



Providing Outstanding Service Since 1963

Board of Directors

Jane Nye, Chair

Janna Orkney, Vice Chair

Leon Shapiro, Director

Raymond Tjulander, Director

James Wall, Director

July 24, 2023

Board of Directors
Triunfo Water & Sanitation District
Ventura County, California

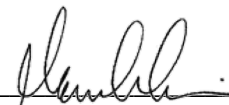
TWSD CAPITAL IMPROVEMENT PLAN UPDATE

Recommendation

In accordance with the direction provided by the Triunfo Water & Sanitation District's (District) Board of Directors, staff has completed an updated Capital Improvement Plan (CIP), which includes a 20-year planning horizon. In support of the plan's development, staff engaged the services of KEH Group, Inc. to assist. Staff recommends the Board review and approve the proposed Capital Improvement Plan for implementation.

Please contact me at 805-658-4621 or email marknorris@trunfowsd.com if you have any questions or need additional information.

REVIEWED AND APPROVED: _____


Mark Norris - General Manager

Attachment: Revisions to the 2013 Capital Improvement Projects Report

This page is intentionally blank.

An aerial photograph of a scenic landscape. In the foreground, there is a grassy hillside with some sparse vegetation. A large, winding lake occupies the middle ground, surrounded by lush green trees and some residential buildings. In the background, a range of rugged mountains stretches across the horizon under a clear blue sky. The text is overlaid on this image.

Triunfo Water & Sanitation District Ventura County, CA

Revisions to the 2013 Capital Improvement Projects Report

July 2023

**Prepared by:
KEH Group, Inc**

1. INTRODUCTION

The Triunfo Water and Sanitation District (District) prepared their first Capital Improvement Program (CIP) in 2013 with a minor revision to scope and costs performed in 2014 based on input from staff. Current planning efforts call for a review of the 2013 CIP with a reevaluation of projects previously identified, a preliminary evaluation of current infrastructure needs, and a conceptual update of project costs based on actual and projected heavy construction cost indices. Such evaluation may identify new capital projects to be considered and the potential of delaying or eliminating projects identified in the 2013 CIP.

2. FACILITY ASSETS

The District maintains an Excel database of all assets. The assets are sequentially numbered and organized based on the following funds.

- Wastewater Infrastructure; Funding Department 210
- Potable Water Infrastructure; Funding Department 310
- Recycled Water Infrastructure; Funding Department 410

This database includes financial and other relevant information on each asset such as;

- Funding Department Purchase Year
- Acquisition Price
- Expected Life
- Projected Replace Year (calc)
- Accumulated Depreciation
- Account Number
- Replacement @ Various Escalation Factors (calc)
- Insured Amount (calc)
- NBV

The database was sorted and consolidated into each fund. Groups of asset types, such as fleet vehicles, pipelines, hydrants, manholes, etc., were consolidated into single line items. A full listing of all numbered assets is provided in Appendix A. Assets considered for this CIP update are presented in Table 2.1 below.

Table 2.1 -Consolidate CIP Asset Listing by Department

<p>Wastewater Assets - Funding Dept 210</p> <p>Gravity Sewer Collection System Repair/Replacement Manholes Trunk Ln To La Co Ln-Bel Wastewater Force Mains Bell Canyon Lift Station Polo Lift Station Carlisle Lift Station Polo Lift Station Westlake Sewer Lift Station North Ranch Lift Station Lakeside Lift Station North Shore Gravity Sewer System</p> <p>Recycled Water Assets - Funding Dept 410</p> <p>Recycled Water Distribution Pipelines - Oak Park/North Ranch (north) Recycled Water Distribution Pipelines - Lake Sherwood (south) Mae Boyer Recycled Water Booster Pump Station Recycled Water Reservoir (Savoy) Regency Hills Recycled Water Pump Station</p>	<p>Potable Water Assets - Funding Dept 310</p> <p>Water Distribution Pipelines Automatic Meter Reading System Hydrants Kilburn Tank Savoy Lower Sutton V Reservoir Savoy Pump Station Oak Canyon Reservoir Lindero Pump Station Deerhill Reservoir Deerhill Pump Station Lambourne Pump Station Smoketree Pump Station</p> <p>Shared Assets - Funding Depts 210, 310 & 410</p> <p>Deerhill Operations Center</p>
--	--

