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 1,200,000 |
| pCS32 | Pleasant Hill Sewer Renovations - | 07/12 | Antkowiak | 10,000 | 250,000 | 1,800,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,060,000 |
| pCS26 | Martinez Sewer Renovations Phase 4 | 07/12 | Antkowiak | 10,000 | 200,000 | 1,800,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,010,000 |
| pCS35 | Walnut Creek Sewer Renovations - | 07/12 | Antkowiak | 229,000 | 1,800,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,029,000 |
| none | Collection System Urgent Projects - | 07/12 | Antkowiak | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 500,000 |
| pCS37 | North Orinda Sewer Renovations - | 07/12 | Antkowiak | 264,000 | 1,800,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,064,000 |
| pCS22 | Concrete Pipe Renovation Program | 07/12 | Antkowiak | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 10,000 |
| pCS36 | Lafayette Sewer Renovations - ph 9 | 07/12 | Antkowiak | 250,000 | 1,800,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,050,000 |
| none | North Orinda Sewer Renovations - | 07/13 | Antkowiak | 0 | 250,000 | 1,800,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,050,000 |
| none | Walnut Creek Sewer Renovations - | 07/13 | Antkowiak | 0 | 250,000 | 1,800,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,050,000 |
| none | North Orinda Sewer Renovations - | 07/14 | Antkowiak | 0 | 0 | 200,000 | 1,900,000 | 0 | 0 | 0 | 0 | 0 | 0 | 2,100,000 |
| none | Pleasant Hill Sewer Renovations - | 07/14 | Antkowiak | 0 | 0 | 250,000 | 2,000,000 | 0 | 0 | 0 | 0 | 0 | 0 | 2,250,000 |
| none | Lafayette Sewer Renovations - ph | 07/14 | Antkowiak | 0 | 0 | 250,000 | 2,000,000 | 0 | 0 | 0 | 0 | 0 | 0 | 2,250,000 |
| none | Walnut Creek Sewer Renovations - | 07/14 | Antkowiak | 0 | 0 | 250,000 | 2,000,000 | 0 | 0 | 0 | 0 | 0 | 0 | 2,250,000 |
| none | Walnut Creek Sewer Renovations - | 07/15 | Antkowiak | 0 | 0 | 0 | 250,000 | 2,100,000 | 0 | 0 | 0 | 0 | 0 | 2,350,000 |
| none | Diablo Renovations - ph 3 | 07/15 | Antkowiak | 0 | 0 | 0 | 250,000 | 2,100,000 | 0 | 0 | 0 | 0 | 0 | 2,350,000 |
| none | Lafayette Sewer Renovations - ph | 07/15 | Antkowiak | 0 | 0 | 0 | 250,000 | 2,100,000 | 0 | 0 | 0 | 0 | 0 | 2,350,000 |
| none | South Orinda Sewer Renovations - | 07/15 | Antkowiak | 0 | 0 | 0 | 250,000 | 2,100,000 | 0 | 0 | 0 | 0 | 0 | 2,350,000 |
| none | South Orinda Sewer Renovations - | 07/16 | Antkowiak | 0 | 0 | 0 | 0 | 250,000 | 2,100,000 | 0 | 0 | 0 | 0 | 2,350,000 |
| none | Martinez Sewer Renovations - ph 5 | 07/16 | Antkowiak | 0 | 0 | 0 | 0 | 250,000 | 2,100,000 | 0 | 0 | 0 | 0 | 2,350,000 |
| none | Walnut Creek Sewer Renovations - | 07/16 | Antkowiak | 0 | 0 | 0 | 0 | 250,000 | 2,100,000 | 0 | 0 | 0 | 0 | 2,350,000 |
| none | Lafayette Sewer Renovations - ph | 07/16 | Antkowiak | 0 | 0 | 0 | 0 | 250,000 | 2,100,000 | 0 | 0 | 0 | 0 | 2,350,000 |

