CAPITAL IMPROVEMENT PROGRAM

Ten Year Plan for Fiscal Years Ending 2018 through 2027 and Two Year Budget for Fiscal Years Ending 2018 and 2019
Capital Improvement Program

10 Year Plan
For Fiscal Years Ending 2018 through 2027

&

2 Year Budget
For Fiscal Years Ending 2018 and 2019

Adopted by Board Resolution No. 29-17 on June 6, 2017
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Chapter 1: Executive Summary

DISTRICT MISSION

The mission of the Dublin San Ramon Services District (“District” or “DSRSD”) is “to provide reliable, sustainable, water, wastewater, and recycled water services safely, efficiently and responsibly.”

DSRSD provides potable water, recycled water, and wastewater services for portions of the Livermore-Amador Valley and San Ramon Valley in the Counties of Alameda and Contra Costa. Specifically, the District provides:

- Water and recycled water distribution within the city of Dublin and to the Dougherty Valley portion of the city of San Ramon
- Wastewater collection, treatment and disposal for the city of Dublin and the southern portion of city of San Ramon in the I-680 corridor
- Wholesale recycled water treatment for Dublin San Ramon Services District – East Bay Municipal Utility District Recycled Water Authority (DERWA) and the city of Pleasanton
- Contract operation of DERWA facilities and the backbone transmission network
- Wastewater treatment and disposal, through contract, to the city of Pleasanton
- Contract operation of Livermore Amador Valley Water Management Authority (LAVWMA) facilities.

CAPITAL IMPROVEMENT PROGRAM BUDGET AND PLAN

The Capital Improvement Program (CIP) is integral to the achievement of the District’s mission and implementation of the strategic plan. Many of the strategic plan goals required to carry the mission are accomplished through the CIP.

The District’s CIP defines the projects to:

- Protect human health and the environment
- Maintain and rehabilitate existing assets
- Respond to regulatory requirements
- Accommodate planned future growth

The CIP consists of the Ten-Year Capital Improvement Plan (CIP Ten-Year Plan) and the Two-Year Capital Improvement Budget (CIP Two-Year Budget). The CIP Ten-Year Plan guides long-range policy and is also used to:

- Identify, prioritize, and schedule capital projects for the ten-year period
- Project the revenue and expenditures and resultant working capital in the District’s capital expansion and replacement funds

The first two years of expenditures in the CIP Ten-Year Plan comprise the District’s CIP Two-Year Budget. By adopting the CIP Two-Year Budget, the Board:

- Authorizes the initiation of project expenditures in either fiscal year 2018 or 2019
- Authorizes total budgets for the individual capital projects
- Establishes the maximum expenditures from each fund for fiscal years 2018 and 2019
Capital Replacement and Expansion Funds

The District has three business enterprises: local wastewater collection, regional wastewater treatment (resource recovery) and water. Each business has four funds: enterprise, rate stabilization, replacement and expansion. The Capital Improvement Program outlines the capital expenditures planned in the replacement and expansion funds.

Local Wastewater Replacement (Fund 210) – The funding source to replace and improve local sewer facilities to handle existing wastewater flows. Facilities include trunk sewer lines, lift stations, and related appurtenances that transfer wastewater from the point of origin to the regional wastewater treatment plant.

Local Wastewater Expansion (Fund 220) – The funding source to expand or add local sewer facilities to accommodate increased wastewater flows from new development.

Regional Wastewater Replacement (Fund 310) – The funding source to replace and improve the regional wastewater treatment plant to process existing wastewater flows before further treatment for recycled water or transit through the LAVWMA pipeline to the San Francisco Bay for disposal.

Regional Wastewater Expansion (Fund 320) – The funding source to expand or add to the regional wastewater treatment plant and related appurtenances that process future wastewater flows.

Water Replacement (Fund 610) – The funding source to replace and improve facilities to treat recycled water, as well as the pipelines, pump stations, reservoirs, and related appurtenances to distribute potable water from the Zone 7 turnouts to the customers and recycled water from the DERWA turnouts to the recycled water customers.

Water Expansion (Fund 620) – The funding source to expand or add facilities to treat recycled water and to distribute potable and recycled water.

A CIP project can have more than one funding source depending on the project scope. The fund split for multi-funded projects are determined based on the Board’s Project Cost Allocation Policy.

Capital Improvement Program Expenditures

The CIP Ten-Year Plan for FYEs 2018 through 2027 includes 108 projects and programs totaling $175.8 million. The CIP Two-Year Budget includes 64 projects and programs totaling $66.3 million. A summary of CIP expenditures by fund over the ten-year plan period is provided in Table 1 and shown graphically in Figure 1. Individual CIP project expenditures by fund are provided in Appendix A. Table 2 provides a summary of CIP expenditures over the 2-year CIP budget for each fund grouped by business enterprise. All expenditures are provided in current dollars.

Capital Fund Balances

This CIP include fund working capital graphs for the ten-year term of the plan in Chapter 2. As revenues and expenditures change from year to year, the resulting fund working capital for each fund varies. Based on planned revenues and expenditures, all capital funds are anticipated to remain at or above the fund reserve minimums as further discussed in Chapter 2.
Table 1. Ten-Year CIP Plan expenditures by fund (in $1000’s)

<table>
<thead>
<tr>
<th>Fund</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
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<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
</tbody>
</table>
Figure 1. Ten-Year CIP Plan Expenditures by Fund (in $1000’s)
HIGHLIGHTED PROJECTS

Dublin Trunk Sewer Rehabilitation (CIP 16-S021). This project will rehabilitate the Dublin trunk sewer in Village Parkway from Tamarack Drive south to Clark Ave, then from Clark Ave under Highway 580 to Commerce Circle in Pleasanton. The project also includes rehabilitation of the sewer from the intersection of the Dublin and Camp Parks trunk sewers to the wastewater treatment plant entrance. The Dublin trunk sewer was installed in 1960 and 1961. As part of the asset management program for the collection system, a large diameter sewer inspection project evaluating the condition of collection system trunk lines was completed in late 2013. The sewer showed significant deterioration and exposed reinforcing steel in locations. This project’s total estimated cost is $6,665,000.

WWTP Anaerobic Digester No. 4 (CIP 07-3203). The 90% design of a fourth digester was completed in 2010. However, with the economic downturn and because the inflows to the wastewater treatment plant have not increased over the past few years, the project was postponed. The digesters decompose and stabilize the process volatile solids, reduce the solids volume, and eliminate pathogenic organisms. With all three digesters in service, there is sufficient digester capacity to accommodate the loading. However, digesters need to be taken out of service every 4 to 5 years for cleaning. The recently completed Wastewater Treatment Plant and Biosolids Master Plan identified that this project needs to be completed immediately in order to keep up with current solids loading rates. Without adequate digestion, increased volatile solids will enter the facultative sludge lagoons which could result in odor problems. The purpose of this project is to construct anaerobic digester No. 4 in approximately the same size and volume as digester No. 3 to provide adequate reliability and redundancy to this critical process. This project also includes the design of a fats, oils and grease (FOG) receiving
station. There are potential benefits to the community, the environment, and the District in receiving FOG for digestion. FOG digestion can provide a cost effective and environmentally superior method for waste haulers to dispose of the FOG, generate revenue to the District through tipping fees, increase gas production and improve the solids destruction capability of the digestion process. This project’s total estimated cost is $13,131,000.

**Primary Sedimentation Expansion and Improvements (17-P004).** This project will improve primary treatment capacity at the wastewater treatment plant. Currently, there are four primary sedimentation basins at the plant that are performing below industry standards, which puts added burden on the downstream treatment process. Studies completed during the Wastewater Treatment Plant and Biosolids Master Plan update indicate that they may be operating below the industry standard. The project will add at least one new primary treatment basin, or potentially two. The District may also consider adding baffles to the new and existing primaries to increase treatment efficiency. Improved treatment efficiency will ease the loading on downstream treatment, reducing air needed for aeration, and improve the secondary process. Overall turbidity will be reduced in the effluent leaving the plant. An added bonus, solids that are captured in the primary process, once digested, are easily converted to biogas, and will increase overall digester gas production, which will offset natural gas currently used in the cogeneration engines. This project’s total estimated cost is $10,000,000.

**Biosolids Dewatering Facility (CIP 18-P013).** The District operates six facultative sludge lagoons (FSL) to stabilize digested sludge from the wastewater treatment plant and a 55-acre dedicated land disposal (DLD) site where the biosolids residuals are tilled into the soil. The Wastewater Treatment Plant and Biosolids Master Plan evaluated the current method of biosolids handling and disposal. The master plan confirmed the current FSL/DLD operation has the lowest capital and operating costs for biosolids disposal and recommended continuing the current operation. The DLD is hydraulically limited, the water content of the biosolids will make the field too wet and the district cannot dispose the biosolids at the rate at which they are generated, resulting in an accumulation of biosolids in the FSLs. The Master Plan recommended the District begin to investigate a small scaleable dewatering system to handle a portion of the biosolids deposited in the FSL. The dewatered biosolids may be deposited at the DLD, or they may be hauled to another location for disposal. The current two-year budget includes $2,500,000 for the smaller pilot facility with the remaining budget in future years. This project’s total estimated cost is $16,095,000. In an effort to diversify future disposal options, the District is participating in the Bay Area Biosolids to Energy Project (BAB2E). BAB2E continues to evaluate technologies that can potentially harvest the energy locked in biosolids and reclaim elements of value, while reducing the volume of the residuals. Should a viable alternative come along in the future, the District may choose to pursue it at that time.
Wet Weather Flow Capacity and Chlorine Contact Tank Dewatering (CIP 14-P005). This project will improve the wet weather flow capacity of the wastewater treatment plant secondary system. The current max flow rate that can be achieved at the treatment plant without diverting the holding basins is approximately 38 mgd. At this flow rate, the secondary clarifiers back up and become flooded. The condition has been studied, and the “bottleneck” is at the junction box that feeds water from the secondary effluent line to the chlorine contact tank. The project will remove a concrete wall and add a weir within the junction box to allow secondary effluent to flow more freely to the chlorine contact tank during wet weather events. This improvement will allow up to 46 mgd to flow through the structure. This project’s total estimated cost is $507,000.

Reservoir 10A (17-W003). This project will replace the existing 3.0 million gallon reservoir with a new 4.1 million gallon reservoir. Existing Reservoir 10A was constructed in the 1940s as an open cut reservoir as part of the Camp Parks water system. It currently serves Zone 1 in central Dublin, however, the bottom elevation is about 15 feet above the rest of the zone’s hydraulic grade line, creating operational difficulties. The recently approved 2016 Water System Master Plan identified a storage deficiency of 1.1 million gallons within Zone 1. The master plan reviewed potential sites to construct a new tank to fill the deficiency. The master plan recommended that the most economical course of action to mitigate the storage deficiency would be to demolish the existing reservoir and replace it with a larger reservoir that is at the correct elevation. This will gain additional storage, set the tank at the correct elevation, eliminate operational difficulties, and replace a 70 year old asset on property that the District currently owns. This project’s total estimated cost is $7,636,000.

Water Line Replacement – Wineberry Area (16-W017). This project will rehabilitate or replace the waterlines in the Wineberry area consisting of Wineberry Way, Locust Place, Cypress Court, Locust Place – South and North, and Mullberry Place. The water pipelines in the area are constructed with asbestos concrete (AC), which was the pipeline material of choice in the mid-70s. The material is brittle and prone to cracks and leaks, and has had many leaks in the past several years. As part of the asset management program for the water distribution system, water mains constructed with AC of this era have been identified, and will systematically be rehabilitated or replaced over time. This project’s total estimated cost is $2,207,000.

Potable Water Pump Station Standby Generators/Emergency Response (CIP 16-W012). This project will increase the reliability of the water distribution in the event of power outage. A power outage can be caused by several factors – storms, extreme heat, seismic event, localized issues with the power grid, etc. At this time, there is only one pump station in the water distribution system with a permanent standby generator. This project will add permanent standby generators at five pumps stations: 2C, 3A, 2B, 200A, and 300B. The addition of permanent standby generators will allow our water system operators to move water up to each of the distribution zones. This project’s total estimated cost is $3,040,000.

DERWA Projects. With the expansion of DSRSD, EBMUD and Pleasanton recycled water distribution systems, it is anticipated that in the next two to three years, the recycled water peak day demand will exceed the wastewater available for recycled water treatment and will exceed the capacity of the DERWA water recycling plant and pump station. There are two DERWA projects included in the CIP which DSRSD will contribute towards: DERWA Supplemental Supply (CIP 16-R018) and DERWA Recycled Water Plant Phase 2 (CIP 16-R014). The estimated cost of both projects is $21,327,450 with a net cost of $10,085,237 after reimbursement from DERWA.
**Capital Improvements to Increase Water Supply Program – Phase II (CIP 00-W002).** This program will develop projects to meet the objectives of the Water Supply and Conservation Policy adopted by the Board on October 20, 2015. This program will focus on diversifying the sources of water supply so that no less than 60% of total demand (potable and recycled) is satisfied by local and regional water supplies, and that no more than 40% of total water supply (potable and recycled) comes from any one physical source. The program will fund the most feasible potable reuse projects outlined in the Tri-Valley Potable Reuse Feasibility Study. This $40 million program will be funded 25% by the Water Expansion Fund and 75% by the Water Replacement Fund based on the ratio of current water demands to projected build-out water demands.

**Board Meeting Audio/Video Improvements (CIP 16-A004).** The audio and video system equipment in the Board room is the original equipment installed when the building was constructed in 1992. It is difficult to find replacement parts or re-engineer the system to keep it functioning. To provide transparency in conducting District business, the District began providing video recordings of Board meetings on the District website in November 2012. The quality of the audio and video in the recordings is poor. This project will retrofit the boardroom lighting and sound system and install video cameras and video streaming equipment to enable quality video streaming and indexing of Board meetings. It will also improve the ability of people attending Board meeting to hear what is being said. There will be several options for improvement developed for this project. Depending on the option, selected there may be an additional ongoing annual cost for third party support for videotaping, streaming, and indexing of the video. This project’s total estimated cost is $245,000.
CHAPTER 2: FINANCIAL OVERVIEW

REPLACEMENT AND EXPANSION FUND CASH FLOW AND WORKING CAPITAL

To assure the District has sufficient funds to maintain existing assets and to construct the facilities to meet the needs of new customers, the District projects the revenues and expenditures in the capital replacement and expansion funds over the ten-year CIP plan period and verifies the fund working capital is greater than the minimum financial reserve level as defined in the Financial Reserve Policy. A summary of the revenues and expenditures in replacement and expansion funds is provided below and a graph of each fund’s ten-year cash flow and working capital is provided on pages 12 through 17.

Revenues

The revenue in the replacement and expansion funds includes:

- Replacement Allocations (indirectly from rates)
- Capacity Reserve Fees
- Interest
- Other Revenue

The Capital Improvement Program is funded by two main sources of revenue: rates and fees. Rates are collected from current customers and are used to pay normal operating costs. A portion of the rates is also allocated to the replacement funds (Replacement Allocations) to pay for capital projects that replace or improve facilities that benefit existing customers.

Capacity Reserve Fees are collected from development projects. The fees are used to pay for debt related to facilities that were built to add capacity for future customers and to pay for new projects that serve future customers. The District will often build a facility that is sized to meet capacity needs into the distant future. A buy-in component of the fee is collected for new development to pay for the use of existing excess capacity.

The revenues in the replacement funds are derived from replacement allocations from the operating fund rates and the buy-in component of capacity reserve fees. The revenues in the expansion funds are derived from capacity reserve fees as well as other revenue derived from permitting and inspection fees. In addition, each fund has interest revenue derived from the capital in the fund.

The revenue from rates over the ten-year plan is estimated by applying normal water rates to the fiscal year 2016 water consumption. The water consumption is increased by the estimated growth in customers from development in each year. The revenue is then adjusted by the current consumer price index in each year. A portion of the rates is then allocated to the capital replacement funds.

The revenue from fees is estimated based on the number of future water and wastewater connections anticipated with planned development provided by the cities of Dublin, Pleasanton, and San Ramon. The number of connections in the first three years are based on the planned development slated for those years. The number of projected connections over the remaining seven years of the plan are averaged over those years as the actual timing of development in the latter years is difficult to predict. The impact of developer use of capacity reserve fee credits have been accounted for by reducing the number of connections by the number of outstanding credits.
Expenditures

The expenditures in the replacement and expansion funds include:

- Capital Expenditures
- Other Expenses
- Loan Payments/Debt
- Allocated District Overhead

The CIP Ten-Year Plan and Two-Year Budget include capital expenditures for capital improvement projects and capital improvement programs.

Capital improvement projects include:

- All assets acquired through a public works contract as defined by the California Public Contract Code Section 1101.
- All “major infrastructure” capital assets, as defined in the District’s Infrastructure Responsibility and Funding Policy.
- Studies that lead to the acquisition or improvement of a capital asset and the acquisition or improvement of any other capital asset that meet such criteria.

The CIP Ten-Year Plan also contains ten capital improvement programs. Programs assure adequate revenue is identified to fund capital assets or projects that are anticipated but do not yet have a definitive scope and budget. Once a specific scope of work and budget is identified, a project can be created from the CIP program.

Some programs set aside money for undefined asset rehabilitation and replacement projects. The District, based on the Asset Management replacement models, sets aside a basic level of expenditures for assets that are expected to reach the end of their useful life and may need to be repaired or replaced within the CIP ten-year plan period. These programs include:

- Water System Replacement and Rehabilitation Program (00-W001)
- Wastewater Collection System Replacement and Rehabilitation Program (00-S020)
- RWTF Replacement and Rehabilitation Program (00-P026)
- Fleet Replacement Program (T18-23)
- Facilities Replacement Program (T18-24)
- Reservoir Recoating Program (T16-67)
- Street Overlay Modification Program (00-A003)

Other programs set aside funding for a particular District initiative which may ultimately fund more than one individual CIP project.

- Energy Management Program (00-3120)
- Capital Improvements to Increase Water Supply Program-Phase 2 (00-W002)
- Capital Improvements to Increase Water Supply Program-Phase 1 (00-W001)

In addition to the capital expenditures, the working capital also accounts for allocated district overhead and other expenses. The “other expenses” associated with Local Sewer Expansion Fund (220) and Water Expansion Fund (620) include labor and materials to complete plan check and inspection of developer dedicated infrastructure. The “other expenses” associated with the replacement funds are items from
the operating budget and include capital outlay, professional services and materials. Capital outlay is the replacement of large items such as a pump or a truck. The costs of capital outlay items are directed to the appropriate, rate based, replacement fund in order to make sure that the correct funds are funding the items.

Other expenditures include loan payments and debt service. Local Wastewater Replacement Fund (210) shows an interfund loan from Local Wastewater Expansion Fund (220) that will be repaid over 6 years. Water Expansion Fund (620) shows a DERWA loan that will be repaid over ten years. Regional Expansion Fund (320) shows LAVMWA debt service which will be repaid through fiscal year 2031. Each funds expenditures are represented by blue bars on the working capital charts. Loan payments and debt service are shown as purple bars in the expense column.

**Financial Reserves**

The District’s Financial Reserves Policy designates financial reserves in order to protect the District’s investment in various assets, satisfy its commitments under its numerous financial, regulatory and contractual obligations and to stabilize long-term rates for its customers.

For capital replacement funds (210, 310, 610), the minimum reserve is twice the average annual expenditures in the fund based on the next 15 years of planned expenditure which includes the ten-year capital expenditures plus an estimate of asset replacement needs for the subsequent five years.

For the expansion funds (220, 320, and 620), minimum reserve is the greater of:
- Two years debt service
- Two years of project expenditures

**Fund Financial Summary**

The working capital remains above the minimum reserve for all capital replacement and expansion funds for the two year budget period.