Each of the assets identified in Table 2.1 above were reviewed for inclusion in the CIP update. Where capital projects were maintained in scope from the 2013 CIP Report, conceptual estimates were updated using construction escalation indices as discussed in Section 4. Where scopes of projects identified in 2013 changed, these projects were updated along with their conceptual costs to 2023 dollars. Certain projects have been identified for inclusion in this update that were not included in the 2013 CIP. Conceptual scope for these efforts were prepared and conceptual estimated established in 2023 dollars. Soft project costs and contingency are included in the estimates as percentages of construction, which are discussed in Section 4.

Conceptual costs for shared facilities included in the CIP update are allocated to the department funds in accordance with the District's accounting procedures; 56% Wastewater - Department 210, 31% Potable Water – Department 310, and 13% Recycled Water – Department 410.

3. REVIEW OF INFRASTRUCTURE NEEDS AND PROJECT SCOPES

The following is a review of the project scopes identified in the 2013 CIP, revisions based upon field surveys, and the addition of other assets based on the preliminary evaluations undertaken with District staff.

3.1. WASTEWATER INFRASTRUCTURE; FUNDING DEPARTMENT 210

3.1.1. Wastewater System SCADA Communications Study

2013 Scope of Work - The 2013 CIP report recommended the preparation of a system wide SCADA communications study to determine the best approach for connecting localized SCADA facilities to a District centralized monitoring and control station. The study would develop the requirements for a system that will provide a reliable and uniform system to connect existing facilities to the District central monitoring station for staff to readily respond to emergencies and potential problems at within the wastewater infrastructure system.

Current Status - This study has been completed by Ventura Regional Sanitary District (VRSD) and is therefore no longer considered a part of the District's CIP efforts.

3.1.2. Carlisle Lift Station Improvements

2013 Scope of Work - The 2013 CIP report recommended undertaking improvements at the Carlisle Lift Station to modify the influent sewer and connecting it to the second wet well. Wet Well No. 1 would be converted into an emergency overflow storage basin. The final wastewater flow study would be evaluated to confirm requirements and sizing of equipment to replace existing pumps. Modifications to the existing control and SCADA system would have also been made.

Current Status - Since 2013, VRSD has also replaced the station's SCADA system, thereby eliminating that scope from the CIP. A review of the current station operation with staff revealed that there were no issues with operation and maintenance at the site. Wet Well No.1 is now considered a benefit as it collects debris at the station that may enter via the gravity collection system and protects the pumping system from potential clogging and resulting damage. No change in the collection system tie-ins to the station wet wells is therefore no longer recommended.

Recent field surveys of the station did reveal an issue related to sheet flow drainage around the station, however, District staff feels that addressing the issue on an ongoing basis by providing temporary trenches to divert rainwater around the station is a preferred method to prevent site flooding. It was suggested that a 6-inch curb be installed around the wet wells and vaults as a precautionary measure against flooding and that a gasketed bolt down cover be installed on the manhole located within a low point of the fairway adjacent to the station to prevent inflow. These minor improvements would be done under the District's O&M budget and not as a CIP project.

District staff indicated that additional development of approximately 60 homes has been planned within the Carlisle Lift Station tributary area. It is anticipated that this additional flow can be handled by the station given the initial oversizing of the existing pumps and may be a benefit to the overall operating characteristics of the system. It is suggested that the District review the hydraulics of the pumping system and force main to document characteristics of the system following the planned development.

3.1.3. Polo Lift Station Improvements

2013 Scope of Work - It was recommended in the 2013 CIP report that all electrical, control, and SCADA systems at the pump station be removed and replaced. Further preliminary design investigations were recommended to fully define the new systems. To maintain an acceptable level of service reliability, it was further recommended to evaluate the replacement of existing pumps due to the extended service life of the equipment. Options for lining the existing wet well due to the high level of corrosion observed were also suggested as part of the pump station improvements.