## Ten-year Program Estimated Expenditures

| #Project | Title | Start Year | Manage | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pCS23 | Walnut Creek Civic Center Main | 07/17 | Mestetsk | 0 | 0 | 0 | 0 | 0 | 200,000 | 1,250,000 | 0 | 0 | 0 | 1,450,000 |
| pCS06 | Mount Diablo Blvd Main | 07/17 | Mestetsk | 0 | 0 | 0 | 0 | 0 | 213,000 | 1,500,000 | 0 | 0 | 0 | 1,713,000 |
| none | South Orinda Sewer Renovations - | 07/17 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 250,000 | 2,100,000 | 0 | 0 | 0 | 2,350,000 |
| none | Lafayette Sewer Renovations - ph | 07/17 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 250,000 | 2,100,000 | 0 | 0 | 0 | 2,350,000 |
| none | Walnut Creek Sewer Renovations - | 07/17 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 280,000 | 2,100,000 | 0 | 0 | 0 | 2,380,000 |
| none | Walnut Creek Sewer Renovations - | 07/18 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 300,000 | 2,100,000 | 0 | 0 | 2,400,000 |
| none | North Main Trunk Improvements | 07/18 | Mestetsk | 0 | 0 | 0 | 0 | 0 | 0 | 300,000 | 1,700,000 | 0 | 0 | 2,000,000 |
| none | Locust Street Improvements | 07/18 | Mestetsk | 0 | 0 | 0 | 0 | 0 | 0 | 450,000 | 2,600,000 | 0 | 0 | 3,050,000 |
| none | Walnut Creek Sewer Renovations - | 07/19 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300,000 | 2,100,000 | 0 | 2,400,000 |
| pCS11 | TV Inspection Program - Phase 3 | 07/20 | Pilecki | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,000,000 | 1,000,000 | 2,000,000 |
| none | A-Line Relief-39 Inch Rehab | 08/20 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100,000 | 1,829,000 | 1,929,000 |
| ***2 - Reg. Compliance/Planning/Safety*** | | | | | | | | | | | | | | |
| 5965 | Collection System Planning | 07/06 | Waples | 170,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 170,000 |
| 5993 | Forcemain Assessment | 07/09 | Waples | 14,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14,000 |
| 5962 | Manhole Remote Level Monitoring | 07/09 | Wenslaw | 100,000 | 100,000 | 100,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300,000 |
| 5997 | CNWS Facility Plan | 07/10 | Waples | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| pCS03 | Collection System Modeling | 07/12 | Waples | 100,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100,000 |
| none | CS Planning - Long Term | 07/13 | Waples | 0 | 170,000 | 170,000 | 170,000 | 170,000 | 170,000 | 170,000 | 170,000 | 170,000 | 170,000 | 1,530,000 |
| none | Manhole Remote Level Monitoring - | 07/15 | Rhoads | 0 | 0 | 0 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 0 | 0 | 500,000 |
| ***3 - Expansion*** | | | | | | | | | | | | | | |
| 5967 | A-Line Easement Acquisition - ph 2 | 07/06 | Gronlun | 9,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9,000 |
| 5937 | Alhambra Vly Assmt Dist | 11/07 | Leavitt | 3,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,000 |
| pCS33 | Trunk Sewer Expansion Program | 07/09 | Rozul | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 0 | 0 | 0 | 7,000 |
| 6002 | Pleasant Hill Grayson Creek | 07/11 | Pilecki | 500,000 | 2,600,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,100,000 |
| 8402 | Contractual Assessment Districts | 07/11 | Miyamot | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 0 | 4,500,000 |
| pCS17 | Development Sewerage - Capital | 07/12 | Miyamot | 681,000 | 681,000 | 800,000 | 800,000 | 800,000 | 800,000 | 800,000 | 800,000 | 800,000 | 800,000 | 7,762,000 |
| pCS38 | Pleasant Hill Road Corridor | 07/13 | Rozul | 0 | 235,000 | 965,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,200,000 |
| pCS09 | San Ramon Sched C Interceptor - | 07/13 | Mestetsk | 0 | 450,000 | 2,850,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,300,000 |
| pCS08 | Lancaster Rd WC, Tr 13-600 | 07/14 | Rozul | 0 | 0 | 227,000 | 1,173,000 | 0 | 0 | 0 | 0 | 0 | 0 | 1,400,000 |
| pCS20 | Moraga Way Orinda, Tr 10-200/300 | 07/15 | Rozul | 0 | 0 | 0 | 500,000 | 2,100,000 | 0 | 0 | 0 | 0 | 0 | 2,600,000 |
| none | Walnut Creek-Walnut Blvd Corridor- | 07/18 | Rozul | 0 | 0 | 0 | 0 | 0 | 0 | 200,000 | 1,700,000 | 0 | 0 | 1,900,000 |
| none | Martinez Alhambra Avenue Trunks | 07/18 | Rozul | 0 | 0 | 0 | 0 | 0 | 0 | 600,000 | 1,250,000 | 2,050,000 | 50,000 | 3,950,000 |
| pCS18 | Trunk Sewer Expansion Program - LT | 07/19 | Pilecki | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,000 | 1,000 | 1,000 | 3,000 |
| none | Lafayette - Happy Valley Road | 07/20 | Rozul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200,000 | 918,000 | 1,118,000 |
| pCS10 | Walnut Creek - Palmer Road | 07/20 | Pilecki | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50,000 | 300,000 | 350,000 |
| none | A-Line-Phase 2B | 07/20 | Rozul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50,000 | 100,000 | 150,000 |
| none | Contractual Assessment Districts - | 07/21 | Leavitt | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 500,000 | 500,000 |