**Local Wastewater Replacement Fund (210) and Expansion Fund (220).** Although the working capital in Fund 210 remains above the fund minimum reserve target, the cash flow in this fund is based on two proposed actions. The first is an interfund loan from Fund 220 to provide the funding for two large projects in this fund, the Dublin Trunk Sewer Rehabilitation Project and the Dublin Boulevard Widening (Dublin Lift Station relocation) Project. The second is a substantial increase in the replacement allocations to this fund from rates.

The total revenue for Fund 210 historically has been approximately $900,000 with two thirds of the revenue derived from the buy-in component of the capacity reserve fees and the remaining from rates. The current funding level is not sufficient given the increasing rehabilitation and replacement costs associated with the aging infrastructure. In addition, the revenue from the capacity reserve fees is uncertain from year to year because of local economic factors. If development experiences a lull, the revenue stream from the buy-in component shrinks, potentially aggravating cash flow problems for the fund. To mitigate this issue, staff has proposed an increase in local wastewater rates to increase the replacement allocations from the rates to this fund.
Fund 220 has one major “expenditure” shown in 17-18. This expenditure is an interfund loan to the local replacement fund, and will be repaid over 6 years, also shown on the chart. There are no other major expenditures over the ten-year planning period.

Regional Wastewater Replacement Fund (310) and Expansion Fund (320). These funds show a healthy balance well above the minimum reserve over the life of the plan. There are several large projects planned over the first five years with funding split between the replacement and expansion funds. Fund 310 is shown gaining balance towards the end of the plan, which, based on the Asset Management Program, will coincide with an anticipated increase in capital replacement costs due to aging infrastructure. Fund 320 gains balance towards the end of the plan, saving for the eventual payoff of fund debt.

The Water Replacement Fund (610) and Expansion Fund (620). These funds show reasonable balances throughout the plan. The working capital for Fund 610 shows a downward trend over the first six years of the plan before it begins to recover. This is due to an anticipated potable reuse project. If that project schedule is delayed, the working capital would adjust accordingly. Fund 620 has several large projects over the first several years of the plan, and beyond that, there is only one significant expansion project remaining beyond the ten-year plan horizon.

**FUND CASH FLOW AND WORKING CAPITAL GRAPHS**

The following pages show the cash flow and working capital graphs for each fund.
Fund 320 - Regional Wastewater Expansion

- Revenue and Expenditures, $Millions (BARS)
- Fund Working Capital, $Millions (LINES)

Fiscal Year:
- 17-18
- 18-19
- 19-20
- 20-21
- 21-22
- 22-23
- 23-24
- 24-25
- 25-26
- 26-27

Legend:
- Green: Capacity Reserve Fees
- Brown: Interest
- Blue: CIP Expenditures
- Purple: LAVWMA Debt
- Blue: Other Expenses
- Cyan: Allocated District Overhead
- Blue: Working Capital
- Red: Fund Minimum Reserve

Revenues and Expenditures, $Millions (BARS)
- Revenues and expenditures for fiscal years 17-18 to 26-27 are shown.
### Fund 610 - Water Replacement Fund

<table>
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<th>Fiscal Year</th>
<th>Fund Minimum Reserve</th>
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<td>26-27</td>
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</table>

The chart above shows the fund working capital and revenues and expenditures for the fiscal years 2017-2027. The columns represent different types of expenses and revenues, such as capacity, reserve fees, interest, replacement allocations, CIP expenditures, other expenses, working capital, and fund minimum reserve. The bars indicate the amount of money for each fiscal year.
BUDGET CONTROLS

Two-Year Project Budget
By Board adoption of the CIP Two-Year Budget, each project and program and their corresponding budget listed in the first two years (FYEs 2018 and 2019) of the CIP Ten-Year Plan is authorized and may be fully expended with the following conditions:

- The total expenditures for each individual project shall not exceed the project total.
- The total allocated expenditures may be initiated in either FYE 2018 or 2019.

Additional project budget approval conditions are discussed in the following sections.

Project Approval from a Program
Approval authority for projects created from a program are consistent with the approval authority limits outlined in the District purchasing procedures:

- The general manager may approve a project of $100,000 or less created from a program.
- The general manager may approve an increase in the budget of a project created from a program provided adequate program funds are available up to the general manager’s authority of $100,000.
- A project created from a program in excess of $100,000 or a budget increase that is greater than the general manager’s authority requires Board approval.

Program Budgets
Upon completion of a project created from a program, any unused funds are returned to the program provided it is in the same fiscal year. Funding allocated to program budgets are not cumulative from year to year. Program budgets that do not fund specific projects by the end of the fiscal period do not carry forward. Thus, the program’s total expenditures shall not exceed the total program budget for each fiscal year. The Board must approve increases in a program budget.

CIP Budget Implementation
The general manager may authorize staff to complete the implementation process or use consultant and construction contracts in standard District form, task orders and purchase orders for services, equipment, materials and supplies up to the authority of $100,000 per the District Purchasing Policy. In addition, the general manager has the authority to adjust contracts that were previously approved by the Board, up to the purchasing authority of $100,000. All work authorized by the general manager or submitted to the Board for authorization shall be procured and managed in accordance with District purchasing procedures and Purchasing Policy.

Actions Requiring Board Approval
The following is a summary of project and budget actions requiring Board approval:

- Addition of a new project not created from a program
- Addition of a new project created from a program in excess of $100,000
- Acceleration of a future project that had to unexpectedly start in either FYE 2018 or 2019
- Increase in a project budget in excess of $100,000
- Increase in a program budget
- Increase in a project budget where the revised project budget is in excess of $100,000
- Authorization of contracts, task orders, purchases or construction contracts in excess of $100,000
Chapter 3: Project Sheets

Grouped by the following project categories, and arranged in the order of project timing,

- Study/Master Plan
- General
- Water System
- Wastewater Collection
- Resource Recovery Facilities
CIP 10-YEAR PLAN FYEs 2018 through 2027

* Listed according to project timing from earliest to latest

**CATEGORY: STUDY/MASTER PLAN**

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>2-Year Projects</strong></td>
<td></td>
</tr>
<tr>
<td>14-P004</td>
<td>WWTP/Biosolids Master Plan</td>
<td>21</td>
</tr>
<tr>
<td>16-S001</td>
<td>Wastewater Collection System Master Plan Update and Connection Fee Study</td>
<td>22</td>
</tr>
<tr>
<td>18-P002</td>
<td>WWTP Electrical System Master Plan</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td><strong>Future Projects</strong></td>
<td></td>
</tr>
<tr>
<td>T14-10</td>
<td>Water System Master Plan Update and Operations Plan Update</td>
<td>24</td>
</tr>
</tbody>
</table>
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

**CATEGORY:** STUDY/MASTER PLAN

**Regional Wastewater Expansion (Fund 320)**

**CIP No. 14-P004  WWTP/Biosolids Master Plan**

**Funding Allocation:**  85% 320  15% 310

**Project Manager:** Judy Zavadil  **Status:** Continuing Project

**Project Summary:**
The last complete Wastewater Treatment Plant (WWTP) Master Plan was completed in 1997 with updates completed in 2005 and 2007. The current average dry weather flow (ADWF) to the WWTP is approximately 11 MGD. Substantial WWTP improvements will be required at approximately 14.5 MGD. Prior to the flows reaching 14.5 MGD, a WWTP Master Plan is needed. The Master Plan will: evaluate current and projected future wastewater flows and strength; determine when additional facilities are required due to hydraulic or treatment limitations; evaluate options for biosolids dewatering and disposal; evaluate current technologies to meet treatment requirements; develop costs estimates; and support a capacity reserve fee study.

**CEQA:** Not a project under CEQA [CEQA Guideline 15378].

**Reference:** WWTP Master Plan Update 2007

**Fund Allocation Basis:** Fund split based on ADWF that initiates project vs. buildout flowrate

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
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<th>FYE 25</th>
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</table>

**Total Estimated Project Cost**  $1,700,000

Current Adopted Budget  $1,700,000

Increase/(Decrease)  $0
Local Wastewater Expansion (Fund 220)

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Wastewater Collection System Master Plan Update and Connection Fee Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Allocation</td>
<td>75% 220 25% 210</td>
</tr>
</tbody>
</table>

**Project Manager:** Stan Kolodzie

**Status:** Continuing Project

**Project Summary:**
This project will update the 2005 Wastewater Collection System Master Plan, a planning document used to ensure the overall wastewater collection system has adequate capacity as the system expands. Planned developments have changed in density, new developments have been proposed, and street alignments have been established since the last update. The Wastewater Collection System Master Plan is to be updated every five (5) years or as development necessitates. Wastewater connection fee study will also be done at the same time of the Master Plan update.

**CEQA:** Not a project under CEQA [CEQA Guideline 15378].

**Reference:** 2005 Wastewater Collection System Master Plan Update.

**Fund Allocation Basis:** Fund split matches the 2010 Local Connection Fee Study

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
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</table>

**Total Estimated Project Cost:** $860,000

Current Adopted Budget $500,000

Increase/(Decrease) $360,000
CIP No. 18-P002  WWTP Electrical System Master Plan

Project Summary:
The last Electrical Master Plan was completed in 2004. This master plan will review the WWTP electrical system and determine the required improvements to support current electrical demands as well as the future electrical demands of WWTP processes planned in the 2017 WWTP and Biosolids Master Plan.

CEQA: Not a project under CEQA [CEQA Guideline 15378].

Reference: 2004 Electrical Master Plan Update

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
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<th>FYE 23</th>
<th>FYE 24</th>
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</table>

Total Estimated Project Cost $750,000
Current Adopted Budget $0
Increase/(Decrease) $750,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: STUDY/MASTER PLAN

Water Expansion (Fund 620)

CIP No. T14-10 Water System Master Plan Update and Operations Plan Update
Funding Allocation: 100% 620

Project Manager: Status: Future Project

Project Summary:
This project will update the District’s 2016 Water System Master Plan in five years. The master plan outlines the water system required to serve our customers from current conditions through future build-out conditions ensuring the water system operation is reliable as systems expand. This project also includes a capacity reserve fee study based on the master plan recommended infrastructure projects.

CEQA: Not a project under CEQA [CEQA Guideline 15378].
Reference: 2016 Water System Master Plan

Fund Allocation Basis:

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
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<th>FYE 21</th>
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<th>FYE 23</th>
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<th>FYE 25</th>
<th>FYE 26</th>
<th>FYE 27</th>
<th>Future</th>
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<tbody>
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<td>0</td>
<td>0</td>
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</tbody>
</table>

Total Estimated Project Cost $500,000
Current Adopted Budget $0
Increase/(Decrease) $500,000
CIP 10-YEAR PLAN FYEs 2018 through 2027

* Listed according to project timing from earliest to latest

CATEGtory: GENERAL

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2-Year Projects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-A004</td>
<td>Board Meeting Audio/Video Improvements</td>
<td>27</td>
</tr>
<tr>
<td>16-A005</td>
<td>Corporation Yard and Administrative Facilities</td>
<td>28</td>
</tr>
<tr>
<td>16-A006</td>
<td>District Office Improvements</td>
<td>29</td>
</tr>
<tr>
<td>17-A006</td>
<td>District Pavement Rehabilitation</td>
<td>30</td>
</tr>
<tr>
<td>17-A007</td>
<td>Wide Area Network Communications Phase 2</td>
<td>31</td>
</tr>
<tr>
<td>18-A001</td>
<td>Field Operations Facility Security Systems Improvements</td>
<td>32</td>
</tr>
<tr>
<td>00-A003</td>
<td>Street Overlay Modification PROGRAM</td>
<td>33</td>
</tr>
</tbody>
</table>

**Future Projects**

| T18-01  | Computing Infrastructure Replacement                   | 34   |
| T18-02  | Network Infrastructure and Security                    | 35   |
| T18-17  | Electric Vehicle Charging Station                      | 36   |
| T18-23  | Fleet Replacement PROGRAM                              | 37   |
| T18-24  | Facilities Asset Replacement PROGRAM                   | 38   |
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: GENERAL

Regional Wastewater Replacement (Fund 310)

CIP No. 16-A004  Board Meeting Audio/Video Improvements

Funding Allocation:  45%  310  45%  610  10%  210

Project Manager: Steven Delight

Status: Continuing Project

Project Summary:
This project will retrofit the Boardroom lighting and audio system and install video cameras and video streaming equipment to facilitate quality video streaming and indexing of Board meetings. There will be an additional ongoing annual operating cost for third party support for videoing, streaming, and indexing of the video.

CEQA: Not a project under CEQA [CEQA Guideline 15378].

Reference:
Fund Allocation Basis: Project will mainly benefit customers so the allocation is based on revenues by fund.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
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<th>FYE 25</th>
<th>FYE 26</th>
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</table>

Total Estimated Project Cost $245,000
Current Adopted Budget $100,000
Increase/(Decrease) $145,000
**DSRSD CIP 10-Year Plan for FYEs 2018 through 2027**

**CATEGORY: GENERAL**

**Water Replacement (Fund 610)**

<table>
<thead>
<tr>
<th>CIP No. 16-A005  Corporation Yard and Administrative Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Allocation: 55% 610 30% 620 10% 210 5% 220</td>
</tr>
</tbody>
</table>

**Project Manager:** Robyn Mutobe

**Status:** Continuing Project

**Project Summary:**

The lease with the US Army for the Field Operations Division (FOD) temporary facilities at Camp Parks terminated in October 2016. In March 2016, the District acquired a commercial building and warehouse at 7035 Commerce Circle in Pleasanton for approximately $4.9 million to become the Field Operations facility. The property is located adjacent to the LAVWMA pump station. Infrastructure including building security, HVAC improvements and control systems, new materials bins, business and SCADA networks, and fencing and parking improvements were completed in spring/summer 2016 and FOD moved to the facility in August 2016. Renovations including a new lobby, new locker rooms, a new mudroom, and kitchen/breakroom improvements will be completed by May 2017 and a backup generator will also be installed by late 2017.

**CEQA:** Building renovation covered by City of Pleasanton EIR; materials bin work - CEQA NOE filed by DSRSD

**Reference:** Field Operations Division Corporation Yard Study, January 2009.

**Fund Allocation Basis:** Fund split is based upon the estimated Field Operations cost split between potable water, recycled water and sewer activities.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
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<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
<th>FYE 27</th>
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</tbody>
</table>

**Total Estimated Project Cost** $7,584,697

**Current Adopted Budget** $7,350,000

**Increase/(Decrease)** $234,697
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: GENERAL

Regional Wastewater Replacement (Fund 310)

CIP No. 16-A006  District Office Improvements

Project Manager: Rudy Portugal

Project Summary:
The District office was constructed in 1992. The carpet and wall coverings are original and considerably worn. To date, the following work has been completed: rehabilitation and/or replacement of all three entry gates and upgrade of the main lobby area. The main lobby upgrade included repairing leaky roof, replacing water-damaged ceiling tiles and framework (to improve future access to ceiling area), updating lobby displays, remediating mold around the drinking fountain, removing wallpaper, resurfacing and painting the lobby walls, adding District name and logo to the wall, upgrading display of Board of Director photos, and deep cleaning floor tiles and replacing carpets. The remaining work to be completed will be replacing the office area carpet and repainting walls in the Boardroom concurrently with the Board Meeting Audio/Video Improvements project (CIP 16-A004).

Project Manager: Rudy Portugal

Status: Continuing Project

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
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<th>FYE 24</th>
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</tbody>
</table>

Total Estimated Project Cost $250,000
Current Adopted Budget $200,000
Increase/(Decrease) $50,000

CEQA: Not a project under CEQA [CEQA Guideline 15378].

Reference:
Fund Allocation Basis: Will be used primarily by employees to conduct District business so fund split is based on employee allocation.
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CIP No. 17-A006  District Pavement Rehabilitation

Funding Allocation:  80%  610  20%  210

Project Manager: Jackie Yee

Project Summary:
This project has evaluated the existing paved access roads at District facilities excluding the Regional Wastewater Treatment Facility. The various access roads will be scheduled for repair, maintenance or reconstruction based on the evaluation report. The roads were ranked by severity (minor, moderate or major improvements). Minor improvements had minor cracking due to roots, lack of proper edging, poor drainage, and expansive soils. Moderate improvements were similar to minor improvements but were more severe and noted by existing visual damage. Major improvements had complex subsurface and geologic conditions that need in depth study for recommended design and construction.

CEQA: Categorical Exemption [CEQA Guideline 15301].
Reference: Pavement Investigation Report, Pavement Rehabilitation Project Phase 1, December 12, 2016, Construction Testing Services

Fund Allocation Basis: Based on approximate area of access roads to facilities associated with each fund.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
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<td>200,000</td>
<td>0</td>
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</tr>
</tbody>
</table>

Total Estimated Project Cost $1,235,000
Current Adopted Budget $100,000
Increase/(Decrease) $1,135,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: GENERAL

Regional Wastewater Replacement (Fund 310)

CIP No. 17-A007 Wide Area Network Communications Phase 2

| Funding Allocation: | 46% 310 | 44% 610 | 10% 210 |

Project Manager: Jackie Yee/Bob Treppa

Status: Continuing Project

Project Summary:
This project will allow for increased access speed and bandwidth at remote sites. Increases in application demands and database systems cause delays in data transmissions and production slowdowns. This project will remove current AT&T leased data lines and install District-owned, multi-strand fiber lines or wireless networks for communications in data and phone systems for faster and bigger-piped communication links. This project will upgrade the existing communication links for the Regional Wastewater Treatment Plant (RWTP) and Field Operations Facility (FOF) in areas of data and phone communications. These upgrades will also allow for future bandwidth requirements in areas of audio and video transmission. Through FYE 2016, the project has completed 1) the fiber connection between the District Office and RWTP, 2) the wireless connection between the District Office and FOF, 3) wireless connection between FOF and RWTP, and 4) purchase and installation of wide area network security appliances to support these connections. The remaining funds will install fiber between RWTP and the new FOF on Commerce Circle and the LAVWMA site.

CEQA: Categorical Exemption [CEQA Guideline 15303]

Reference: 2002 Information Technology Master Plan

Fund Allocation Basis: Project is replacement-oriented and will use the standard "general capital asset" allocation

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
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<td>0</td>
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</table>

Total Estimated Project Cost: $615,000
Current Adopted Budget: $365,000
Increase/(Decrease): $250,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: GENERAL

Water Replacement (Fund 610)

### CIP No. 18-A001  Field Operations Facility Security Systems Improvements

<table>
<thead>
<tr>
<th>Funding Allocation:</th>
<th>55% 610</th>
<th>30% 620</th>
<th>10% 210</th>
<th>5% 220</th>
</tr>
</thead>
</table>

**Project Manager:** Dan Lopez  
**Status:** New Project

**Project Summary:**
Current security at the Field Operations Facility is minimal and has led to false alarms. This project will add card readers to interior and exterior doors, cameras to warehouse and exterior, and BOSCH panel access to exterior access points. Additions will ensure a secure workplace for employee safety and reduce risk of theft and vandalism, while reducing the number of false and nuisance alarms.

**CEQA:**

**Reference:**

**Fund Allocation Basis:** Based upon Field Operation cost between potable water, recycled water and sewer activities.

### 10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
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<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
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</tbody>
</table>

**Total Estimated Project Cost** $50,000  
Current Adopted Budget $0  
Increase/(Decrease) $50,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: GENERAL

Local Wastewater Replacement (Fund 210)

<table>
<thead>
<tr>
<th>CIP No. 00-A003</th>
<th>Street Overlay Modification PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Allocation:</td>
<td>50% 210 50% 610</td>
</tr>
</tbody>
</table>

**Project Manager:** Rudy Portugal  
**Status:** Continuing Program

**Project Summary:**
The District is required to adjust infrastructure access to any increases in street grades. This project will raise manholes and valve boxes annually in conjunction with overlay projects conducted by the City of Dublin and City of San Ramon using the Tri-Valley Intergovernmental Reciprocal Services Agreement.