Current Status – Since the 2013 CIP report, SCADA upgrades and some electrical system modifications have been completed at the station. Inspection of the wet well did not identify any significant deterioration of the concrete since the 2013 CIP Report. It is therefore recommended that field crews continue an annual inspection of the concrete and any coatings and/or repair work be undertaken as a part of the O&M budget and not as a CIP project.

It is recommended that a personal fall arrest and retrieval system be installed at the station to prevent injuries during pump and wet well maintenance as discussed under the section below related to Lakeside Lift Station Improvements. Funds for the installation of a fall restraint system should be reserved under the District's O&M budget.

During field investigations, the station force main was discussed with staff relative to operational issues. Staff indicated that recent surveys identified the receiving manhole for the force main and that little is known as to the alignment design and condition of the pipeline. It is suggested that further study be done on the force main alignment and construction, with the potential for setting up a pigging station for line cleaning. Even though pig cleaning of a 4-inch line is possible, typically using spherical pigs, considerations should be given to fittings along the route as 1D radius fittings and other older type fittings, such as mitered fittings, make the procedure problematic. Although no immediate clogging issues are apparent, ongoing operation should consider force main maintenance, which would be undertaken as a part of the operations and maintenance budget and not included within the District's CIP.

Pump operation remains at acceptable levels and field crews should document their condition on a routine basis. Further capacity analysis should be performed once the condition and cleaning of the force main is completed. This work would be budgeted under the District's O&M budget and not as a CIP effort.

3.1.4. Westlake Lift Station Improvements

2013 Scope of Work – Recognizing that the hydraulic lift provided at the station is minimal, a Conceptual Design Study to evaluate the abandonment of Westlake Lift Station and diverting flow by gravity to the collection system was recommended as part of the 2013 CIP Report. Elimination of the lift station would eliminate O&M issues due to limited and difficult access to perform equipment maintenance and eliminate security risks and potential vandalism at the unsecured lift station site. The preliminary results of the conceptual analysis undertaken during the CIP Report development found that abandoning existing lift station and diverting flows by gravity appears to be feasible, however further evaluation is required to confirm this preliminary conclusion. If abandonment of existing lift station is not feasible, then the following improvements and upgrades were recommended in the report:

- Replace existing pumps,
- Line existing wet well to reduce or eliminate root intrusion,
- Provide miscellaneous site security improvements.
- Install standby generator,
- Remove and replace all the electrical, control, and SCADA system to optimize the reliability of the station and standardize the control system used by the District for lift station operation.

Current Status – The conditions identified during the preparation of the 2013 CIP Report have not changed appreciatively. During a failure of the lift station that occurred within the last year, field crews monitored the upstream collection system over a six (6) week period and found no overflows to have occurred. It is suggested that the upstream hydraulic grade line of the collection system rose to a level allowing gravity flow through the lift station, however based on the system mapping of the tributary system, continuing a flooded line condition would eventually cause clogging issues likely leading to an overflow. It does indicate that the system can be operated for a time during station outages, thereby suggesting that the standby generator identified in the 2013 CIP Report may not be necessary. If abandonment of the station was found not to be feasible, replacement of the station with a package system would be warranted due to the age and access limitation of the existing system. Locating the submersible station away from the large trees that surround the existing station would be prudent, with tie-ins made to the existing receiving manhole and subsequent abandonment of the current system. This would eliminate issues associated with the limited and difficult access to perform equipment maintenance. Panels for station operation would be heavy duty lockable units with landscaping placed to provide visual screening. Wetwell and valve box covers would be lockable and constructed of stainless steel. A conceptual line-item breakdown and cost estimate for the station’s replacement is provided in Appendix B.