## Ten-year Program Estimated Expenditures

| #Project Title | | Start Year | Manage | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***4 - Pumping Stations*** | | | | | | | | | | | | | | |
| 5941 | PS Equip & Piping Repl | 07/07 | Rhoads | 75,000 | 75,000 | 75,000 | 75,000 | 75,000 | 0 | 0 | 0 | 0 | 0 | 375,000 |
| 8407 | Martinez Bypass Pump | 04/10 | Antkowiak | 5,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,000 |
| 5995 | San Ramon Bypass Pump | 07/10 | Antkowiak | 200,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200,000 |
| pCS31 | Pump Station Hazard Identification | 12/10 | Antkowiak | 20,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20,000 |
| 8403 | Buchanan South PS Replacement | 02/11 | Miyamot | 400,000 | 400,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 800,000 |
| 6003 | San Ramon Pumping Station | 05/11 | Rathunde | 250,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250,000 |
| 8406 | Pump Station Safety Improvements | 07/11 | Rhoads | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 | 0 | 540,000 |
| pCS19 | Pumping Station Minor Upgrades | 07/11 | Mestetsk | 25,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25,000 |
| pCS13 | PS SCADA O&M Manual | 07/11 | Rhoads | 10,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,000 |
| pCS29 | Fairview / Maltby Upgrades | 03/12 | Antkowiak | 50,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50,000 |
| 8408 | Pumping Stations Master Plan | 07/12 | Waples | 80,000 | 70,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150,000 |
| pCS28 | Flush Kleen Pumping Station | 07/12 | Antkowiak | 50,000 | 250,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300,000 |
| pCS25 | SCADA Master Plan | 07/12 | Antkowiak | 25,000 | 25,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50,000 |
| pCS27 | Moraga PS Grinder | 07/12 | Antkowiak | 50,000 | 350,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 400,000 |
| pCS34 | Misc. Force Main Improvements | 07/12 | Antkowiak | 25,000 | 200,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 225,000 |
| pCS24 | Lower Orinda PS Force Main | 07/16 | Antkowiak | 0 | 0 | 0 | 0 | 120,000 | 1,500,000 | 0 | 0 | 0 | 0 | 1,620,000 |
| none | PS Equip & Piping Repl - LT | 01/18 | Rhoads | 0 | 0 | 0 | 0 | 0 | 75,000 | 75,000 | 75,000 | 75,000 | 75,000 | 375,000 |
| none | Buchanan North PS Upgrades | 07/18 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 75,000 | 250,000 | 0 | 0 | 325,000 |
| pCS39 | Orinda Crossroads PS Force Main | 07/18 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 400,000 | 1,200,000 | 0 | 0 | 1,600,000 |
| none | Bates Blvd PS Upgrades | 07/19 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50,000 | 250,000 | 0 | 300,000 |
| none | Moraga Pumping Station Force Main | 07/20 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250,000 | 1,400,000 | 1,650,000 |
| none | Concord Industrial Pumping Station | 07/21 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 280,000 | 280,000 |
| none | Clyde Parallel Force Main | 07/21 | Antkowiak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100,000 | 100,000 |
| none | Pump Station Safety Improvements | 07/21 | Rhoads | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60,000 | 60,000 |
| | | **Program Total:** | | 13,724,000 | 17,869,000 | 16,249,000 | 15,930,000 | 16,077,000 | 17,250,000 | 17,432,000 | 18,307,000 | 18,307,000 | 17,584,000 | 168,729,000 |
| | | **Report Total:** | | 13,724,000 | 17,869,000 | 16,249,000 | 15,930,000 | 16,077,000 | 17,250,000 | 17,432,000 | 18,307,000 | 18,307,000 | 17,584,000 | 168,729,000 |

## GENERAL IMPROVEMENTS PROGRAM

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; preparation of the CIB/CIP each year; and easement acquisition. At $21.3 million, the General Improvements Program represents about six percent of the total 2012 ten-year Capital Improvement Plan.