**CEQA:** Categorical Exemption [CEQA Guideline 15301].  
**Reference:** Coordination meetings with City staff.

**Fund Allocation Basis:** Fund split is based upon the number of valve boxes and manholes in the system. There are twice as many valve boxes as manholes, however, manholes cost twice as much to raise. Each project created will be based upon the actual work included.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
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<td>160,000</td>
<td>160,000</td>
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</tbody>
</table>

Total Estimated Project Cost $2,400,000
Current Adopted Budget $0
Increase/(Decrease) $2,400,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: GENERAL

Regional Wastewater Replacement (Fund 310)

CIP No. T18-01 Computing Infrastructure Replacement

| Funding Allocation: | 50% 310 | 38% 610 | 12% 210 |

Project Manager: 

Status: Future Project

Project Summary:
This project will modernize and replace the computing infrastructure for the processing of multiple database applications including our Enterprise Resource Planning (ERP), Geographic Information System (GIS), Laboratory Information Management System (LIMS) and Computerized Maintenance Management System (CMMS). Blade servers and storage area networks were originally purchased in 2011. By 2022, the equipment will be at least ten years old, three years past best practice replacement schedule of seven years.

CEQA: Not a project under CEQA [CEQA Guideline 15378].

Reference: Best practice for network technology replacement.

Fund Allocation Basis: Based on employee allocation.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
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</table>

Total Estimated Project Cost $280,000
Current Adopted Budget $0
Increase/(Decrease) $280,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: GENERAL

Regional Wastewater Replacement (Fund 310)

<table>
<thead>
<tr>
<th>CIP No. T18-02</th>
<th>Network Infrastructure and Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Allocation:</td>
<td>50% 310 38% 610 12% 210</td>
</tr>
</tbody>
</table>

Project Manager: Status: Future Project

Project Summary:
Most “best practices” call for network technology replacement every seven years. This is often the product life-cycle for network switching, communications, and includes the regular faster cycling review for network security. This project will address replacements needed for the business network in years 2024 and 2025, and the Field Operations Facility SCADA network in 2027.

CEQA: Not a project under CEQA [CEQA Guideline 15378].
Reference: Best practice for network technology replacement.

Fund Allocation Basis: Based on employee allocation.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
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Total Estimated Project Cost $1,000,000
Current Adopted Budget $0
Increase/(Decrease) $1,000,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CIP No. T18-17  Electric Vehicle Charging Station

Funding Allocation: 50% 310  38% 610  12% 210

Project Manager: Status: Deferred Project

Project Summary:
This project will install electric vehicle charging stations at the Regional Wastewater Treatment Facility, Field Operations Facility, and District Office.

CEQA:
Reference: Staff recommendation.

Fund Allocation Basis: Based on employee allocation.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
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</table>

Total Estimated Project Cost  $100,000
Current Adopted Budget  $0
Increase/(Decrease)  $100,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: GENERAL

Water Replacement (Fund 610)

CIP No. T18-23  Fleet Replacement PROGRAM

Funding Allocation:  50%  610  30%  310  20%  210

Project Manager:  Status: Placeholder

Project Summary:
This program will set aside annual capital outlay funding to meet the District’s vehicle asset replacement requirements in future years. The District will use a comprehensive approach and follow best practice fleet operations to implement a cost effective fleet replacement program. Although not a capital project, this program is included in the CIP planning to make sure that capital outlay cashflow is incorporated to support future rate and fee studies.

CEQA:  Not a project under CEQA [CEQA Guideline 15378].

Reference:  Current vehicle asset inventory.

Fund Allocation Basis:  Ratio based on department/function associated with each vehicle.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
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</table>

Total Estimated Project Cost  $3,900,000
Current Adopted Budget  $0
Increase/(Decrease)  $3,900,000
**DSRSD CIP 10-Year Plan for FYEs 2018 through 2027**

**CATEGORY: GENERAL**

### Regional Wastewater Replacement (Fund 310)

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Facilities Asset Replacement PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>T18-24</td>
<td></td>
</tr>
</tbody>
</table>

**Funding Allocation:**

| 66%  | 310 | 32%  | 610 | 2%   | 210 |

**Project Manager:**

**Status:** Placeholder

**Project Summary:**
This program will set aside annual capital outlay funding to meet the District’s facilities asset replacement requirements in future years. The District will use a comprehensive approach and follow best practice to implement a cost effective facilities asset replacement program. Although not a capital project, this program is included in the CIP planning to make sure that capital outlay cashflow is incorporated to support future rate and fee studies. The estimated annual replacement cost is based on 1% of the District’s total real property value per California Sanitation Risk Management Authority (CSRMA) report dated January 2016.

**CEQA:** To be determined based on individual projects funded by program.

**Reference:**

**Fund Allocation Basis:** Ratio based on department/function associated with each facility.

### 10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
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<th>FYE 23</th>
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**Total Estimated Project Cost** $5,590,000

**Current Adopted Budget** $0

**Increase/(Decrease)** $5,590,000
## CIP 10-YEAR PLAN FYEs 2018 through 2027

*Listed according to project timing from earliest to latest*

### CATEGORY: WATER SYSTEM

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>2-Year Projects</strong></td>
<td></td>
</tr>
<tr>
<td>09-6101</td>
<td>Water and Recycled Water SCADA Improvements</td>
<td>41</td>
</tr>
<tr>
<td>12-W013</td>
<td>Water Main - Fallon Rd, Tassajara Rd to Tassajara Creek</td>
<td>42</td>
</tr>
<tr>
<td>15-W004</td>
<td>Dougherty Road Utilities</td>
<td>43</td>
</tr>
<tr>
<td>15-W017</td>
<td>Water Distribution System Water Quality Improvements</td>
<td>44</td>
</tr>
<tr>
<td>16-A016</td>
<td>District Facilities Security Project - Phase 2</td>
<td>45</td>
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<tr>
<td>16-R014</td>
<td>DERWA Recycled Water Plant - Phase 2</td>
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<tr>
<td>16-R018</td>
<td>DERWA Supplemental Supply</td>
<td>47</td>
</tr>
<tr>
<td>16-W009</td>
<td>Potable Water Supply Reliability Planning</td>
<td>48</td>
</tr>
<tr>
<td>16-W012</td>
<td>Potable Water Pump Station Standby Generators/Emergency Response</td>
<td>49</td>
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<tr>
<td>17-W001</td>
<td>Automated Water Meter Data Transmission Repeaters</td>
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<tr>
<td>17-W003</td>
<td>Reservoir 10A</td>
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<tr>
<td>18-W003</td>
<td>Reservoir 2 Recoating</td>
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<tr>
<td>05-6204</td>
<td>Water Main-Bollinger Canyon Rd. to Reservoir 200B</td>
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<tr>
<td>12-W016</td>
<td>Reservoir 1B Recoating</td>
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<td>16-R013</td>
<td>Water Reuse Demonstration Project</td>
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<td>14-W008</td>
<td>Reservoir 20B</td>
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<td>16-W017</td>
<td>Water Lines Replacement - Wineberry Area</td>
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<tr>
<td>18-W004</td>
<td>MCC Improvements - PS1A and PS3A</td>
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<tr>
<td>18-W005</td>
<td>Commercial Recycled Water Fill Station Enhancements</td>
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<tr>
<td>00-W002</td>
<td>Capital Improvements to Increase Water Supply PROGRAM - Phase 2</td>
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<tr>
<td>00-W011</td>
<td>Water System Replacement and Rehabilitation PROGRAM</td>
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<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Name</th>
<th>Page</th>
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<tbody>
<tr>
<td></td>
<td><strong>Future Projects</strong></td>
<td></td>
</tr>
<tr>
<td>17-W002</td>
<td>Electrical Service to Reservoirs 10A and 200B</td>
<td>62</td>
</tr>
<tr>
<td>08-6103</td>
<td>Water Main - Sebille Ave to 12th St</td>
<td>63</td>
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<tr>
<td>T16-28</td>
<td>Water Lines Replacement - Tamarack Drive - Village Pkwy to Firethorn Way</td>
<td>64</td>
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<tr>
<td>T16-29</td>
<td>Water Lines Replacement - Canterbury Lane and Cardigan Street</td>
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<tr>
<td>T16-30</td>
<td>Water Line Replacement Phase 2 - Canterbury Lane</td>
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<tr>
<td>T18-03</td>
<td>SCADA Field Wireless</td>
<td>67</td>
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<tr>
<td>T10-85</td>
<td>Camp Parks Water Main - Mitchell Drive, Powell to 8th Streets</td>
<td>68</td>
</tr>
<tr>
<td>T10-87</td>
<td>Camp Parks Cromwell Avenue and 12th Street Main Replacement</td>
<td>69</td>
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<tr>
<td>T18-22</td>
<td>Reservoir 20A Recoating</td>
<td>70</td>
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</tbody>
</table>
**CIP 10-YEAR PLAN FYEs 2018 through 2027**

*Listed according to project timing from earliest to latest*

**CATEGORY: WATER SYSTEM**

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Name</th>
<th>Page</th>
</tr>
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<tbody>
<tr>
<td>T16-31</td>
<td>Water Line Replacement - Ironwood Drive</td>
<td>71</td>
</tr>
<tr>
<td>T16-37</td>
<td>Microfiltration Rack and Membrane Replacement</td>
<td>72</td>
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<tr>
<td>T10-86</td>
<td>Camp Parks Water Mains - Loring Street and Monroe Avenue</td>
<td>73</td>
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<tr>
<td>08-6202</td>
<td>Pump Station 20A Improvements</td>
<td>74</td>
</tr>
<tr>
<td>T00-29</td>
<td>Turnout 6</td>
<td>75</td>
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<tr>
<td>T18-26</td>
<td>DERWA Recycled Water Plant - Phase 3</td>
<td>76</td>
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<tr>
<td>00-W001</td>
<td>Capital Improvement to Increase Water Supply PROGRAM - Phase 1</td>
<td>77</td>
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<tr>
<td>T16-67</td>
<td>Reservoir Recoating PROGRAM</td>
<td>78</td>
</tr>
</tbody>
</table>
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

Water Replacement (Fund 610)

CIP No. 09-6101  Water and Recycled Water SCADA Improvements

Funding Allocation:  98% 610  2%  210

Project Manager: Rudy Portugal  Status: Continuing Project

Project Summary:

This project will upgrade the Field Operations Division (FOD) Supervisory Control and Data Acquisition (SCADA) System. The SCADA system consists of programmable logic controllers (PLCs) wired to the instrumentation, pumps, and valves at each of the District facilities. The status of all the facilities is communicated between the facilities and to a central SCADA server via a radio, telephone and fiber communications system and is provided on custom system displays for the operators to monitor the system, change operating parameters and troubleshoot operational issues. The facilities’ status is also recorded on a central SCADA historian allowing for analysis of historical data.

The upgrade includes 1) replacing over 40 PLCs at the District pump stations, reservoirs and sewer lift stations, 2) replacing the existing unlicensed 980 MHz serial radio system with a licensed frequency microwave and 4.9 GHz ethernet radio system between all the facilities, 3) upgrading the SCADA displays and historian for easier analysis of the real time and historical data, 4) completing the development of SCADA design standards to be used for all future FOD and WWTP SCADA installations, 5) making security improvements at each of the sites such as wiring all the reservoir hatches and exterior panels with intrusion alarms, and 6) installing District security card readers at each of the locations to turn off and on the security system at each site as well as identify the staff entering the site. The system was also designed to allow for future security and emergency communication improvements.

CEQA: Categorical Exemption [CEQA Guideline 15301, Existing Facilities].

Reference: SCADA Master Plan, March 2010

Fund Allocation Basis: Fund split based on ratio of SCADA sites in collection system, DSRSD water and recycled system, and DERWA. Amount is net cost to DSRSD.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
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<th>FYE 25</th>
<th>FYE 26</th>
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</table>

Total Estimated Project Cost $6,922,178  DSRSD Net Cost: $6,778,921

Current Adopted Budget $6,663,136  Other Funding: approx 5% of cost charged to DERWA; DERWA cost to be split 57/43 between DSRSD and EBMUD
CIP No. 12-W013 Water Main - Fallon Rd, Tassajara Rd to Tassajara Creek

**Project Summary:**
This development project installed 400 feet of 16-inch water main in Pressure Zone 2 and 1,700 feet of 20-inch water main in Pressure Zone 3 on Fallon Road. The project has been accepted by the District from the developer. However, the associated developer reimbursement will be disbursed when funds are available per Board policy or direction.

**CEQA:**
EIR certified by City of Dublin 5/10/1993.

**Reference:**
Pinn Bros. AWFA dated 7/27/2004 for Silveria Property - Phase IV.

**Fund Allocation Basis:**
Project in support of future water customers.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
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**Total Estimated Project Cost**
$315,500

**Current Adopted Budget**
$315,500

**Increase/(Decrease)**
$0
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

**CIP No. 15-W004 Dougherty Road Utilities**

<table>
<thead>
<tr>
<th>Funding Allocation:</th>
<th>55% 610</th>
<th>30% 620</th>
<th>10% 210</th>
<th>5% 220</th>
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</thead>
</table>

**Project Manager:** Rudy Portugal  
**Status:** Continuing Project

**Project Summary:**
This project will install fiber optic conduit and construct a short segment of recycled water pipeline in conjunction with the City of Dublin Dougherty Road Widening Project and complete a portion of the conduit that leads to the Gleason property. The majority of the fiber optic conduit required is in place with the exception of a section in Dougherty Road. With this project, the District will install two 4-inch fiber optic conduits starting at Sierra Lane and Dougherty Road and proceed north to an existing pull box at Scarlett Drive and Dougherty Road. The District will also extend an 8-inch recycled water line from the existing 30-inch DERWA main in Dougherty Road and one 4-inch fiber optic conduit into Camp Parks at Eighth Street.

**CEQA:** Categorical Exemption [CEQA Guideline 15303]  
**Reference:** City of Dublin Dougherty Road Widening Project

**Fund Allocation Basis:** Based on number of facilities associated with each fund.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
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</table>

Total Estimated Project Cost $135,000  
Current Adopted Budget $110,000  
Increase/(Decrease) $25,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

Water Replacement (Fund 610)

CIP No. 15-W017 Water Distribution System Water Quality Improvements

Funding Allocation: 100% 610

Project Manager: Steven Delight

Status: Continuing Project

Project Summary:

This project will install a chloramination system at Reservoir 1A and low horsepower mixers in Reservoirs 1A, 3A, 3B, 10A, 300A and 300B. The District has experienced loss of chlorine residual in the water distribution system. Installing the chloramination system and the mixers will reduce water age in the tanks and facilitate maintaining chlorine residual throughout the system.

CEQA: Categorical Exemption [CEQA Guideline 15301, 15303].

Reference: None.

Fund Allocation Basis: Project is required to maintain existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
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Total Estimated Project Cost $596,300
Current Adopted Budget $596,300
Increase/(Decrease) $0

Funding Allocation: 100% 610
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

**CATEGORY:** WATER SYSTEM

**CIP No.** 16-A016  **District Facilities Security Project - Phase 2**

**Funding Allocation:** 90% 610  10% 310

**Project Manager:** Rudy Portugal  **Status:** Continuing Project

**Project Summary:**
This project will 1) review past recommendations for physical security for the potable and recycled water facilities and the sewer lift stations, 2) inventory which recommendations have been implemented, either installed over the last few years or installed as part of the SCADA project (09-6101) and, 3) develop a plan and cost estimate for remaining required improvements. The project cost will be revised in future years to include the cost of construction once the required improvements are defined.

**CEQA:** To be determined.


**Fund Allocation Basis:** Based on number of facilities associated with each fund.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
<th>FYE 27</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>50,000</td>
<td>0</td>
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</tr>
</tbody>
</table>

**Total Estimated Project Cost** $50,000

**Current Adopted Budget** $50,000

**Increase/(Decrease)** $0
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

**CATEGORY: WATER SYSTEM**

**CIP No. 16-R014  DERWA Recycled Water Plant - Phase 2**

**Funding Allocation:** 100% 620

**Project Manager:** Robyn Mutobe

**Project Summary:**
This DERWA project will expand the DERWA Water Recycling Plant from its design capacity of 9.7 mgd to 16.5 mgd. The project will add a new band screen and ballasted flocculating clarifier and additional tertiary influent pumps, ultraviolet disinfection modules, and Pump Station R1 pumps. DSRSD will be responsible for the design and construction of the facility expansion. Per the Agreement for the Sale of Recycled Water by DERWA to DSRSD and EBMUD and the DERWA Pleasanton Agreement, cost of the project will be funded in the same proportion as allocation of future incremental capacity rights.

**CEQA:** CEQA Addendum to 1996 Dublin San Ramon Valley Recycled Water Program EIR


**Fund Allocation Basis:** Project in support of future water customers.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Year</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
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<tr>
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</tbody>
</table>

**Total Estimated Project Cost** $18,831,000  **DSRSD Net Cost:** $8,662,260

**Current Adopted Budget** $19,035,000  **Other Funding:** DERWA project; cost share based on facility capacity allocation: DSRSD 46%, EBMUD 27%, Pleasanton 27. Expected reimbursement of $10,168,740

Increase/(Decrease) ($204,000)
 CATEGORY: WATER SYSTEM

Water Expansion (Fund 620)

CIP No. 16-R018  DERWA Supplemental Supply

Funding Allocation:  100%  620

Project Manager: Steven Delight

Status: Continuing Project

Project Summary:
This project will provide for a supplemental source of supply to the recycled water program. The recycled water demands are projected to exceed the Regional Wastewater Treatment Facility (RWTF) inflow during peak months until buildout of the Dublin and Pleasanton service areas. This project will identify and construct necessary facilities to provide supplemental water. It is anticipated the supplemental water will either be pumped from the groundwater fringe basin, water from Hopyard well 7, seasonal storage at the chain of lakes, diverted from Livermore effluent discharges to LAVWMA, or diverted wastewater from Contra Costa County Sanitary District service area treated at the RWTF.

CEQA: CEQA addendum to 1996 EIR prepared by DSRSD and approved by DERWA.

Reference: DERWA Permanent Supplemental Supplies - completed studies.

Fund Allocation Basis: Project in support of future water customers.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
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Total Estimated Project Cost: $2,496,450

DSRSD Net Cost: $1,447,941

Current Adopted Budget: $900,450

Increase/(Decrease): $1,596,000

Other Funding: DERWA project and will be funded by DERWA (DSRSD 58%, EBMUD 42%)

DERWA Supplemental Supply CIP No. 16-R018
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

Water Replacement (Fund 610)

<table>
<thead>
<tr>
<th>CIP No. 16-W009 Potable Water Supply Reliability Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Allocation: 65% 610 35% 620</td>
</tr>
</tbody>
</table>

Project Manager: Rhodora Biagtan

Status: Continuing Project

Project Summary:
This project will plan water supply projects that would permanently reduce the District’s reliance on the State Water Project and/or bridge the gap from the present to the time in the future when the State Water Project Delta Conveyance Facilities first go into operation. The primary goal is to maintain or improve upon the District’s current water supply reliability level through a diversification of its supply portfolio. This effort will develop projects for inclusion in the 2020 Urban Water Management Plan, to be implemented either in partnership with Zone 7, or independently by the District after 2024. Projects could include potable reuse, participation in regional desalination, "north of Delta" transfer through an EBMUD intertie, or other concepts to be developed. The project is also funding the District’s portion of the Joint Tri-Valley Potable Water Reuse Feasibility Study which is an interagency effort among the signatories of the Tri-Valley Intergovernmental Reciprocal Services Master Agreement. Other potential projects include improvements to interties with other agencies.

CEQA: To be determined.


Fund Allocation Basis: Fund split is based on current demand vs. buildout at time of project inception.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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<th>FYE 20</th>
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</table>

Total Estimated Project Cost: $500,000
Current Adopted Budget: $500,000
Increase/(Decrease): $0
**Project Summary:**

The 2016 Water Master Plan evaluated the overall potable water system to meet recommended planning and design criteria. Pumping criteria is met under normal operating conditions. However, in the event of power outages, pumping criteria will not be met, eventually leading to a loss of fire protection. A power outage can be caused by several factors - storms, extreme heat, seismic event, localized issues with the power grid, etc. At this time, there is only one pump station in the water distribution system with a permanent standby generator. This project will add permanent standby generators at five pump stations: 2C, 3A, 20B, 200A, and 300B. The addition of permanent standby generators will allow our water system operators to move water up to each of the distribution zones, increasing system reliability.