The focus of General Improvements Program over the next ten years will be for the equipment budget, improvements in the District's management information systems, renovation of the District Headquarters Office Building in Martinez, and seismic upgrades to various District buildings.

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. The General Improvements Program expenditures have been increased to address these planned building renovations.

## GENERAL IMPROVEMENTS PROGRAM PROJECTS IN THE 2012 CAPITAL IMPROVEMENT PLAN

| Project Title | Year | |
|---|---|---|
| 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. |

## Ten-year Program Estimated Expenditures

| #Project | Title | Start Year | Manage | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Improvements** | | | | | | | | | | | | | | |
| ***1 - Vehicles & Equipment*** | | | | | | | | | | | | | | |
| 9999 | Cap Proj Clearing | 07/08 | Vassallo | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 0 | 0 | 0 | 0 | 6,000 |
| pGI03 | Vehicles and Equipment Acquisition | 07/12 | Vassallo | 960,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 5,000,000 |
| ***2 - Management Information Systems*** | | | | | | | | | | | | | | |
| 8195 | Information Technology | 07/04 | Li | 1,095,000 | 500,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,100,000 |
| 8227 | GDI - Treatment Plant | 07/08 | Pilecki | 200,000 | 300,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 600,000 |
| 8232 | GDI-SMMS Replacement | 07/10 | Knight | 345,000 | 245,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 600,000 |
| none | Information Technology | 07/14 | Greenaw | 0 | 0 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 4,000,000 |
| ***3 - Projects*** | | | | | | | | | | | | | | |
| 8210 | Kiewit Clean Fill Operation | 09/04 | Musgrav | 60,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60,000 |
| 8217 | Capital Improvement Plan and | 07/06 | Millier | 90,000 | 110,000 | 110,000 | 110,000 | 0 | 0 | 0 | 0 | 0 | 0 | 420,000 |
| 8219 | HOB Improvements | 07/06 | Musgrav | 1,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,000 |
| 8221 | POD Office Imprvs | 10/06 | Musgrav | 75,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75,000 |
| 8207 | General Security Access | 07/07 | Deutsch | 15,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15,000 |
| 8223 | District Property Safety Improvements | 07/07 | Deutsch | 80,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80,000 |
| 8224 | Rental Property Improvements | 07/07 | Musgrav | 30,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30,000 |
| 8225 | Imhoff Triangle Development | 12/07 | Musgrav | 10,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,000 |
| 8226 | Seismic Improvements for HOB | 07/08 | Hodges | 4,500,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,500,000 |
| 8229 | Martinez Easements | 08/09 | Hernand | 31,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31,000 |
| 8228 | District Easements | 01/10 | Seitz | 100,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100,000 |
| 8231 | Rental Property Seismic | 02/10 | Hodges | 250,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250,000 |
| 8230 | Capital Legal Services - 2010 to | 07/10 | Leavitt | 70,000 | 70,000 | 70,000 | 70,000 | 70,000 | 70,000 | 0 | 0 | 0 | 0 | 420,000 |
| pGI06 | CSOD Facilities Improvements | 01/12 | Rozul | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 50,000 | 50,000 | 50,000 | 50,000 | 0 | 350,000 |
| pGI04 | HOB Improvements - LT | 07/12 | Musgrav | 10,000 | 50,000 | 50,000 | 50,000 | 50,000 | 95,000 | 95,000 | 95,000 | 95,000 | 95,000 | 685,000 |
| pGI05 | POD Office Improvements - LT | 07/13 | Musgrav | 0 | 75,000 | 75,000 | 75,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 525,000 |
| none | District Easements - LT | 01/14 | Gronlun | 0 | 75,000 | 75,000 | 75,000 | 75,000 | 75,000 | 75,000 | 75,000 | 75,000 | 75,000 | 675,000 |
| none | Kiewit, DP Safety, Gen Sec, Rental, | 01/14 | Musgrav | 0 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 270,000 |
| none | CSO Vehicle Maint Bldg | 07/15 | Berger | 0 | 0 | 0 | 30,000 | 70,000 | 375,000 | 0 | 0 | 0 | 0 | 475,000 |
| none | Capital Improvement Plan and | 01/17 | Millier | 0 | 0 | 0 | 0 | 110,000 | 110,000 | 110,000 | 110,000 | 110,000 | 110,000 | 660,000 |
| none | Capital Legal Services - LT | 07/18 | Leavitt | 0 | 0 | 0 | 0 | 0 | 0 | 70,000 | 70,000 | 70,000 | 70,000 | 280,000 |
| none | CSOD Facilities Improvements - LT | 07/21 | Rozul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50,000 | 50,000 |
| | | | **Program Total:** | 7,253,000 | 1,841,000 | 1,441,000 | 1,471,000 | 1,486,000 | 1,856,000 | 1,480,000 | 1,480,000 | 1,480,000 | 1,480,000 | 21,268,000 |
| | | | **Report Total:** | 7,253,000 | 1,841,000 | 1,441,000 | 1,471,000 | 1,486,000 | 1,856,000 | 1,480,000 | 1,480,000 | 1,480,000 | 1,480,000 | 21,268,000 |