**CEQA:** Categorical Exemption [CEQA Guideline 15303].

**Reference:** 2016 Water System Master Plan

**Fund Allocation Basis:** Project is required to maintain existing water fund assets.

### 10-Year Cash Flow and Estimated Project Cost:

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<tr>
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<th>FYE 18</th>
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</table>

Total Estimated Project Cost $3,040,000

Current Adopted Budget $500,000

Increase/(Decrease) $2,540,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

**CATEGORY: WATER SYSTEM**

**CIP No. 17-W001 Automated Water Meter Data Transmission Repeaters**

| Funding Allocation | 80%  | 620 | 20%  | 610 |

**Project Manager:** Vicki Goldman  
**Status:** Continuing Project

**Project Summary:** This project will install Automatic Meter Integration (AMI) repeaters and Tower Gateway Base Stations (TBS) to correct existing data transmission problems and avoid similar future problems in anticipated high density residential developments. The combination of repeaters and TBS needed will be determined by vendor’s expert inspection of existing neighborhoods and review of plans as submitted. The project will result in better billing system operation, improved accuracy and reduction in staff time for manually correcting inaccurate or missing readings.

**CEQA:** Categorical Exemption [CEQA Guideline 15303]  
**Reference:** Customer Service staff recommendation

**Fund Allocation Basis:** Ratio of cost to maintain existing equipment vs. cost of equipment to support new water customers.

**10-Year Cash Flow and Estimated Project Cost:**

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<thead>
<tr>
<th>Prior</th>
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<th>FYE 25</th>
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</tbody>
</table>

**Total Estimated Project Cost** $360,000  
**Current Adopted Budget** $360,000  
**Increase/(Decrease)** $0
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

CIP No. 17-W003 Reservoir 10A

Funding Allocation: 100% 620

Project Manager: Robyn Mutobe

Status: Continuing Project

Project Summary:
This project will replace the existing 3.0 million gallon reservoir with a new 4.1 million gallon reservoir. Existing Reservoir 10A was constructed in the 1940s as an open cut reservoir as part of the Camp Parks water system. It currently serves Zone 1 in central Dublin, however, the bottom elevation is about 15 feet above the rest of the zone’s hydraulic grade line, creating operational difficulties. The recently approved 2016 Water System Master Plan identified a storage deficiency of 1.1 million gallons within Zone 1. The master plan reviewed potential sites to construct a new tank to fill the deficiency. The master plan recommended that the most economical course of action to mitigate the storage deficiency would be to demolish the existing reservoir and replace it with a larger reservoir that is at the correct elevation. This will gain additional storage, set the tank at the correct elevation, eliminate operational difficulties, and replace a 70 year old asset on property that the District currently owns.

CEQA: CEQA Mitigated Negative Declaration/EIR

Reference: 2016 Water System Master Plan

Fund Allocation Basis: Project is required to provide water storage capacity for future development.

10-Year Cash Flow and Estimated Project Cost:

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<tr>
<th></th>
<th>FYE 18</th>
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</table>

Total Estimated Project Cost $7,636,000
Current Adopted Budget $7,636,000
Increase/(Decrease) $0
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

CIP No. 18-W003 Reservoir 2 Recoating

Funding Allocation: 100% 610

Project Manager: Robyn Mutobe
Status: New Project

Project Summary:
This project will recoat the exterior and interior of Reservoir 2. The reservoir was cleaned and inspected in 2016. The inspection report indicated that there are multiple coating blisters on the interior surfaces and areas of corrosion on the roof. The interior and exterior coatings are original. The project will also recoat all tank and piping appurtenances including the roof hatch and vents, interior and exterior ladders, manways, inlet, outlet, and overflow pipes. A new cathodic protection system will also be installed to replace the original system.

CEQA: Categorical Exemption [CEQA Guideline 15301].
Reference: 2016 Department of Health Inspection Report
Fund Allocation Basis: Project is required to maintain existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
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<th>FYE 23</th>
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<th>FYE 25</th>
<th>FYE 26</th>
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</tbody>
</table>

Total Estimated Project Cost $490,000
Current Adopted Budget $0
Increase/(Decrease) $490,000
**Project Manager:** Rhodora Biagtan  
**Status:** Continuing Project

**Project Summary:**
This project will provide potable water service to Dougherty Valley Pressure Zone 2. Approximately 1,700 feet of 14-inch water main will be designed and installed from Bollinger Canyon Road south to Reservoir 200B. The project is being constructed by Shapell Industries with an agreement to reimburse them with connection fee credits for project costs when the facilities are dedicated to the District. Half of the pipeline, from the tank to the future Dougherty Road alignment, has been constructed. The remaining section of the pipeline will be constructed when the future Dougherty Road is completed.

**CEQA:** EIR certified by Contra Costa County 11/30/97.  
**Reference:** 1992 Dougherty Valley Water, Wastewater & Recycled Water Facilities Plan; 2016 Water Master Plan Update

**Fund Allocation Basis:** Project is required to provide conveyance to future water customers.

### 10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
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</table>

**Total Estimated Project Cost** $826,623  
**Current Adopted Budget** $250,900  
**Increase/(Decrease)** $575,723
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CIP No. 12-W016 Reservoir 1B Recoating

Funding Allocation: 100% 610

Project Manager: Robyn Mutobe

Status: Continuing Project

Project Summary:
This project will recoat the exterior and interior of Reservoir 1B. The reservoir was cleaned and inspected in 2016. The inspection report indicated that there are multiple coating blisters on the interior surfaces and areas of corrosion on the roof. The interior and exterior coatings are original. The project will also recoat all tank and piping appurtenances including the roof hatch and vents, interior and exterior ladders, manways, inlet, outlet, and overflow pipes. A new cathodic protection system will also be installed to replace the original system for all reservoirs. Reservoir 1B is a four million gallon (MG) shared facility with 2.35 MG owned by DSRSD and 1.65 MG owned by Zone 7. Per Basic Agreement for Construction and Joint Use of 4MG Dougherty Reservoir and Appurtenant Facilities dated April 19, 1983, DSRSD pays for 50% of operations and maintenance costs.

CEQA: Categorical Exemption [CEQA Guideline 15301].

Reference: 2016 Dept. of Health Services inspection report; video testing report.

Fund Allocation Basis: Project is required to maintain existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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</tbody>
</table>

Total Estimated Project Cost $1,025,000
Current Adopted Budget $1,835,000
Increase/(Decrease) ($810,000)
CIP No. 16-R013  Water Reuse Demonstration Project

Project Summary:
The water reuse treatment demonstration project will (1) develop treatment system design criteria for reuse of District treated water, (2) develop sufficient treated water quality data and work with the relevant regulatory agency, State Water Resources Control Board’s Division of Drinking Water, to demonstrate regulatory compliance for reuse of District treated water, and (3) conduct public outreach regarding potable reuse and provide opportunities for the public to see the reuse treatment process, and understand the level of treatment provided and finished water quality. Budget is based on a six-month demonstration project that includes microfiltration, reverse osmosis, and advanced oxidation located at the District Regional Wastewater Treatment Facility.

CEQA: To be determined.

Reference:
Fund Allocation Basis: Project in support of future water customers.

10-Year Cash Flow and Estimated Project Cost:

<table>
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<tr>
<th>Prior</th>
<th>FYE 18</th>
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<th>Future</th>
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<td>100,000</td>
<td>200,000</td>
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Total Estimated Project Cost $300,000
Current Adopted Budget $300,000
Increase/(Decrease) $0
CATEGORY: WATER SYSTEM

Water Expansion (Fund 620)

CIP No. 14-W008 Reservoir 20B

Funding Allocation: 100% 620

Project Manager: Rudy Portugal

Status: New Project

Project Summary:
Reservoir 20B will provide potable water storage capacity for eastern Dublin and, in combination with existing Pump Station 300B, will provide potable water to Dougherty Valley. The 1.3 million gallon potable water reservoir will be constructed in eastern Dublin. Along with the reservoir, up to 8,700 linear feet of 12-inch Zone 2 pipeline will be needed to integrate the reservoir into the water system. Property acquisition may be required. Project implementation will be dependent on future development growth in service areas.

CEQA: CEQA Initial Study/Mitigated Negative Declaration
Reference: 2016 Water Master Plan Update
Fund Allocation Basis: Project in support of future water customers.

10-Year Cash Flow and Estimated Project Cost:

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<th>FYE 26</th>
<th>FYE 27</th>
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</thead>
<tbody>
<tr>
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</table>

Total Estimated Project Cost $7,150,000
Current Adopted Budget $7,150,000
Increase/(Decrease) $0
CIP No. 16-W017 Water Lines Replacement - Wineberry Area

**Project Manager:** Robyn Mutobe  
**Status:** New Project

**Project Summary:**
This project will replace approximately 4400 feet of 8-inch asbestos concrete pipe (ACP) potable water lines, services, and appurtenances on Wineberry, Cypress Court, Locust Place - South and North, and Mulberry Place. This area has a history of water service repairs.

**CEQA:** Statutory Exemption [CEQA Guideline 15282]  
**Reference:** Maintenance service history  
**Fund Allocation Basis:** Project is required to replace existing water fund assets.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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- **Total Estimated Project Cost:** $2,207,200  
- **Current Adopted Budget:** $2,207,200  
- **Increase/(Decrease):** $0
### Project Summary:
The motor control centers (MCCs) at Pump Station 1A and Pump Station 3A are over 30 years old and replacement parts (i.e. starters, circuit breakers, protective devices, power monitoring equipment, etc.) require modifications to existing MCC buckets because exact replacements are no longer readily available. Pump Station 1A is a critical pump station since it is the only Pressure Zone 1 pump station in western Dublin.

#### CEQA:
Categorical Exemption [CEQA Guideline 15302].

#### Reference:
None.

#### Fund Allocation Basis:
Project is required to replace existing water fund assets.

### 10-Year Cash Flow and Estimated Project Cost:

<table>
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<tr>
<th>Prior</th>
<th>FYE 18</th>
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</table>

**Total Estimated Project Cost**: $268,050

**Current Adopted Budget**: $0

**Increase/(Decrease)**: $268,050
Project Manager: Robyn Mutobe

Project Summary:
The District has operated a commercial recycled water fill station since 2006 when the sand filter plant became operational. The commercial scale fill station allows contractors to get water for construction purposes by filling large water trucks. It operated with few customers from 2006 to 2014. With the onset of the drought in 2014, the use of potable water for construction was curtailed, causing a large increase in customers. Minor upgrades to the fill station were completed to speed up truck fill times. However, the operation is manual and the District relies on customers filling out log sheets to document the water used. The manual logs are reviewed by staff to create invoices. If a contractor is behind on payment, there is no system in place to prevent them from getting additional water. This project will automate the fill station with a card reader or passcode system linked to the District network. Each load of water will be documented and uploaded directly into the billing system and will generate a flag on contractors behind on payments and deactivate the card readers of contractors on default.

CEQA: To be determined.

Reference: Staff recommendation.

Fund Allocation Basis: Project in support of future water customers.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
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</tbody>
</table>

Total Estimated Project Cost $60,000
Current Adopted Budget $0
Increase/(Decrease) $60,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

Water Replacement (Fund 610)

CIP No. 00-W002 Capital Improvements to Increase Water Supply PROGRAM - Phase 2

Funding Allocation: 75% 610 25% 620

Project Manager: Judy Zavadil

Status: Continuing Program

Project Summary:
This program will develop projects to meet the objectives of the Water Supply and Conservation Policy adopted by the Board on October 20, 2015. The program will focus on diversifying the sources of water supply so that no less than 60% of total demand (potable and recycled) is satisfied by local and regional water supplies, and that no more than 40% of total water supply (potable and recycled) comes from any one physical source. The program will fund the most feasible potable reuse projects outlined in the District’s Long-Term Water Supply Study, September 2016, and developed further in the Joint Tri-Valley Potable Water Reuse Feasibility Study. It may include a range of diversification projects including an intertie project with EBMUD to serve "north of the Delta" transfers, or participation in a regional desalination project. Any of the projects funded by this program may be completed in partnership with Tri-Valley or neighboring agencies based on recommendations by the Potable Water Supply Reliability Planning project (CIP 16-W009).

CEQA: Environmental Impact Report


Fund Allocation Basis: Based on the ratio of current water demands to projected build-out demands at the time of program inception

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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</table>

Total Estimated Project Cost $40,000,000
Current Adopted Budget $0
Increase/(Decrease) $40,000,000
CIP No. 00-W011 Water System Replacement and Rehabilitation PROGRAM

Funding Allocation: 100% 610

Project Manager: Steven Delight

Status: Continuing Program

Project Summary:
This program is an element of the District’s Asset Management Program and will fund projects to upgrade, replace and improve water system facilities to ensure the District provides uninterrupted water supply service. This program provides for the renewal or replacement of equipment on an as-needed basis or the upgrade of equipment as it becomes obsolete. This program may also be used to investigate issues that lead to the identification of projects that require the creation of a specific CIP project.

CEQA: To be determined based on individual projects funded by program.

Reference: District internal inspections; CMMS

Fund Allocation Basis: Program required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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<th>FYE 20</th>
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Total Estimated Project Cost $13,580,000
Current Adopted Budget $0
Increase/(Decrease) $13,580,000
CIP No. 17-W002 Electrical Service to Reservoirs 10A and 200B

Funding Allocation: 100% 610

Project Manager:

Project Summary:
This project will install underground conduits and electrical circuits for power and communications between Pump Station 10A and Reservoir 10A. Current power at Reservoir 10A is provided through Alameda County and the power supply has been unreliable. This project will also install a more reliable power source for Reservoir 200B which is currently using a solar panel that requires frequent maintenance.

CEQA: Categorical Exemption [CEQA Guideline 15303].
Reference: Electrical and Instrumentation staff recommendation.

Fund Allocation Basis: Required improvement to existing water system

10-Year Cash Flow and Estimated Project Cost:

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<thead>
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<th>Prior</th>
<th>FYE 18</th>
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Total Estimated Project Cost $585,800
Current Adopted Budget $195,000
Increase/(Decrease) $390,800
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

Water Replacement (Fund 610)

CIP No. 08-6103  Water Main - Sebille Ave to 12th St

Funding Allocation: 100% 610

Project Manager: Status: Future Project

Project Summary:
This project will provide additional capacity to meet fire flows deficiencies in central Dublin due to revised fire department regulations. This project will design and install 1420 feet of 12-inch water main in 12th Street from Sebille Avenue to the east end of 12th Street (northwest corner of U.S. Department of Justice) located in Camp Parks. This project will be coordinated with Camp Parks development.

CEQA: Statutory Exemption [CEQA Guideline 15282]
Reference: Fire Department Regulations

Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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Total Estimated Project Cost $444,600
Current Adopted Budget $359,500
Increase/(Decrease) $85,100
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

**CATEGORY: WATER SYSTEM**

**Water Replacement (Fund 610)**

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Details</th>
<th>Funding Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>T16-28</td>
<td>Water Lines Replacement - Tamarack Drive - Village Pkwy to Firethorn Way</td>
<td>100% 610</td>
</tr>
</tbody>
</table>

**Project Manager:**

**Status:** Future Project

**Project Summary:**

This project will replace the existing 2300 feet of 8-inch and 10-inch asbestos cement pipe (ACP) potable water lines in Tamarack Drive from Village Parkway to Firethorn Way, along with valves, hydrants, and services. The lines were installed in 1961. Staff reviewed the pipe repair history, corrosion information and the acoustic evaluation and have concluded that they are near the end of their useful lives and therefore should be replaced.

**CEQA:** Statutory Exemption [CEQA Guideline 15282]

**Reference:** Asset Management Program

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing water fund assets.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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</table>

Total Estimated Project Cost: $1,101,780

Current Adopted Budget: $0

Increase/(Decrease): $1,101,780
Project Manager: 
Status: Future Project

Project Summary:
This project will replace approximately 2800 feet of existing 4-inch, 6-inch and 8-inch asbestos cement pipe (ACP) potable water lines in Canterbury Lane from Bedford Way to Flanders Way, Cardigan Street, Mayan Court, Flanders Way, and Cardigan Court, along with valves, hydrants, and services. The lines were installed in 1961. Staff reviewed the pipe repair history, corrosion information and the acoustic evaluation and have concluded that they are near the end of their useful lives and therefore should be replaced.

CEQA: Statutory Exemption [CEQA Guideline 15282]
Reference: Asset Management Program
Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
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</table>

Total Estimated Project Cost $1,190,000
Current Adopted Budget $0
Increase/(Decrease) $1,190,000
**CIP No. T16-30  Water Line Replacement Phase 2 - Canterbury Lane**

**Status**: Future Project

**Project Manager:**

**Project Summary:** This project will replace approximately 3700 feet of existing 4-inch, 6-inch and 8-inch asbestos cement pipe (ACP) potable water lines in Canterbury Lane from Flanders Way to Bedford Way, Bedford Way from Canterbury to Alene Street, Hastings Way, Sutton Lane, Jasmine Court, and Canterbury Court, along with valves, hydrants, and services. The lines were installed in 1961. Staff reviewed the pipe repair history, corrosion information and the acoustic evaluation and have concluded that they are near the end of their useful lives and therefore should be replaced.

**CEQA:** Statutory Exemption [CEQA Guideline 15282]

**Reference:** Asset Management Program

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing water fund assets.

### 10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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</tbody>
</table>

**Total Estimated Project Cost** $1,208,770

**Current Adopted Budget** $0

**Increase/(Decrease)** $1,208,770
**DSRSD CIP 10-Year Plan for FYEs 2018 through 2027**

**CATEGORY: WATER SYSTEM**

### Regional Wastewater Replacement (Fund 310)

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>SCADA Field Wireless</th>
</tr>
</thead>
<tbody>
<tr>
<td>T18-03</td>
<td></td>
</tr>
</tbody>
</table>

**Funding Allocation:**

- 52% 310
- 37% 610
- 11% 210

**Project Manager:**

**Status:** Future Project

**Project Summary:**
This project leverages the new communications infrastructure of the SCADA network to provide secure wireless communication from the various field assets of pump stations and major reservoirs to the business network resources (i.e. Lucity, SharePoint) and unified communications system (Jabber, phone system).

**CEQA:**
Categorical Exemption [CEQA Guideline 15302]

**Reference:**
Fund Allocation Basis: Based on number of facilities associated with each fund.

### 10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
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<th>FYE 25</th>
<th>FYE 26</th>
<th>FYE 27</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>0</td>
<td>0 53,000</td>
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</tbody>
</table>

**Total Estimated Project Cost:** $53,000

- Current Adopted Budget: $0
- Increase/(Decrease): $53,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

<table>
<thead>
<tr>
<th>CIP No. T10-85</th>
<th>Camp Parks Water Main - Mitchell Drive, Powell to 8th Streets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Allocation:</td>
<td>100% 610</td>
</tr>
</tbody>
</table>

Project Summary:
This project will install a new 500 feet of 8-inch potable water line in Mitchell Drive north of 8th Street and will include miscellaneous modifications. There have been numerous main repairs required in this area. This project will be coordinated with Camp Parks development.

CEQA:
Statutory Exemption [CEQA Guideline 15282]

Reference:
Asset Management Program

Fund Allocation Basis:
Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
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</tbody>
</table>

Total Estimated Project Cost: $170,900
Current Adopted Budget: $0
Increase/(Decrease): $170,900
Project Manager: 

Project Summary:
This project will replace 2800 feet of 6-inch asbestos concrete pipe (ACP) potable water lines west of Cromwell Avenue between 10th and 12th Streets, and in 12th Street west of Cromwell Avenue to north of Davis Avenue. These lines have a history of frequent breaks and repairs, several have been shear type breaks. This project will be coordinated with Camp Parks development.

CEQA: Statutory Exemption [CEQA Guideline 15282]
Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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<th>FYE 27</th>
<th>Future</th>
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</tbody>
</table>

Total Estimated Project Cost $513,610
Current Adopted Budget $0
Increase/(Decrease) $513,610
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

**CATEGORY: WATER SYSTEM**

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Name</th>
<th>Funding Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>T18-22</td>
<td>Reservoir 20A Recoating</td>
<td>100% 610</td>
</tr>
</tbody>
</table>

Project Manager:  
Status: Future Project

**Project Summary:**

This project will recoat the exterior and interior of Reservoir 20A. The reservoir was cleaned and inspected in 2016. The inspection report indicated that there are multiple coating blisters on the interior surfaces and areas of corrosion on the roof. The interior and exterior coatings are original. The project will also recoat all tank and piping appurtenances including the roof hatch and vents, interior and exterior ladders, manways, inlet, outlet, and overflow pipes. A new cathodic protection system will also be installed to replace the original system. This project will take place after the completion of Reservoir 20B. It may also need to coordinate construction timing with the golden eagle nesting in the tree near the tank site. If the eagle is still there, construction cannot take place until after July 1.

**CEQA:** Categorical Exemption [CEQA Guideline 15301]

**Reference:** 2016 Inspection report

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing water fund assets.

**10-Year Cash Flow and Estimated Project Cost:**

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<th>FYE 18</th>
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</table>

- **Total Estimated Project Cost:** $1,350,000  
- **Current Adopted Budget:** $0  
- **Increase/(Decrease):** $1,350,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

Water Replacement (Fund 610)

CIP No. T16-31  Water Line Replacement - Ironwood Drive
Funding Allocation: 100% 610

Project Manager: Status: Future Project

Project Summary:
This project will replace approximately 2800 feet of existing 4-inch, 6-inch and 8-inch asbestos cement pipe (ACP) potable water lines in Ironwood Drive, Irving Way, Honey Court, and Ironwood Court, along with valves, hydrants, and services. The lines were installed in 1960. Staff reviewed the pipe repair history, corrosion information and the acoustic evaluation and have concluded that they are near the end of their useful lives and therefore should be replaced.

CEQA: Statutory Exemption [CEQA Guideline 15282]
Reference: Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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</table>

Total Estimated Project Cost $1,210,260
Current Adopted Budget $0
Increase/(Decrease) $1,210,260
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

CIP No. T16-37   Microfiltration Rack and Membrane Replacement
Funding Allocation:  100%  610

Project Manager:  Status: Future Project

Project Summary:
This project will replace the microfiltration/ultraviolet (MF/UV) facility membrane racks with an open platform membrane system designed for membrane module interchangeability for more competitive membrane pricing. The membranes will also be replaced. The MF/UV system was constructed in 1998 and the membrane racks will be at the end of their useful life by 2025.

CEQA: Categorical Exemption [CEQA Guidelines 15301, 15303]
Reference: Microfiltration Membrane Replacement Evaluation, Carollo Engineers, October 2014
Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
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</tbody>
</table>

Total Estimated Project Cost  $3,500,000  DSRSD Net Cost: $997,500
Current Adopted Budget  $0  Other Funding: Pleasanton/DERWA share of cost $2,502,500 based on DERWA Agreement for Sale of RW Water to EBMUD and DSRSD, July 2003.
Increase/(Decrease) $3,500,000

DSRSD Net Cost: $997,500
CIP No. T10-86  Camp Parks Water Mains - Lorrying Street and Monroe Avenue

Funding Allocation:  100%  610

Project Summary:
This project will replace 1200 feet of 8-inch potable water lines in Lorrying Street and Monroe Avenue, from 7th to 8th Streets, as well pipelines in Jones and 7th Streets. These lines have had several recent breaks and have required numerous repairs. This project will be coordinated with Camp Parks development.

CEQA: Statutory Exemption [CEQA Guideline 15282]

Reference: Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
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<th>FYE 26</th>
<th>FYE 27</th>
<th>Future</th>
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</table>

Total Estimated Project Cost: $355,100
Current Adopted Budget: $0
Increase/(Decrease): $355,100
CIP No. 08-6202  Pump Station 20A Improvements

Project Manager: 
Status: Future Project

Project Summary:
This project will add an additional pump to Pump Station 20A. The pump station was constructed with provisions for the addition of a fourth pump that matches the existing pumps. Pump Station 20B was sized assuming that this additional pump would be installed. The additional pump is needed to meet buildout pumping capacity in Pressure Zone 2 in eastern Dublin as identified in the 2016 Water Master Plan Update. This project also includes modifications to the motor control center and controls required to accommodate the fourth pump.

CEQA:  EIR Certified by City of Dublin 5/10/93
Reference:  2005 Basis of Design Report for Pump Station 20B; Eastern Dublin Specific Plan; 2016 Water Master Plan Update

Fund Allocation Basis:  Project in support of future water customers.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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</table>

Total Estimated Project Cost $469,040
Current Adopted Budget $327,500
Increase/(Decrease) $141,540
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

CIP No. T00-29 Turnout 6

Funding Allocation: 100% 620

Status: Future Project

Project Manager:

Project Summary:
This project will provide water supply for development in eastern Dublin. A turnout from Zone 7 south off I-580 at Pimlico Drive with a capacity of 6000 gpm (8.6 mgd) will be installed. This project will include 2300 feet of 20-inch main from the turnout to Dublin Boulevard with 200 feet of trenchless pipeline to cross under I-580. This turnout will include chemical feed facilities. Project will be dependent on future development growth in service areas.

CEQA: Previous EIR certified 5-10-93 by City of Dublin
Reference: 2016 Water Master Plan Update

Fund Allocation Basis: Project is required to support future water customers.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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</table>

Total Estimated Project Cost $2,000,000
Current Adopted Budget $0
Increase/(Decrease) $2,000,000
**DSRSD CIP 10-Year Plan for FYEs 2018 through 2027**

**CATEGORY: WATER SYSTEM**

**Water Expansion (Fund 620)**

<table>
<thead>
<tr>
<th>CIP No. T18-26</th>
<th>DERWA Recycled Water Plant - Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Allocation:</td>
<td>100% 620</td>
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</tbody>
</table>

**Project Manager:**

**Project Summary:**
This project will add an additional sand filter and UV at the DERWA Recycled Water Plant to accommodate ultimate recycled water demands.

**CEQA:** To be determined.

**Reference:**
Project in support of future water customers.

**Fund Allocation Basis:** Project in support of future water customers.

### 10-Year Cash Flow and Estimated Project Cost:

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**Total Estimated Project Cost** $3,301,640

**Current Adopted Budget** $0

**Increase/(Decrease)** $3,301,640

**Net Cost to DSRSD:** $1,650,820

DERWA funded project; Assume DSRSD 50% portion based on DSRSD, Pleasanton and EBMUD needed capacity after Phase 2

**Status:** Future Project
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

Water Expansion (Fund 620)

CIP No. 00-W001 Capital Improvement to Increase Water Supply PROGRAM - Phase 1

Funding Allocation: 67% 620 33% 610

Project Manager: Status: Future Program

Project Summary:
The objective of this program is to fund projects that increase potable water supply and develop recycled water and potable water supply improvements. Through FYE 2016, this program funded 1) the Recycled Water Expansion Phase 1: Distribution to West Dublin and Alameda County Facilities Project; 2) the Recycled Water Expansion State Grant Assistance Project; 3) the Water Supply Contingency Plan; 4) the in-progress Water Supply Reliability project in support of the Joint Tri-Valley Potable Reuse Water Feasibility Study; and 5) the Water Reuse Demonstration project. The remainder of the program funds will be used to expand the current recycled water distribution system and to continuously meet the recycled water demands 100% of time, which may include acquiring additional wastewater effluent supplies and/or off-season wastewater effluent storage and to actively promote water conservation for commercial and residential customers, with a long-term goal of a permanent system-wide average annual residential potable water use of no more than 70 gallons per capita per day.

CEQA: To be determined.

Reference:

Fund Allocation Basis: Based on the ratio of current water demands to projected buildout demands at the time of program inception

10-Year Cash Flow and Estimated Project Cost:

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<th>Future</th>
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Total Estimated Project Cost $3,534,000
Current Adopted Budget $0
Increase/(Decrease) $3,534,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WATER SYSTEM

Water Replacement (Fund 610)

CIP No. T16-67 Reservoir Recoating PROGRAM

Funding Allocation: 100%  610

Status: Future Program

Project Manager:

Project Summary:
This project will recoat the interiors and paint the exteriors of potable and recycled reservoirs. The recoating and painting will provide corrosion control, extend the reservoir useful life and maintain facility aesthetics. There are five reservoirs, 30A, 300A, 1A, 3A and 3B, that will require recoating from FYE 2026 through FYE 2030.

CEQA: Categorical Exemption [CEQA Guideline 15302]
Reference: Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

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<th>Prior</th>
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Total Estimated Project Cost $2,656,000

Current Adopted Budget $0

Increase/(Decrease) $2,656,000
CIP 10-YEAR PLAN FYEs 2018 through 2027

* Listed according to project timing from earliest to latest

**CATEGORY: WASTEWATER COLLECTION**

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Name</th>
<th>Page</th>
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<td></td>
<td><strong>2-Year Projects</strong></td>
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<tr>
<td>16-A002</td>
<td>Facilities Relocation for Dublin Blvd Widening - Sierra Court to Dublin Court</td>
<td>80</td>
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<tr>
<td>16-S019</td>
<td>Davona-Berwick 8&quot; Sewer Replacement</td>
<td>81</td>
</tr>
<tr>
<td>16-S021</td>
<td>Dublin Trunk Sewer Rehabilitation</td>
<td>82</td>
</tr>
<tr>
<td>16-S034</td>
<td>Sewer Collection System Replacement and Rehabilitation</td>
<td>83</td>
</tr>
<tr>
<td>16-S022</td>
<td>Camp Parks Sewer Repair</td>
<td>84</td>
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<tr>
<td>18-S006</td>
<td>San Ramon Golf Course 24&quot; Trunk Sewer Rehabilitation</td>
<td>85</td>
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<tr>
<td>18-S007</td>
<td>Alcosta Blvd Sewer Replacement</td>
<td>86</td>
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<tr>
<td>00-S020</td>
<td>Wastewater Collection System Replacement and Rehabilitation PROGRAM</td>
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<td><strong>Future Projects</strong></td>
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<tr>
<td>14-S001</td>
<td>Camp Parks Sewer Rehabilitation Project - Goodfellow Ave North of 8th Street</td>
<td>88</td>
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<tr>
<td>T14-02</td>
<td>Camp Parks Sewer Rehabilitation Project - Davis and Cromwell, 8th to 10 Streets</td>
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<tr>
<td>T16-22</td>
<td>East Dublin 36&quot; Trunk Sewer Rehabilitation</td>
<td>90</td>
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<tr>
<td>14-S002</td>
<td>Camp Parks Sewer Rehabilitation Project - Adams 8th to 10th Streets</td>
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<tr>
<td>T16-50</td>
<td>Iron Horse Trail Sewer Replacement</td>
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<tr>
<td>08-2101</td>
<td>Donahue Dr./Vomac Rd. Relief Sewer</td>
<td>93</td>
</tr>
<tr>
<td>T00-76</td>
<td>Dublin Trunk Relief Sewer</td>
<td>94</td>
</tr>
</tbody>
</table>
Project Summary:
This project will relocate water and sewer utilities to accommodate the widening of Dublin Blvd between Sierra Court and Dublin Court by the City of Dublin. Due to the complex construction activities and sequencing required for the widening of Dublin Blvd, this project will be completed in two parts. The first part is relocating the District’s sewer Lift Station 1 prior to the City widening Dublin Blvd. This part is to be completed by the District’s contractor between April 2017 and October 2017. The lift station is currently located in the sidewalk alongside Dublin Blvd. With the widening of Dublin Blvd, the lift station would be located in a traveled lane which would make access to the lift station hazardous for both District staff and the public. The second part is relocation of water and sewer facilities (e.g. water meters, services, backflow preventers, fire hydrants, etc.) to outside the proposed widened Dublin Blvd. This part also includes vertical adjustments of water valve and sewer manhole covers within Dublin Blvd. This part will be completed by the City’s contractor performing the construction work of widening Dublin Blvd. This part is scheduled to be completed between September 2017 and December 2018. The District will reimburse the City for the portion of the cost to relocate the water and sewer facilities through the Tri-Valley Intergovernmental Reciprocal Services Agreement.

CEQA: Categorical Exemption [CEQA 15302(c) and 15061(b)(3)] - NOE filed 2/10/17
Reference: Tri-Valley Intergovernmental Reciprocal Services Agreement, 12/4/2014
Fund Allocation Basis: Ratio of sewer and water appurtenances affected.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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</table>

Total Estimated Project Cost $1,953,000
Current Adopted Budget $1,953,000
Increase/(Decrease) $0
Project Manager: Jackie Yee

Project Summary:
Approximately 175 feet of existing 8-inch vitrified clay pipe (VCP) sewer, constructed in 1969 and located in an easement along the north side of a flood control channel, has a significant sag that may be the result of the channel bank movement. It is on the Operations Department’s trouble spot list for monthly cleaning to prevent sanitary sewer overflows. The project will replace the sewer beginning at a manhole in Davona Drive (San Ramon) located approximately 170 feet south of Bridgeport and continue approximately 175 feet east along the channel (MH T16D1-15 to MH T16D1-14). The project will evaluate alternatives including construction of a new sewer in Davona and redirecting flow south to an existing manhole (MH T17B1-25), which may require coring through an existing box culvert or an inverted siphon.

CEQA: Statutory Exemption [CEQA Guideline 15282]
Reference: Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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</table>

Total Estimated Project Cost $420,000
Current Adopted Budget $420,000
Increase/(Decrease) $0
CIP No. 16-S021  Dublin Trunk Sewer Rehabilitation

Funding Allocation: 100% 210

Project Manager: Jackie Yee

Status: Continuing Project

Project Summary:
This project will rehabilitate 7,945 feet of 33-inch to 42-inch diameter reinforced concrete pipe (RCP) Dublin trunk sewer. The project extends from Village Parkway and Tamarack Drive south to Village Parkway and Clark Ave, then from Clark Ave under Highway 580 to Commerce Circle in Pleasanton. The project also includes rehabilitation of the sewer from the intersection of the Dublin and east Dublin PRFTA trunk sewers to the Regional Wastewater Treatment Facility (RWTF) entrance. The Dublin trunk sewer was installed in 1960 and 1961. The sewer has deteriorated and has significant spalling and exposed reinforcing steel in locations. The project will first evaluate alternatives for pipeline lining, bypass pumping, and construction phasing. Based on this evaluation, the construction methods and phasing may be modified as the project progresses.

CEQA: Categorical Exemption [CEQA Guidelines 15302(c) and 15303(d)], Notice of Exemption filed 1/18/17

Reference: Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
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<tr>
<th>Prior</th>
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Total Estimated Project Cost $6,664,952
Current Adopted Budget $6,664,952
Increase/(Decrease) $0
**DSRSD CIP 10-Year Plan for FYEs 2018 through 2027**

**CATEGORY: WASTEWATER COLLECTION**

<table>
<thead>
<tr>
<th>CIP No. 16-S034</th>
<th>Sewer Collection System Replacement and Rehabilitation</th>
</tr>
</thead>
</table>

**Funding Allocation:** 100% 210

**Project Manager:** Jackie Yee  
**Status:** Continuing Project

**Project Summary:**
This project will rehabilitate or replace over 20 individual sections of sewer line that are cracked, broken or have offset joints. As part of the Asset Management Program for the collections system, sewer lines are periodically inspected and given a condition rating in accordance with the Pipeline Assessment Certification Program (PACP). The sewer lines with the most severe PACP structural condition ratings were identified for repair. This project will determine the most cost-effective repair for each section of pipeline and develop standard technical specifications that can be used for a variety of sewer line repair methods such as cured-in place pipe (CIPP), trenching, spot repairs, etc. The current budget is for design only, the project budget will be increased to include construction after repair recommendations have been determined.

**CEQA:** Statutory Exemption [CEQA Guideline 15282]  
**Reference:** Asset Management Program

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing local wastewater fund assets.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
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<tr>
<th>Prior</th>
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**Total Estimated Project Cost** $377,700  
**Current Adopted Budget** $67,700  
**Increase/(Decrease)** $310,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CIP No. 16-S022  Camp Parks Sewer Repair

Funding Allocation:  100%  210

Project Manager: Jackie Yee

Status: Continuing Project

Project Summary:
The project would repair/rehabilitate approximately 282 feet of 24-inch vitrified clay pipe (VCP) in Camp Parks that was broken with hinged fractures and out of round. It is located downstream from manhole# MH W20C1-26), for approximately 100 feet downstream, about 25 feet of which is under a creek, and just upstream of the Camp Parks equipment storage and maintenance facility. The project will evaluate alternatives for spot repair or temporary rehabilitation to prevent collapse.

CEQA: Statutory Exemption [CEQA Guideline 15282]

Reference: Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
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<th>Prior</th>
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Total Estimated Project Cost $244,000

Current Adopted Budget $244,000

Increase/(Decrease) $0
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WASTEWATER COLLECTION

Local Wastewater Replacement (Fund 210)

CIP No. 18-S006  San Ramon Golf Course 24" Trunk Sewer Rehabilitation

Funding Allocation:  100%  210

Project Manager: Jackie Yee

Status: New Project

Project Summary:
This section of existing 24-inch reinforced concrete pipe (RCP) installed in 1961 has deteriorated with corrosion visible and concrete spalling. The project will rehabilitate approximately 470 feet of the trunk sewer in the Iron Horse Trail at the San Ramon Valley Golf Course from about 1500 feet north of Alcosta Blvd, south to about 1000 feet north of Alcosta Blvd.

CEQA: Statutory Exemption [CEQA Guideline 15282]

Reference: Asset Management Program: results of National Plant Services field investigation (CCTV, sonar, laser) of large diameter sewers

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
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<tr>
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</table>

Total Estimated Project Cost $557,500
Current Adopted Budget $0
Increase/(Decrease) $557,500
Project Manager: Robyn Mutobe

Status: New Project

Project Summary:
The project will replace approximately 1250 feet of 10-inch of vitrified clay pipe (VCP) sewer located in Alcosta Blvd from approximately at Village Parkway east to the Iron Horse Trail. The sags in the pipe make it impossible to TV to determine its condition and requires cleaning on frequent basis (3-month trouble spot). The project will replace the sewer as needed to prevent the potential of sanitary sewer overflow (SSO) incidents.

CEQA: Statutory Exemption [CEQA Guideline 15282]

Reference: Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
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Total Estimated Project Cost: $480,375
Current Adopted Budget: $0
Increase/(Decrease): $480,375
**Project Summary:**
This project will insure that uninterrupted sewer collection service is provided and will include, but are not limited to, repairing leaking pipes, pipe joints and manholes to reduce the amount of infiltration and inflow rates, which will reduce operating costs at the wastewater treatment plant and extend the LAVWMA wet weather capacity. Sewer lines and manholes will be repaired or replaced as identified by District staff annually.

**CEQA:**
To be determined based on each project funded by the program.

**Reference:**
Asset Management Program

**Fund Allocation Basis:**
Program is required to replace or rehabilitate existing local wastewater fund assets.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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</table>

Total Estimated Project Cost $4,190,000
Current Adopted Budget $0
Increase/(Decrease) $4,190,000
Project Manager:  

Project Summary:  
This project will rehabilitate approximately 1500 feet of 8-inch of vitrified clay pipe (VCP) sewer on Goodfellow Avenue north of 8th Street. It will include fixing the siphon installed by the Federal Corrections Institute (FCI). This pipe has several cracks and fractures leading to high inflow and infiltration rates. Project cost will be dependent on the method of rehabilitation which may be slip line, pipeburst or replacement.