## RECYCLED WATER PROGRAM

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 recently 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.

At $8.8 million, the Recycled Water Program represents about 2.5 percent of the Capital Improvement Plan expenditures over the next ten years.

## Ten-year Program Estimated Expenditures

| #Project | Title | Start Year | Manager | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Recycled Water** | | | | | | | | | | | | | | |
| ***1 - Urban Landscaping*** | | | | | | | | | | | | | | |
| 7261 | REW - Cathodic Prot Sys Repl | 07/06 | Antkowiak | 5,000 | 5,000 | 5,000 | 5,000 | 0 | 0 | 0 | 0 | 0 | 0 | 20,000 |
| 7259 | Recycled Water Planning | 01/08 | Berger | 105,000 | 105,000 | 105,000 | 63,000 | 158,000 | 0 | 0 | 0 | 0 | 0 | 536,000 |
| 7279 | Concord Naval Weapons REW | 07/10 | Berger | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 0 | 0 | 0 | 35,000 |
| 7299 | Concord Landscape Project | 07/11 | Gronlun | 3,300,000 | 200,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,500,000 |
| 7300 | Refinery Recycled Water Project | 07/11 | Berger | 100,000 | 100,000 | 100,000 | 100,000 | 0 | 0 | 0 | 0 | 0 | 0 | 400,000 |
| 7303 | REW Line to Conco & Maltby PS | 03/12 | Morales | 100,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100,000 |
| pRW03 | Zone 1 Recycled Water - ph 1C - LT | 07/12 | Berger | 315,000 | 136,000 | 335,000 | 335,000 | 340,000 | 340,000 | 240,000 | 340,000 | 355,000 | 355,000 | 3,091,000 |
| none | Recycled Water Treatment Facilities | 07/15 | Than | 0 | 0 | 0 | 42,000 | 42,000 | 60,000 | 160,000 | 0 | 0 | 0 | 304,000 |
| none | RW - Cathodic Prot Sys Repl LT | 01/17 | Antkowiak | 0 | 0 | 0 | 0 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 | 30,000 |
| none | Recycled Water Planning - phase | 07/17 | Berger | 0 | 0 | 0 | 0 | 0 | 140,000 | 140,000 | 205,000 | 190,000 | 190,000 | 865,000 |
| | | **Program Total:** | | 3,930,000 | 551,000 | 550,000 | 550,000 | 550,000 | 550,000 | 550,000 | 550,000 | 550,000 | 550,000 | 8,881,000 |
| | | **Report Total:** | | 3,930,000 | 551,000 | 550,000 | 550,000 | 550,000 | 550,000 | 550,000 | 550,000 | 550,000 | 550,000 | 8,881,000 |

## RECYCLED WATER PROGRAM PROJECTS IN THE 2012 CAPITAL IMPROVEMENT PLAN

| **Project Title** | **Year** | |
|---|---|---|
| Recycled Water – Pleasant Hill – Phase 1C | 2013 | This project is a continuation of Pleasant Hill Phase 1B and consists of connecting the remaining Zone 1 recycled water customers identified in the project agreement with CCWD and the District's 2001 Zone 1 Implementation Plan. |
| Recycled Water Treatment Facilities Improvements | 2016 | This project would investigate and implement improvements to the District's Recycled Water Treatment Facilities. |