CEQA:  
Statutory Exemption [CEQA Guideline 15282]

Reference:  
Camp Parks Privatization Study, WBA, July 1998

Fund Allocation Basis:  
Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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</table>

Total Estimated Project Cost: $390,009  
Current Adopted Budget: $225,000  
Increase/(Decrease): $165,009
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WASTEWATER COLLECTION
Local Wastewater Replacement (Fund 210)

CIP No. T14-02  Camp Parks Sewer Rehabilitation Project - Davis and Cromwell, 8th to 10 Streets
Funding Allocation:  100%  210

Project Manager: 

Project Summary:
This project will rehabilitate approximately 2600 feet of 12-inch of vitrified clay pipe (VCP) sewer along Davis and Cromwell Avenues, between 8th and 10th Streets. The existing sewer has several cracks and fractures leading to high inflow and infiltration rates. The project may pipeburst, or slip line, or replace the pipe in its entirety.

CEQA:
Statutory Exemption [CEQA Guideline 15282]

Reference:
Camp Parks Privatization Study, WBA, July 1998

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th></th>
<th>FYE 18</th>
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Total Estimated Project Cost $1,113,480
Current Adopted Budget $0
Increase/(Decrease) $1,113,480
CIP No. T16-22  East Dublin 36” Trunk Sewer Rehabilitation

Funding Allocation: 100%  210

Project Manager:  

Project Summary:  
This project will rehabilitate approximately 670 feet of an existing 36-inch reinforced concrete pipe (RCP) of the East Dublin PRFTA trunk. The pipe was installed in 1960 and have deteriorated with some corrosion visible and significant spalling. The first pipe reach (Johnson BP) is in an easement that begins just west of Johnson Drive (about 500 feet north of Owens Drive) and continues west almost to Owens Drive (loop). The second pipe section (Hacienda BP) is in an easement just south of I-580 between Owens Court and the Pleasanton BART parking lot (behind Dahlin Group Bldg).

CEQA:  
Statutory Exemption [CEQA Guideline 15282]

Reference:  
Results of National Plant Services field investigation (CCTV, sonar, laser) of large diameter sewers

Fund Allocation Basis:  
Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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Total Estimated Project Cost  $737,600
Current Adopted Budget  $0
Increase/(Decrease)  $737,600
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WASTEWATER COLLECTION

Local Wastewater Replacement (Fund 210)

CIP No. 14-S002  Camp Parks Sewer Rehabilitation Project - Adams 8th to 10th Streets

Funding Allocation: 100%  210

Project Manager:  
Status: Future Project

Project Summary:
This project will rehabilitate approximately 1300 feet of 12-inch of vitrified clay pipe (VCP) sewer along Adams Avenue between 8th and 10th Streets. The existing sewer has several cracks and fractures leading to high inflow and infiltration rates. Project cost will be dependent on the method of rehabilitation which may be slip line, pipeburst or replacement.

CEQA: Statutory Exemption [CEQA Guideline 15282]

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

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<tr>
<th>Prior</th>
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Total Estimated Project Cost $505,803

Current Adopted Budget $270,000

Increase/(Decrease) $235,803
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WASTEWATER COLLECTION

Local Wastewater Replacement (Fund 210)

CIP No. T16-50  Iron Horse Trail Sewer Replacement

Funding Allocation:  100%  210

Project Manager:  Status: Future Project

Project Summary:
The project will replace approximately 1650 feet of 8-inch and 10-inch of polyvinyl chloride pipe (PVC) and vitrified clay pipe (VCP) sewer located just north of the Alameda/Contra Costa County line that cross the Iron Horse Trail and the adjacent creek. The project will also add manholes; at this time, the manhole spacing makes TV inspection and cleaning problematic. The sags in the pipe make it impossible to TV to determine its condition and requires cleaning on frequent basis (3-month trouble spot). The project will replace the sewer and additional sewers upstream as needed to prevent the potential of sanitary sewer overflow (SSO) incidents.

CEQA: Statutory Exemption [CEQA Guideline 15282]
Reference: District internal inspections, CMMS data; Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

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<tr>
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Total Estimated Project Cost $487,765
Current Adopted Budget $0
Increase/(Decrease) $487,765
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WASTEWATER COLLECTION

Local Wastewater Replacement (Fund 210)

CIP No. 08-2101  Donahue Dr./Vomac Rd. Relief Sewer

Funding Allocation:  100%  210

Project Manager:  Status: Future Project

Project Summary:
This project will investigate and improve the inflow and infiltration (I&I) identified in the 2005 Sewer Master Plan. There are 3 sub-basins that lead to the Donahue/Vomac area. One or all of these sub-basins are contributing to unusually high infiltration and inflow rate. The investigation will likely include additional TV inspection, flow monitoring, and smoke testing. Problem areas identified will be repaired and replaced. It is anticipated that repairs and replacement of 8 and 10 inch sewer mains in the sub-basin will be needed.

CEQA:  Categorical Exemption [CEQA Guideline 15302]

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
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</table>

Total Estimated Project Cost $721,445
Current Adopted Budget $696,833
Increase/(Decrease) $24,612
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: WASTEWATER COLLECTION

Local Wastewater Expansion (Fund 220)

CIP No. T00-76  Dublin Trunk Relief Sewer

Funding Allocation: 100%  220

Project Manager:  

Status: Future Project

Project Summary:
The project will construct a relief sewer for the Dublin trunk sewer downstream of the east Dublin trunk sewer connection located within the District’s Dedicated Land Disposal site to an existing 48-inch sewer line within the WWTP, near the East Amador Lift Station. The project consists of approximately 2100 feet of a 42-inch parallel pipeline. The 2005 Wastewater Collection System Master Plan Update indicated that the Dublin Trunk sewer surcharges in a 20-year return frequency storm. This project is required to comply with the Regional Water Quality Control Board (RWQCB) design requirements and to reduce infiltration and inflow rate.

CEQA: Initial Study may be required.

Reference: 2005 Wastewater Collection System Master Plan Update

Fund Allocation Basis: Project is required to convey future customer wastewater flows.

10-Year Cash Flow and Estimated Project Cost:

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<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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Total Estimated Project Cost $6,235,000
Current Adopted Budget $0
Increase/(Decrease) $6,235,000
CIP 10-YEAR PLAN FYEs 2018 through 2027

* Listed according to project timing from earliest to latest

### CATEGORY: RESOURCE RECOVERY FACILITIES

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Name</th>
<th>Page</th>
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<tbody>
<tr>
<td>05-3103</td>
<td>FSL Piping Improvements</td>
<td>97</td>
</tr>
<tr>
<td>07-3201</td>
<td>DSRSD Participation in Regional Biosolids Facility Project</td>
<td>98</td>
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<tr>
<td>07-3203</td>
<td>Anaerobic Digester No. 4</td>
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<td>12-P003</td>
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<td>13-S004</td>
<td>Pump Stations VFD Replacements</td>
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<td>16-P023</td>
<td>RWTF Lighting</td>
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<td>16-P024</td>
<td>RWTF Fire Alarm System Upgrades</td>
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<td>Bio-Gas Treatment System Improvements</td>
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<td>EPS1 and EPS2 Pump Modifications</td>
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<td>RWTF Administration Building Improvements</td>
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<td>17-P004</td>
<td>Primary Sedimentation Expansion and Improvements</td>
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<td>18-P008</td>
<td>RWTF Industrial Control Network Security Essentials</td>
<td>108</td>
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<td>18-P009</td>
<td>RWTF Access Security Assessment</td>
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<td>Biogas Flare Improvements</td>
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<td>Chlorinated Secondary Effluent Process Water System Condition Assessment</td>
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<td>Inner Sewer Wetwell and Pumping Assessment</td>
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<td>Wet Weather Flow Capacity and Chlorine Contact Tank Dewatering</td>
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<td>Biosolids Dewatering Facility</td>
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<td>18-P014</td>
<td>WWTP Recycled and Potable Water Systems</td>
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<td>Gravity Belt Thickener Rehabilitation</td>
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<td>Alum Addition</td>
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### Future Projects

<table>
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<th>CIP No.</th>
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<td>Foul Air Line Rehabilitation</td>
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<td>Hypochlorite Building Rehabilitation</td>
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<td>Ferrous Chloride System Improvements</td>
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<td>T18-05</td>
<td>FSL MCC Improvements</td>
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<tr>
<td>T00-37</td>
<td>Recoating of Digester Interior Covers 3, 2, and 1</td>
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CIP 10-YEAR PLAN FYEs 2018 through 2027

* Listed according to project timing from earliest to latest

CATEGORY: RESOURCE RECOVERY FACILITIES

<table>
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<th>CIP No.</th>
<th>Project Name</th>
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<td>T16-11</td>
<td>WWTP Motor Control Center and Distribution Panel &quot;A&quot; Improvements</td>
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<td>T12-19</td>
<td>RWTF Fencing and Security - Phase 2</td>
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<td>T16-40</td>
<td>RWTF Pavement Repair</td>
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<td>T16-54</td>
<td>Odor Reduction Tower Replacement</td>
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<td>Cogeneration Engine Replacement</td>
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<td>T10-83</td>
<td>Cover Primary Clarifiers</td>
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<td>T12-08</td>
<td>Cover Settled Sewage Channel and Selector</td>
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<tr>
<td>T16-42</td>
<td>Nutrient Removal</td>
<td>135</td>
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</table>
Regional Wastewater Replacement (Fund 310)

CIP No. 05-3103   FSL Piping Improvements

Funding Allocation:  100%  310

Project Manager:  Rudy Portugal  Status:  Continuing Project

Project Summary:
The facultative sludge lagoons (FSLs) are a biological process that must have monitoring and controls in place to enable the process to be well operated. The return of the cap water from the FSLs has a large impact on the secondary treatment process at the wastewater treatment plant which can negatively impact the tertiary treatment of the effluent. This project will install various process controls in the FSL system including: improvements to the return flow overflow systems; replacement of chlorinated secondary effluent process water system (3 Water or 3W) charging valves; addition of new sludge charging valves; and sampling locations for digested sludge and return flows.

CEQA:  Categorical Exemption [CEQA Guideline 15302]

Fund Allocation Basis:  Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
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Total Estimated Project Cost  $714,369
Current Adopted Budget  $714,369
Increase/(Decrease)  $0

DLD Area
FSL's
WWTP
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: RESOURCE RECOVERY FACILITIES

Regional Wastewater Expansion (Fund 320)

CIP No. 07-3201  DSRSD Participation in Regional Biosolids Facility Project

Funding Allocation: 100% 320

Project Manager: Steven Delight  Status: Continuing Project

Project Summary:
The District is participating in a regional biosolids facility project in coalition with 19 Bay Area agencies. The environmental phase is complete as well as a 10% design. At this time, District staff is monitoring the testing efforts of a super critical water oxidation "aquacritox" pilot facility in Valencia, Spain. Upon completion of all testing activities, the viability of the project at a District facility will be reevaluated. To date, the District continues to participate with the coalition. The coalition is adjusting its mission and moving its focus towards evaluating all technologies that are new innovative solutions to reuse biosolids in a beneficial way. Annual coalition dues have been paid from this project in the past. In future budget cycles, dues for participation with the coalition may be shifted to the operating budget.

CEQA: Statutory Exemption [CEQA Guideline 15262]

Reference:

Fund Allocation Basis: Project is required to provide biosolids reuse for future customers.

10-Year Cash Flow and Estimated Project Cost:

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<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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</tr>
</tbody>
</table>

Total Estimated Project Cost $748,330

Current Adopted Budget $748,330

Increase/(Decrease) $0
Project Summary:
This project will plan, design and construct a new 1.03 MG anaerobic digester and all ancillary equipment at the wastewater treatment plant (WWTP) to provide adequate biosolids process redundancy under current AWDF. The WWTP has three anaerobic digesters; two with a volume of 0.58 MG and one with a volume of 1.03 MG. With the three digesters in service, there is sufficient digester capacity. However, if the largest digester were taken out of service for maintenance, the WWTP would not have sufficient digester capacity. When the ADWF reaches approximately 14 mgd, the digester needs to be constructed in order to take the largest digester out of service to maintain solids treatment capacity. Reduced digester capacity increases the risk of digester upset, which could lead to odor issues. To provide adequate reliability and redundancy to this critical unit process, a fourth digester is required. This project also include a fats, oils, and grease (FOG) receiving facility to increase digester gas production. Parking modifications and internal landscaping around the digester and plant administration building will be made to accommodate displaced parking due to digester construction.

CEQA:
WWTP Expansion and Improvement Project, Initial Study/Mitigated Negative Declaration, May 1998
Reference:
2017 WWTP and Biosolids Master Plan; WWTP Process Capacity Study; Anaerobic Digester No. 4 Preliminary Design Report, May 2009; Ninety Percent Design Drawings, June 2010

Fund Allocation Basis: Fund split based on total volume needs for future capacity vs. redundancy for existing capacity.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
<th>FYE 27</th>
<th>Future</th>
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<tbody>
<tr>
<td>3,632,041</td>
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</tbody>
</table>

Total Estimated Project Cost: $13,130,826
Current Adopted Budget: $9,869,256
Increase/(Decrease): $3,261,570
**DSRSD CIP 10-Year Plan for FYEs 2018 through 2027**

**CATEGORY: RESOURCE RECOVERY FACILITIES**

<table>
<thead>
<tr>
<th>CIP No. 12-P003</th>
<th>RAS Line Rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funding Allocation:</strong></td>
<td>100% 310</td>
</tr>
</tbody>
</table>

**Project Manager:** Jackie Yee

**Status:** Continuing Project

**Project Summary:**
This project will reline approximately 550 feet of 24-inch steel pipeline that convey the wastewater treatment plant return activated sludge (RAS). The RAS system is an integral part of the treatment process and the plant cannot risk failure of the system. The 24-inch RAS line was inspected during a repair of the line and was found to be in poor shape with multiple leaks due to coating holidays and corrosion. The structural integrity of the pipe is fair and lining the pipe will extend its life.

**CEQA:**
Categorical Exemption [CEQA 15302]

**Reference:**
Inspection results

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing regional wastewater fund assets.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
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<th>FYE 23</th>
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</tbody>
</table>

**Total Estimated Project Cost** $744,136

**Current Adopted Budget** $744,136

**Increase/(Decrease)** $0
Project Summary:
The project will replace 17 Robicon brand variable frequency drives (VFD) which are used to control pump speed and flow at District facilities. The existing VFDs are currently functioning; however, Robicon went out of business several years ago and no other company picked up support of their product line. Replacement parts cannot be found and there is no technical support. Some of the pumps that are using these VFDs are very important and the District cannot have them out of service. The most important pumps that have these VFDs are the influent pumps, the effluent pumps, and the recycled water pump station PSR1. The recycled pump station is a DERWA facility and the cost for that replacement will be reimbursed to the District.

CEQA: Categorical Exemption [CEQA Guideline 15302]

Reference:
Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

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<tr>
<th></th>
<th>FYE 18</th>
<th>FYE 19</th>
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<tr>
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</table>

Total Estimated Project Cost: $2,045,477
Current Adopted Budget: $2,045,477
Increase/(Decrease): $0

DSRSD Net Cost: $1,534,108
Other Funding: DERWA pays for PSR1 portion which is 25% of the cost of the project
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: RESOURCE RECOVERY FACILITIES

Regional Wastewater Replacement (Fund 310)

CIP No. 16-P023   RWTF Lighting
Funding Allocation:  100%  310

Project Manager: Maurice Atendido
Status: Continuing Project

Project Summary:
This project will review the overall lighting at the Regional Wastewater Treatment Facility (RWTF) and install lighting along the roadway from the front gate to Building A.

CEQA: Categorical Exemption [CEQA Guideline 15301]
Reference: Staff recommendation

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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</tbody>
</table>

Total Estimated Project Cost $85,000
Current Adopted Budget $85,000
Increase/(Decrease) $0
Project Manager: Dan Lopez  

Status: Continuing Project

Project Summary:
The Regional Wastewater Treatment Facility (RWTF) currently has four different fire alarm controls panels (FACP) on two separate systems. Two of the FACPs are obsolete and the other two are crude remotes to the primary systems at Building A and Building R. There are separate dialers with two phones lines (primary and backup) for each system. This configuration complicates the maintenance and testing of the systems. This project will integrate the entire system into a single FACP that could be easily networked and expanded as needed. Some of the existing infrastructure (i.e. smoke detectors, strobes, pull stations, etc.) will be utilized to the extent possible which should reduce cost and labor. The upgrade will also include other items such as adding fire alarm notification devices to the first and second floors of Building A, tying in flow switch (at riser) to FACP, panel programming, and fire alarm drawings that will improve staff's ability to maintain and repair the system.

CEQA: Categorical Exemption [CEQA Guideline 15301]

Reference: Staff recommendation

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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</tbody>
</table>

Total Estimated Project Cost $204,150

Current Adopted Budget $33,000

Increase/(Decrease) $171,150
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: RESOURCE RECOVERY FACILITIES

CIP No. 16-P028  Bio-Gas Treatment System Improvements

Funding Allocation: 67% 320  33% 310

Project Manager: Robyn Mutobe  Status: Continuing Project

Project Summary:
The existing biogas scrubber cleans and pressurizes biogas prior to being sent to the cogeneration engines. Clean biogas improves engine efficiency and assists in meeting BAAQMD regulations at cogen. When the new digester, primaries, and fats, oils and grease (FOG) station are put into operation, additional solids will collected for digestion. The additional solids will increase biogas production. At this time, the biogas scrubber is working at capacity. Additional gas will need to be cleaned prior to sending it to cogen. This project will evaluate the existing biogas scrubber and make recommendations to improve the existing scrubber or replace it.

CEQA: Categorical Exemption [CEQA Guideline 15303]
Reference: 2017 WWTP and Biosolids Master Plan
Fund Allocation Basis: Based on 140 scfm current gas flow vs 430 scfm new gas flow after improvements

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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<th>FYE 21</th>
<th>FYE 22</th>
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<th>FYE 26</th>
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<th>Future</th>
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</table>

Total Estimated Project Cost  $4,030,767
Current Adopted Budget  $70,000
Increase/(Decrease)  $3,960,767
Project Manager: Shawn Quinlan

Project Summary:
This project will modify three effluent pump station #1 (EPS1) pumps and two effluent pump station # 2 (EPS2) pumps to maintain full pumping capacity in wet weather conditions. The effluent pump bushings require modifications to flush out sediment and plastics. Three of the pumps have seized up and had to be pulled out and repaired. This project will modify the bushings of the remaining pumps.

CEQA: Categorical Exemption [CEQA Guideline 15301 and 15302]
Reference: Staff recommendation

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
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<th>FYE 24</th>
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</tbody>
</table>

Total Estimated Project Cost: $250,000
Current Adopted Budget: $250,000
Increase/(Decrease): $0
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: RESOURCE RECOVERY FACILITIES

Regional Wastewater Replacement (Fund 310)

CIP No. 16-P031  RWTF Administration Building Improvements

Funding Allocation: 100% 310

Project Manager: Jackie Yee

Status: Continuing Project

Project Summary:
This project will complete several improvements to the Regional Wastewater Treatment Facility (RWTF) Administration building. It will repair the leaking roof, repair a sagging floor section, replace the carpet on the main floor, replace vinyl tile in lab, develop an overall space utilization plan, upgrade fire system for existing infrastructure, and install security card readers. The security card readers will be installed on three different back and side doors to the building and in the 2nd floor laboratory area. Readers will allow access control; security and safety over equipment and controlled substances per Drug Enforcement Administration (DEA) requirement.

CEQA:
Reference: Staff recommendation

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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<th>FYE 21</th>
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<th>FYE 25</th>
<th>FYE 26</th>
<th>FYE 27</th>
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<tbody>
<tr>
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</tbody>
</table>

Total Estimated Project Cost: $334,997

Current Adopted Budget: $260,000

Increase/(Decrease): $74,997
**DSRSD CIP 10-Year Plan for FYEs 2018 through 2027**

**CATEGORY: RESOURCE RECOVERY FACILITIES**

**Regional Wastewater Expansion (Fund 320)**

<table>
<thead>
<tr>
<th>Project No. 17-P004 Primary Sedimentation Expansion and Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Allocation: 85% 320 15% 310</td>
</tr>
</tbody>
</table>

**Project Manager:** Jackie Yee  

**Status:** Continuing Project

**Project Summary:**

This project will construct up to three additional primary sedimentation tanks at the Regional Wastewater Treatment Facility (RWTF). The primary treatment capacity is undersized for the facility’s current average dry weather flow. Insufficient primary treatment capacity overburdens the aeration basins and secondary clarifiers leading to higher energy costs and more difficulties in controlling the secondary effluent water quality. The additional primary sedimentation tanks will provide the treatment capacity needed for current and buildout flows.

**CEQA:** Initial Study/Mitigated Negative Declaration  

**Reference:** 2017 WWTP and Biosolids Master Plan

**Fund Allocation Basis:** Based on ratio of WWTP flow at which project was estimated to be required to WWTP buildout flow per the 2007 WWTP Master Plan Update

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
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<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
<th>FYE 27</th>
<th>Future</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

Total Estimated Project Cost $10,000,000  
Current Adopted Budget $4,794,000  
Increase/(Decrease) $5,206,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CIP No. 18-P008  RWTF Industrial Control Network Security Essentials

Project Manager: Bob Treppa  Status: New Project

Project Summary:
This project will improve the network infrastructure to bring the Regional Wastewater Treatment Facility (RWTF) network up to current standards as a tighter security schema will be implemented. Much of the current industrial control switching is legacy equipment handed down from the business network or is consumer grade rather than industrial. Much of the equipment is past end-of-life and no longer supported by vendor or the manufacturer. This project will improve network security and standardize network switching to Cisco 4000i (like Field SCADA) and 3850’s to allow for more security. Additional security allows for more wireless connections to provide denser connectivity from mobile devices.

CEQA: Categorical Exemption [CEQA Guideline 15302]
Reference: Staff Recommendations
Fund Allocation Basis: Project will benefit entire SCADA network including treatment plant and field operations facilities.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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<th>FYE 26</th>
<th>FYE 27</th>
<th>Future</th>
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</thead>
<tbody>
<tr>
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</table>

Total Estimated Project Cost  $400,000
Current Adopted Budget  $0
Increase/(Decrease)  $400,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: RESOURCE RECOVERY FACILITIES

CIP No. 18-P009  RWTF Access Security Assessment

Funding Allocation: 100%  310

Project Manager: Dan Lopez

Project Summary:
This project will assess the current security at the Regional Wastewater Treatment Facility (RWTF). In the past, residents, contractors, and vendors have entered the plant site unescorted. Once inside, the visitors do not always check in to the administration building. This project will examine options and provide a design to increase site security.

CEQA: Categorical Exemption [CEQA Guideline 15302]

Reference: Staff recommendations

Fund Allocation Basis: Project is required to protect existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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<th>FYE 26</th>
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</table>

Total Estimated Project Cost $50,000
Current Adopted Budget $0
Increase/(Decrease) $50,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: RESOURCE RECOVERY FACILITIES

Regional Wastewater Replacement (Fund 310)

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>18-P010</th>
<th>Biogas Flare Improvements</th>
</tr>
</thead>
</table>

Funding Allocation: 100% 310

Status: New Project

Project Manager: Robyn Mutobe

Project Summary:
This project will replace the Regional Wastewater Treatment Facility's existing biogas flare. Typically, all biogas is used to power the cogen engines after the gas is scrubbed. If the gas scrubber is out of service, or if cogen is offline, biogas must be vented to prevent overpressurization of the digesters. The flare cleanly burns the biogas under a BAAQMD permit. At this time, the existing flare is out of compliance with Bay Area Air Quality Management District (BAAQMD) requirements. This project will evaluate and replace the existing flare and three-way control valves located on the digesters. Additional permitting may be required through the BAAQMD.

CEQA: Categorical Exemption [CEQA Guideline 15301 and 15302]

Reference:

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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</tbody>
</table>

Total Estimated Project Cost $625,000
Current Adopted Budget $0
Increase/(Decrease) $625,000
Project Manager: Aaron Johnson

Project Summary:
This project will assess the condition of the existing chlorinated secondary effluent process water (3 Water or 3W) system at the wastewater treatment plant. The current 3W system is the backbone for plant operations. 3W is treated process water used for spray water, pump seal water, and cooling water for cogen. When 3W system goes down, the overall plant process is compromised. Although the 3W system is currently backed up with recycled water (4 Water or 4W) system, 4W relies on the same piping as 3W, meaning the backup is only for pump failure and not for a major leak. This evaluation will look at the pumps as well as the existing piping. The project will also evaluate other critical pipelines within the boundaries of the plant. Recommendations may be to replace sections of 3W or potentially to connect a backup water supply to key processes. This project is for evaluation only, additional funding will be needed based on recommendations.

CEQA: Not a project under CEQA [CEQA Guideline 15378]

Reference: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
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<tr>
<th>Prior</th>
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</tbody>
</table>

Total Estimated Project Cost $75,000
Current Adopted Budget $0
Increase/(Decrease) $75,000
**DSRSD CIP 10-Year Plan for FYEs 2018 through 2027**

**CATEGORY: RESOURCE RECOVERY FACILITIES**

**CIP No. 18-P012  Inner Sewer Wetwell and Pumping Assessment**

**Funding Allocation:** 100% 310

**Project Manager:** Robyn Mutobe  
**Status:** New Project

**Project Summary:**

This project will assess the current inner sewer wetwell and pumping system. This system is integral to the wastewater treatment plant process as it pumps intersewer water around the influent pumps and metering system. This pump around is necessary for accurate metering of plant influent flows. However, this system is problematic and the pumps have a short service life due to conditions. This project will assess the equipment and wetwell to determine if the equipment is sized properly or perhaps determine that there is a better way to satisfy the goal for accurate influent metering. This project is for evaluation only, additional funding will be needed based on recommendations from the report.

**CEQA:**

**Reference:**

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing regional wastewater fund assets.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
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<tbody>
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<td>$0</td>
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</tr>
</tbody>
</table>

**Total Estimated Project Cost** $75,000  
**Current Adopted Budget** $0  
**Increase/(Decrease)** $75,000
Project Summary:
This project will upgrade the WWTP Supervisory Control and Data Acquisition (SCADA) communication network, replace and program the programmable logic controllers (PLCs), replace the servers, install a new database repository for historical data and acquire a web portal to view SCADA data over the District’s business network. The WWTP SCADA servers communicate with the plant PLCs through ARCNET, a legacy control system for which parts are no longer available and soon will no longer be supported. This project will convert the ARCNET system to an industry standard ethernet system. This project will also replace the PLCs with ethernet compatible water/wastewater industry standard PLCs. This project will involve complex construction sequencing to allow for parallel SCADA systems during implementation as the plant processes cannot be interrupted. It will also require thorough testing of the PLC programming and communication system to assure reliable plant operation after cut-over to the new system.

CEQA: Categorical Exemption [CEQA Guideline 15301]
Reference: SCADA System Master Plan, March 2010
Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
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</table>

Total Estimated Project Cost $2,964,304
Current Adopted Budget $2,964,179
Increase/(Decrease) $125
Project Manager: Steven Delight

Status: Continuing Project

Project Summary:
This project will remove a divider wall between the chlorine contact tank (CCT) influent channel and the CCT and remove the weir in the chlorine junction box to allow greater flows through these structures. The project will also add a CCT dewatering system. When the wastewater treatment plant flow is greater than 37 mgd, the secondary clarifiers flood due to hydraulic constraints downstream of the clarifiers. Removal of the walls and weirs will allow for greater flows through the wastewater treatment plant. Also, the chlorine contact tank should ideally be cleaned once every quarter. Dewatering the CCT for cleaning involves extensive pumping equipment setup and staff time, and once everything is set up, it takes time to pump out the water. This project will design necessary pumping valving and controls for a CCT dewatering system.

CEQA: Mitigated Negative Declaration approved by Board on 8/17/1999
Reference: Secondary Effluent Wet Weather Capacity Review, RMC, August 2014; 2017 WWTP and Biosolids Master Plan

Fund Allocation Basis: Based on current vs projected buildout average dry weather flow at the time of project inception.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
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Total Estimated Project Cost $507,381
Current Adopted Budget $2,270,194
Increase/(Decrease) ($1,762,813)
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CIP No. 18-P013 Biosolids Dewatering Facility

<table>
<thead>
<tr>
<th>Funding Allocation:</th>
<th>100% 320</th>
</tr>
</thead>
</table>

Project Manager: Robyn Mutobe

Status: New Project

Project Summary:
The water content of the biosolids harvested from District's facultative sludge lagoons (FSLs) limits the amount of biosolids that can be placed on the dedicated land disposal (DLD) site. With this limitation, the FSLs are slowly accumulating biosolids. The current land application of biosolids on the DLD is by far the most cost-effective solution for biosolids management. To continue using the DLD for biosolids disposal, the biosolids need to be dewatered. This project will construct a new biosolids dewatering facilities and building at the DLD site. The dewatering of biosolids will allow the DLD to continue to be the primary method of sludge disposal. Should the District wish to diversify biosolid management or take advantage of new technologies to recover biosolids as a resource, dewatering will be required. Therefore, dewatering is a near term solution for biosolids disposal that will also move the District toward diversifying its biosolids management in the long term. This project is required for both options of continuing with DLD disposal or participation in a regional biosolids facility (CIP 07-3201).

CEQA: To be determined

Reference: 2017 Wastewater Treatment Plant and Biosolids Master Plan

Fund Allocation Basis: Project is required to meet the needs for biosolids disposal for future customers.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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</table>

Total Estimated Project Cost $16,095,000

Current Adopted Budget $0

Increase/(Decrease) $16,095,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

**REGIONAL WASTEWATER REPLACEMENT (Fund 310)**

**CIP No. 18-P014  WWTP Recycled and Potable Water Systems**

**Funding Allocation:** 100% 310

**Project Manager:** Jackie Yee  
**Status:** New Project

**Project Summary:**
This project will separate the potable water and fire systems at the Regional Wastewater Treatment Facility (RWTF) and expand the use of recycled water for the plant processes. The current fire main supplies both the potable and fire water systems. The project will separate the systems by installing 2000 feet of 3-inch and 500 feet of 2-inch potable water lines to Buildings A, D, S, T, and fleet maintenance building. This project will also install approximately 550 feet of 3-inch above ground and 350 feet of 3-inch below ground recycled water pipe to the cogeneration building, blower building, plant air compressors, bar screens, 1250kW and 750 kW generators, and buildings S and T.

**CEQA:** Categorical Exemption [CEQA Guideline 15303]

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing regional wastewater fund assets.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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<th>FYE 20</th>
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</table>

**Total Estimated Project Cost** $384,000

- **Current Adopted Budget** $0
- **Increase/(Decrease)** $384,000
**Project Manager:** Dan Lopez  

**Project Summary:**  
This project will rehabilitate the worn components on the gravity belt thickener and upgrade the controls. The District purchased a truck mounted gravity belt thickener in 2003. The thickener is used when the dissolved air flotation thickener, which thickens the waste activated sludge prior to the digesters, is taken out of service for maintenance and repairs. When the thickener is not in service, it is rented to other agencies for use. For solids handling reliability, the thickener must be kept in good working condition.

**CEQA:**

Reference:

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing regional wastewater fund assets.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
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</table>

**Total Estimated Project Cost** $40,000  
Current Adopted Budget $0  
Increase/(Decrease) $40,000
Regional Wastewater Replacement (Fund 310)

CIP No. 18-P016  Alum Addition

Funding Allocation: 75%  310  25%  320

Project Manager: Rudy Portugal  Status: New Project

Project Summary:
This project will construct facilites to add alum to the facultative sludge lagoon return water. The addition of alum will precipitate phosphate from the return water and reduce the formation of struvite. Currently, one of the strategies to avoid the formation of struvite at the wastewater treatment plant (WWTP) is to run the WWTP in a mode where the phosphate remains in the liquid process and exits the WWTP with the effluent, rather than remaining in the biosolids and forming struvite in the digesters. However, this mode of operation is not as effective in producing a consistently high quality effluent. The addition of alum will allow the WWTP to operate in an alternate mode that will produce a better settling sludge and higher quality effluent, thus eliminating the need for an additional clarifier.

CEQA: Categorical Exemption [CEQA Guideline 15303]
Reference: To be determined
Fund Allocation Basis: Project is required to improve current operations; based on current vs. projected buildout average dry weather flow at the time of project inception.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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<th>FYE 20</th>
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</tbody>
</table>

Total Estimated Project Cost $800,000
Current Adopted Budget $0
Increase/(Decrease) $800,000
Facility tours are one way the District communicates the value we provide the community 24/7. Engaging with our customers in an ongoing, direct, proactive way builds confidence in the District as a reliable, trustworthy service provider and increases our customers' understanding of what they get for their money. Tours also promote careers in the water/wastewater industry. This project will purchase and install signs at the Regional Wastewater Treatment Facility (RWTF) to help facilitate the tours that are given on a regular basis. The project will also paint a mural on the west side of Building S which faces Interstate 680, making it very visible to travelers. The mural will promote how DSRSD is "Keeping our Waterways Clean."

CEQA:
Reference:

Fund Allocation Basis: Project will benefit existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
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</table>

Total Estimated Project Cost $100,000
Current Adopted Budget $0
Increase/(Decrease) $100,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: RESOURCE RECOVERY FACILITIES

Regional Wastewater Replacement (Fund 310)

CIP No. 00-3120  Energy Management PROGRAM

Funding Allocation:  75%  310  25%  610

Project Manager: Steven Delight  Status: Continuing Program

Project Summary:
Over the next 10 years, energy management is going to be a significant issue for wastewater and recycled water treatment. This project will fund participation in local and regional efforts regarding alternative energy, evaluating existing systems, studying and evaluating technologies and making minor improvements to existing systems. Examples of potential projects include: evaluating most efficient digester gas usage in the cogeneration system; partnering with other agencies in offsite solar power; assessing value of digester gas storage; experimenting with low energy lighting; and an Energy Management Master Plan.

CEQA:  To be determined based on individual projects funded by program.

Reference:

Fund Allocation Basis: Based on ratio of energy used at treatment plant vs. water facilities

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
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<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
<th>FYE 27</th>
<th>Future</th>
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<td>250,000</td>
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</tbody>
</table>

Total Estimated Project Cost  $1,000,000
Current Adopted Budget  $0
Increase/(Decrease)  $1,000,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

**CATEGORY:** RESOURCE RECOVERY FACILITIES

**Regional Wastewater Replacement (Fund 310)**

<table>
<thead>
<tr>
<th>CIP No. 00-P026</th>
<th>RWTF Replacement and Rehabilitation PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Allocation:</td>
<td>100% 310</td>
</tr>
</tbody>
</table>

**Project Manager:** Steven Delight

**Status:** Continuing Program

**Project Summary:**
This program will fund projects to upgrade, replace and improve facilities and equipment within the Regional Wastewater Treatment Facility (RWTF) to meet operational and permit requirements. Some equipment is now more than 30 years old. This program provides for the renewal, replacement and/or increase in capacity of process equipment on an as-needed basis or the upgrade of equipment as it becomes obsolete. This program may also be used to investigate issues that lead to the identification of projects that require the creation of a specific CIP project. Increases in future years’ estimated cashflow reflect anticipated Asset Management Program needs as plant infrastructure ages.

**CEQA:** To be determined based on individual projects funded by program.

**Reference:** Staff recommendation

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing regional wastewater fund assets.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
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**Total Estimated Project Cost:** $13,800,000

**Current Adopted Budget:** $0

**Increase/(Decrease):** $13,800,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: RESOURCE RECOVERY FACILITIES

Regional Wastewater Replacement (Fund 310)

CIP No. 15-P018  Foul Air Line Rehabilitation

Funding Allocation:  100%  310

Project Manager:  Status: Deferred Project

Project Summary:
This project will rehabilitate the foul air line which conveys odorous air from the bar screen building to the biofilter. The foul air is constructed of corrugated plastic line pipeline and the joints have weakened. The foul air has been leaking through the existing pavement and holding basin #2 causing cracking and base failure in the pavement. The foul air line will be assessed for repairs. The rehabilitation may range from sealing joints and sliplining to full replacement, including the reconstruction of the center manhole that is currently inaccessible and making it accessible for future repairs and maintenance. The sealed air line will stop pavement damage, provide more efficient treatment through the biofilter, and decrease foul air escaping into the atmosphere that is sometimes noticed by pedestrians on the nearby trail.

CEQA:  Categorical Exemption [CEQA Guideline 15301]

Reference:  Operations staff recommendation

Fund Allocation Basis:  Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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Total Estimated Project Cost  $492,364
Current Adopted Budget  $176,000
Increase/(Decrease)  $316,364
# DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

## CATEGORY: RESOURCE RECOVERY FACILITIES

### Regional Wastewater Replacement (Fund 310)

<table>
<thead>
<tr>
<th>CIP No. T16-01</th>
<th>Hypochlorite Building Rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Allocation:</td>
<td>100% 310</td>
</tr>
</tbody>
</table>

**Project Manager:**

**Status:** Deferred Project

**Project Summary:**

The four sodium hypochlorite bulk storage tanks at the wastewater treatment plant were replaced during the summer of 2014. During the tank replacement, a visual analysis of the existing pads and building were reviewed by a structural engineer. The coating at the perimeter of the existing tank pads and coating on the tank room slab have failed in areas where the old storage tanks had leaked. The coating in the pump room had failed completely due to chemical exposure. This project will address those findings and correct the problems. Concrete samples will be taken and tested for chloride ion concentration. Concrete repair will be undertaken before reinforcing steel capacity is compromised. Alternatives to arrest any ongoing corrosion will also be investigated and implemented. Concrete coating will be applied over the concrete repairs and corroded pipe; pump supports in the pump room will be replaced; and the wall to slab, wall-to-wall connection and roof beams will also be strengthened to update the building to current seismic standards.

**CEQA:** Categorical Exemption [CEQA Guideline 15301]

**Reference:** Hypochlorite Storage Building Condition and Seismic Assessment, Carollo Engineers, October 2014

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing regional wastewater fund assets.

### 10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
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</table>

**Total Estimated Project Cost** $306,000

**Current Adopted Budget** $0

**Increase/(Decrease)** $306,000
**DSRSD CIP 10-Year Plan for FYEs 2018 through 2027**

**CATEGORY: RESOURCE RECOVERY FACILITIES**

<table>
<thead>
<tr>
<th>CIP No. T16-35</th>
<th>Ferrous Chloride System Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Allocation:</td>
<td>100% 310</td>
</tr>
</tbody>
</table>

**Project Manager:**

**Project Summary:**
The ferrous chloride tank and containment area is over 30 years old. This project will replace the 6500 gallon ferrous chloride storage tank, repair the concrete secondary containment area, and install a control system for dosing to the headworks based on flow for improved odor control.

**CEQA:** Categorical Exemption [CEQA Guideline 15302]

**Reference:** Tank Integrity Assessment for the Ferrous Chloride Storage Tank, Trident Environmental and Engineering, Inc., April 2004

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing regional wastewater fund assets.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
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Total Estimated Project Cost: $102,600

Current Adopted Budget: $0

Increase/(Decrease): $102,600
Project Summary:
The motor control center (MCC) at the facultative sludge lagoons (FSL) is over 30 years old and replacement parts (i.e., starters, circuit breakers, protective devices, power monitoring equipment, etc.) will require modifications to existing MCC buckets because exact replacements are no longer readily available. This is a critical MCC since it is a single point of failure for power and controls for the FSL mixers and valves.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
<th>FYE 27</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>65,550</td>
<td>99,900</td>
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</table>

Total Estimated Project Cost $165,450
Current Adopted Budget $0
Increase/(Decrease) $165,450
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

<table>
<thead>
<tr>
<th>CIP No. T00-37</th>
<th>Recoating of Digester Interior Covers 3, 2, and 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Allocation:</td>
<td>100% 310</td>
</tr>
</tbody>
</table>

**Project Manager:**

**Project Summary:**
The life expectancy of a digester steel cover is ten years. This project will repair and coat the interior covers of the digesters, if needed, to extend their useful life. As part of the project, the digesters will be drained and cleaned so the interior covers can be inspected. After the condition of each interior cover is determined, necessary work will be performed. Digester 1 was last cleaned in 2012 and Digesters 2 and 3 in 2013.

**CEQA:** Categorical Exemption [CEQA Guideline 15301]

**Reference:**

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing regional wastewater fund assets.

**10-Year Cash Flow and Estimated Project Cost:**

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
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<tbody>
<tr>
<td></td>
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Total Estimated Project Cost $290,000
Current Adopted Budget $0
Increase/(Decrease) $290,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: RESOURCE RECOVERY FACILITIES

Regional Wastewater Replacement (Fund 310)

CIP No. T16-11    WWTP Motor Control Center and Distribution Panel "A" Improvements

Funding Allocation: 100%  310

Project Manager:                                      Status: Deferred Project

Project Summary:
This project will upgrade the wastewater treatment plant’s motor control centers (MCCs) and electrical distribution panel A (DPA) to a standard 65,000 ampere interrupting capacity (AIC) rating. Based on the most recent short circuit analysis, ten MCCs and the DPA do not have adequate short circuit equipment AIC ratings to either handle possible fault scenarios or to handle future expansions. The upgrade will also require modifications to existing MCC buckets as the MCCs are over 20 years old and exact replacement parts (i.e. starters, circuit breakers, etc.) are no longer readily available.

CEQA: Categorical Exemption [CEQA Guideline 15301, 15302]

Reference:
Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
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<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>203,550</td>
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<td>471,750</td>
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</table>

Total Estimated Project Cost $1,369,050
Current Adopted Budget $0
Increase/(Decrease) $1,369,050
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

**CATEGORY: RESOURCE RECOVERY FACILITIES**

**CIP No. T12-19  RWTF Fencing and Security - Phase 2**

**Funding Allocation: 100% 310**

**Project Manager:**

**Project Summary:**
This project will improve security along the Regional Wastewater Treatment Facility (RWTF) perimeter. This project will install 8-feet tall vinyl coated fence along the south, west and north and half of the east perimeter of the RWTF. It will also include screening landscaping where space permits. Phase 1 replaced the fencing along the eastern perimeter from the Administration building to the southeast corner of the RWTF. That phase also included landscaping for screening of the RWTF from the adjacent Val Vista Park.

**CEQA:** Negative Declaration approved May 19, 1998

**Reference:** Physical Security Risk Assessment, Pinkerton Consulting, April 2004

**Fund Allocation Basis:** Project is required to replace or rehabilitate existing regional wastewater fund assets.

### 10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
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**Total Estimated Project Cost** $1,210,000

**Current Adopted Budget** $0

**Increase/(Decrease)** $1,210,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: RESOURCE RECOVERY FACILITIES

Regional Wastewater Replacement (Fund 310)

<table>
<thead>
<tr>
<th>CIP No. T16-40</th>
<th>RWTF Pavement Repair</th>
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<tbody>
<tr>
<td>Funding Allocation:</td>
<td>100% 310</td>
</tr>
</tbody>
</table>

Project Manager:  
Status: Future Project

Project Summary:
This project will repair and seal coat pavement at the Regional Wastewater Treatment Facility (RWTF). The facility's pavement is subject to vehicles with heavy loads. This work is required periodically to maintain the integrity of the pavement.

CEQA:  
Categorical Exemption [CEQA Guideline 15301]

Reference:  
Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
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</table>

Total Estimated Project Cost $325,000  
Current Adopted Budget $0  
Increase/(Decrease) $325,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: RESOURCE RECOVERY FACILITIES

CIP No. T16-54  Odor Reduction Tower Replacement

Funding Allocation:  100%  320

Project Manager:

Status: Future Project

Project Summary:
This project will either rehabilitate or replace the Odor Reduction Tower (ORT) at the Regional Wastewater Treatment Facility (RWTF). The ORT treats odorous air from the influent pump room, aerated grits tanks, and the grit building. Although the ORT effectively treats hydrogen sulfide, it does not effectively treat reduced sulfur compounds. This project will help the District meet the RWTF odor control goals to minimize odor impacts to the surrounding community.

CEQA: Categorical Exemption [CEQA Guideline 15302]
Reference: 2008 Update to Odor Control Focus Areas Analysis, CH2M Hill, July 2009
Fund Allocation Basis: New project is odor control associated with increasing flows into WWTP.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
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</table>

Total Estimated Project Cost $1,042,500
Current Adopted Budget $0
Increase/(Decrease) $1,042,500
Project Summary:
The Asset Management Program has identified many items on the cogeneration system that are in need of replacement. The option for a full replacement of the engines and ancillary equipment compared to the cost of replacement items for the engines need to be considered. One of the engines is in excess of 50 years old based on the block casting numbers.

CEQA: Categorical Exemption [CEQA Guideline 15302]
Reference: Asset Management Program
Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
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<td>20,000</td>
<td>1,000,000</td>
<td>0</td>
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</tr>
</tbody>
</table>

Total Estimated Project Cost: $1,020,000
Current Adopted Budget: $0
Increase/(Decrease): $1,020,000
Project Manager: Status: Future Project

Project Summary:
This project will install a 900 kW emergency power generator for the distribution panel-D (DPD) switchgear to support continued growth of the service population and the corresponding increases in influent pumping and related wastewater treatment plant equipment, such as the bar screens, primary clarifiers, etc. The DPD is currently provided with emergency power via the existing generator, but higher flows will require an additional generator. Emergency power is also a requirement of the District's NPDES Permit. This project will be revised per updated Electrical Master Plan scheduled for completion in 2019.

CEQA: To be determined
Reference:
2004 WWTP Electrical Master Plan and dependent on findings of 2019 Electrical Master Plan Update;
2017 WWTP and Biosolids Master Plan

Fund Allocation Basis: Project is required for future customer wastewater treatment capacity.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
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<td>0</td>
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<td>5,560,000</td>
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</table>

Total Estimated Project Cost $5,560,000
Current Adopted Budget $0
Increase/(Decrease) $5,560,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CIP No. T10-83  Cover Primary Clarifiers

Funding Allocation:  100%  320

Project Manager:  Status: Future Project

Project Summary:
This project will cover the primary clarifiers. The settled sewerage channel and the primary clarifiers have been identified in the Odor Control Master Plan as areas in the wastewater treatment plant that have odor issues. The project may cover the entire primary tanks or only the launderers. The foul air removed from the primary clarifiers will be treated in a new odor treatment facility that also serves the settled sewerage channel and other processes in the area.

CEQA: Categorical Exemption [CEQA Guideline 15303]

Reference: 2008 Update to Odor Control Focus Areas Analysis, CH2M Hill, July 2009; 2017 WWTP and Biosolids Master Plan

Fund Allocation Basis: New project is odor control associated with increasing flows into WWTP.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
<th>FYE 27</th>
<th>Future</th>
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<td>2,080,000</td>
</tr>
</tbody>
</table>

Total Estimated Project Cost  $2,080,000
Current Adopted Budget  $0
Increase/(Decrease)  $2,080,000
Project Summary:
This project will cover the settled sewage channel and the selector. The settled sewage channel and the primary clarifiers have been identified in the Odor Control Master Plan as areas in the wastewater treatment plant that have odor issues. The covers will also allow the addition of air to the settled sewage channel, which will increase the performance of the plant. The foul air removed from the settled sewage channel will be treated in a new odor treatment facility that also serves the primary clarifiers and other items in the area. This project will also include replacement of the odor reduction tower with a new high performance biofilter in the current biofilter location. The new biofilter will be constructed modular and will be added when the primaries are covered.

CEQA: To be determined
Reference: 2008 Update to Odor Control Focus Areas Analysis, CH2M Hill, July 2009; 2017 WWTP and Biosolids Master Plan
Fund Allocation Basis: New project is odor control associated with increasing flows into WWTP.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
<th>FYE 22</th>
<th>FYE 23</th>
<th>FYE 24</th>
<th>FYE 25</th>
<th>FYE 26</th>
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Total Estimated Project Cost $3,900,000
Current Adopted Budget $0
Increase/(Decrease) $3,900,000
DSRSD CIP 10-Year Plan for FYEs 2018 through 2027

CATEGORY: RESOURCE RECOVERY FACILITIES

Regional Wastewater Replacement (Fund 310)

CIP No. T16-42 Nutrient Removal

Funding Allocation: 80% 310 20% 320

Project Manager: Status: Future Project

Project Summary:
In April 2014, the Bay Area Regional Water Quality Control Board (RWQCB) issued a San Francisco Bay Nutrients Watershed permit to municipal wastewater dischargers. The permit requires wastewater dischargers to evaluate reductions in nutrient discharges through treatment upgrades and contribute toward studies to develop a San Francisco Bay Nutrient Management Strategy. The District is working with the Bay Area Clean Water Agencies (BACWA) to address the permit requirements. If the current studies determine wastewater discharges have an adverse effect on Bay water quality, the RWQCB will impose nutrient load limits on the wastewater treatment plant effluent which will require treatment upgrades. Although future regulation or the extent of the regulation is uncertain, it is prudent that the District plan for some future treatment upgrades. This project assumes the addition of three aeration basins, a fifth secondary clarifier, and chlorination improvements to meet BACWA Level 2 effluent nutrient requirements.

CEQA: To be determined
Reference: RWQCB’s San Francisco Bay Nutrients Watershed Permit; 2017 WWTP and Biosolids Master Plan
Fund Allocation Basis: Based on ratio of current ADWF to projected buildout ADWF at the time of project inception.

10-Year Cash Flow and Estimated Project Cost:

<table>
<thead>
<tr>
<th>Prior</th>
<th>FYE 18</th>
<th>FYE 19</th>
<th>FYE 20</th>
<th>FYE 21</th>
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<th>FYE 23</th>
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<th>FYE 25</th>
<th>FYE 26</th>
<th>FYE 27</th>
<th>Future</th>
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</thead>
<tbody>
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</table>

Total Estimated Project Cost: $42,780,000
Current Adopted Budget: $0
Increase/(Decrease): $42,780,000
APPENDIX A:  
Project Expenditures by Fund
### CIP 10-Year Plan for Fiscal Years Ending 2018 through 2027

#### Portion of Estimated Cashflow Allocated to Local Wastewater Replacement (Fund 210)

*Amounts shown are District costs net of grants and other fundings*

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Name</th>
<th>210 Split</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
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<th>Future</th>
<th>Total</th>
</tr>
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<tbody>
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<td><strong>General</strong></td>
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<td>16-A005</td>
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<td>District Office Improvements</td>
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<tr>
<td>16-A006</td>
<td>District Office Improvements</td>
<td>10%</td>
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<td>District Pavement Rehabilitation</td>
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<td>17-A007</td>
<td>Wide Area Network Communications Phase 2</td>
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<td>18-A001</td>
<td>Field Operations Facility Security Systems Improvements</td>
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<td>Fleet Replacement PROGRAM</td>
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<td>60,000</td>
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<td>T18-24</td>
<td>Facilities Asset Replacement PROGRAM</td>
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<td>Computing Infrastructure Replacement</td>
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<td>15-W004</td>
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<td>18,109,876</td>
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*Amounts shown are District costs net of grants and other fundings*
## CIP 10-Year Plan for Fiscal Years Ending 2018 through 2027

### Portion of Estimated Cashflow Allocated to Local Wastewater Expansion (Fund 220)

*Amounts shown are District costs net of grants and other fundings*

<table>
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<th>CIP No.</th>
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<th>2021</th>
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<th>2023</th>
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<tr>
<td>16-A005</td>
<td>Corporation Yard and Administrative Facilities</td>
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<td>Field Operations Facility Security Systems Improvements</td>
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<tr>
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139
## CIP 10-Year Plan for Fiscal Years Ending 2018 through 2027

### Portion of Estimated Cashflow Allocated to Regional Wastewater Replacement (Fund 310)

*Amounts shown are District costs net of grants and other fundings*

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<td>RAS Line Rehabilitation</td>
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<td>13-S004</td>
<td>Pump Stations VFD Replacements</td>
<td>100%</td>
<td>299,906</td>
<td>402,975</td>
<td>558,750</td>
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<td>0</td>
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<td>16-P023</td>
<td>RWTF Lighting</td>
<td>100%</td>
<td>20,000</td>
<td>20,000</td>
<td>18,000</td>
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<td>0</td>
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<td>RWTF Fire Alarm System Upgrades</td>
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<td>111,000</td>
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<td>16-P028</td>
<td>Bio-Gas Treatment System Improvements</td>
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<td>0</td>
<td>643,500</td>
<td>660,000</td>
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<td>100%</td>
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<td>0</td>
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<td>0</td>
<td>75,000</td>
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<td>17-P004</td>
<td>Primary Sedimentation Expansion and Improvements</td>
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<td>26,000</td>
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<td>RWTF Access Security Assessment</td>
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<td>18-P010</td>
<td>Biogas Flare Improvements</td>
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<td>350,000</td>
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<td>Chlorinated Secondary Effluent Process Water System Condition Assessment</td>
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### Portion of Estimated Cashflow Allocated to Regional Wastewater Replacement (Fund 310)

*Amounts shown are District costs net of grants and other fundings*

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<th>Project Name</th>
<th>310 Split</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
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<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>Future</th>
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<td>00-3120</td>
<td>Energy Management PROGRAM</td>
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<td>56,250</td>
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<td>187,500</td>
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<td>00-P026</td>
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<td>1,000,000</td>
<td>1,000,000</td>
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<td>18-P016</td>
<td>Alum Addition</td>
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<td>0</td>
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<td>0</td>
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<td>T16-35</td>
<td>Ferrous Chloride System Improvements</td>
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<tr>
<td>T18-05</td>
<td>FSL MCC Improvements</td>
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<td>99,900</td>
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<td>T00-37</td>
<td>Recoating of Digester Interior Covers 3, 2, and 1</td>
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<td>79,000</td>
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<td>WWTP Motor Control Center and Distribution Panel &quot;A&quot; Improvements</td>
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<td>0</td>
<td>203,550</td>
<td>693,750</td>
<td>471,750</td>
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<td>1,369,050</td>
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<td>0</td>
<td>0</td>
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<td>0</td>
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<td>0</td>
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<td>Cogeneration Engine Replacement</td>
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<td>132,000</td>
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### Study/Master Plan

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<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>Future</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>14-P004</td>
<td>WWTP/Biosolids Master Plan</td>
<td>15%</td>
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<td>0</td>
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<td>0</td>
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<td>0</td>
<td>0</td>
<td>3,750</td>
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<td>18-P002</td>
<td>WWTP Electrical System Master Plan</td>
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<td>0</td>
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<td>0</td>
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### Water System

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<th>2020</th>
<th>2021</th>
<th>2022</th>
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<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>Future</th>
<th>Total</th>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>27,560</td>
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|       |                                                 |           | 3,914,117| 5,126,225| 4,998,010| 5,569,250| 2,542,050| 1,925,550| 2,498,800| 1,498,800| 1,373,800| 1,673,800| 41,093,000| 72,213,402 |

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CIP 10-Year Plan for Fiscal Years Ending 2018 through 2027

Portion of Estimated Cashflow Allocated to Regional Wastewater Expansion (Fund 320)

*Amounts shown are District costs net of grants and other fundings

<table>
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<tr>
<th>CIP No.</th>
<th>Project Name</th>
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<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>Future</th>
<th>Total</th>
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<td>Anaerobic Digester No. 4</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>17-P004</td>
<td>Primary Sedimentation Expansion and Improvements</td>
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<td>8,160,000</td>
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<td>1,450,000</td>
<td>16,095,000</td>
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142
## CIP 10-Year Plan for Fiscal Years Ending 2018 through 2027

### Portion of Estimated Cashflow Allocated to Water Replacement (Fund 610)

*Amounts shown are District costs net of grants and other fundings

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Name</th>
<th>Fund</th>
<th>610 Split</th>
<th>2018</th>
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<th>2020</th>
<th>2021</th>
<th>2022</th>
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<th>2027</th>
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<td>1,210,260</td>
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<tr>
<td>T16-37</td>
<td>Microfiltration Rack and Membrane Replacement</td>
<td>100%</td>
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<td>T16-67</td>
<td>Reservoir Recoating PROGRAM</td>
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<td>0</td>
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<td>2,656,000</td>
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</tr>
</tbody>
</table>

*Amounts shown are District costs net of grants and other fundings*
### Portion of Estimated Cashflow Allocated to Water Replacement (Fund 610)

*Amounts shown are District costs net of grants and other fundings*

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Name</th>
<th>610 Split</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>Future</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>T10-86</td>
<td>Camp Parks Water Mains - Loring Street and Monroe Avenue</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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<td>0</td>
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<td>0</td>
<td>355,100</td>
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Total: 4,919,526 9,662,850 8,257,110 9,281,410 11,256,220 2,137,660 767,400 2,169,900 1,750,700 14,074,000 73,087,476
## CIP 10-Year Plan for Fiscal Years Ending 2018 through 2027

### Portion of Estimated Cashflow Allocated to Water Expansion (Fund 620)

*Amounts shown are District costs net of grants and other fundings*

<table>
<thead>
<tr>
<th>CIP No.</th>
<th>Project Name</th>
<th>620 Split</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>Future</th>
<th>Total</th>
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<tr>
<td><strong>General</strong></td>
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<tr>
<td>16-A005</td>
<td>Corporation Yard and Administrative Facilities</td>
<td>30%</td>
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<tr>
<td>18-A001</td>
<td>Field Operations Facility Security Systems Improvements</td>
<td>30%</td>
<td>15,000</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>15,000</td>
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<td><strong>Study/Master Plan</strong></td>
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<td></td>
<td></td>
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<tr>
<td>T14-10</td>
<td>Water System Master Plan Update and Operations Plan Update</td>
<td>100%</td>
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<td><strong>Water System</strong></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>12-W013</td>
<td>Water Main - Fallon Rd, Tassajara Rd to Tassajara Creek</td>
<td>100%</td>
<td>315,500</td>
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<td>0</td>
<td>0</td>
<td>315,500</td>
</tr>
<tr>
<td>15-W004</td>
<td>Dougherty Road Utilities</td>
<td>30%</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>33,483</td>
</tr>
<tr>
<td>16-R014</td>
<td>DERWA Recycled Water Plant - Phase 2</td>
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<td>3,673,100</td>
<td>150,952</td>
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<td>0</td>
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<td>0</td>
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<td>3,824,052</td>
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<tr>
<td>16-R018</td>
<td>DERWA Supplemental Supply</td>
<td>100%</td>
<td>522,261</td>
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<td>490,680</td>
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<td>1,447,941</td>
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</tr>
<tr>
<td>16-W009</td>
<td>Potable Water Supply Reliability Planning</td>
<td>35%</td>
<td>115,717</td>
<td>0</td>
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<td>0</td>
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<td>115,717</td>
</tr>
<tr>
<td>17-W001</td>
<td>Automated Water Meter Data Transmission Repeaters</td>
<td>80%</td>
<td>38,400</td>
<td>67,200</td>
<td>19,200</td>
<td>19,200</td>
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<td>67,200</td>
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<tr>
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<td>Reservoir 10A</td>
<td>100%</td>
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<td>3,366,000</td>
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<td>0</td>
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<td>6,666,000</td>
</tr>
<tr>
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<td>25%</td>
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<td>1,000,000</td>
<td>750,000</td>
<td>2,500,000</td>
<td>2,500,000</td>
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<td>05-6204</td>
<td>Water Main-Bollinger Canyon Rd. to Reservoir 208B</td>
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<td>824,000</td>
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<td>16-R013</td>
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<td>18-W005</td>
<td>Commercial Recycled Water Fill Station Enhancements</td>
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<td>Capital Improvement to Increase Water Supply PROGRAM - Phase 1</td>
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