It should be noted that a detailed analysis of the system hydraulics or a preliminary design of a lift station replacement were not included as a part of the scope of the 2013 CIP Report. The updated conceptual cost for station replacement should be considered a placeholder for long-term CIP budgeting, with a more thorough engineering analysis performed to determine optimal improvements at this location.

3.1.5. Improvements and Upgrades for the North Ranch Lift Station

2013 Scope of Work – The existing station, located near the back gate entrance to the North Ranch Development, was constructed in 1987. All existing equipment is located inside the fenced area. The 2013 CIP report recommended providing miscellaneous site security improvements and removal and

replacement of all the electrical, control, and SCADA system to optimize the reliability of the station and standardize the control system used by the District for lift station operation.

Current Status – Since the 2013 CIP Report, new SCADA upgrades have been completed at the lift station as well as some electrical system improvements. New coatings have been applied to the wet well and stainless-steel bolts installed on fitting flanges. The wet well and pump rails appear to be in good condition. District staff reports that there have been no security issues at the station in the past 10 years and improvements for additional security improvements are not considered warranted at this time. The standby generator is exercised and maintained by field crews on a routine basis, but the age of the equipment remains a concern in the long term. From a budgeting perspective, the District intends to fund future generator replacement under the O&M budget and not as a CIP item. The same approach would be taken for funding future pump replacements. No CIP efforts are anticipated for this station within the current planning horizon.

It is recommended that provisions to support a personal fall arrest and retrieval system be installed at the station to prevent injuries during pump and wet well maintenance. These systems would be designed to satisfy requirements established under OSHA Section 1926.502 - Fall protection systems criteria and practices, including the development of fall protection and rescue plans as part of the collection system operations planning documents. These are not considered to be a part of the District's CIP plan, but rather to be included in the annual operations and maintenance budget.

3.1.6. Lakeside Lift Station Improvements

2013 Scope of Work - The 2013 CIP report recommended undertaking a hydraulic and capacity study to determine the sizing of new pumps at existing Lakeside Lift Station. The installation of new pumps was intended to reduce the potential for spills and overflows into Sherwood Lake due to undersized pumps and eliminate existing station deficiencies to prevent spills, optimize reliability and minimize operations and maintenance costs.

Should the results of the capacity flow study confirm the recommendation to replace the existing pumps, new pumps and modifications to the guide rail system would have been undertaken as a part of the CIP. The conceptual scope for the project would have also include the following:

- Line existing wet well due to corrosion observed during site investigations and to reduce groundwater infiltration,
- Remove and replace all the electrical, control, and SCADA system to optimize the reliability of the station and standardize the control system used by the District for lift station operation,
- Replace vault hatches due to the significant levels of corrosion observed during field investigations,
- Install a discharge manifold to improve operational flexibility,
- Relocation and repair of the existing irrigation piping next to valve vault,
- Provide miscellaneous site security improvements.

Current Status – Recent field investigations were undertaken with District staff. Review of current station operation identified no significant issues associated with station operation. Although access to the station for Vactor use and crane operation for removal of pumps is not optimal, staff is currently able to maneuver the equipment around the station for maintenance. Electrical and SCADA system replacements and upgrades have been performed at the station since the 2013 CIP report. Corrosion around the hatch

covers and wet well appeared to have been addressed. Security around the station has not been an issue since 2013 and staff does no longer consider this a significant issue, although it is suggested the District consider any security measures that may have been identified in the 2022 Security Study prepared for the District.

Observations made during field investigations did identify two issues that should be addressed by the District. Firstly, it is recommended that provisions for a personal fall arrest and retrieval system be installed at the station to prevent injuries during pump and wet well maintenance. These systems would be designed to satisfy requirements established under OSHA Section 1926.502 - Fall protection systems criteria and practices, including the development of fall protection and rescue plans as part of the collection system operations planning documents. In addition, it is suggested that a curb be installed around access hatches to prevent objects from falling into the wet well during maintenance procedures. These are not considered to be a part of the District's CIP plan, but rather to be included in the annual operations and maintenance budget.

3.1.7. North Shore Variable Gravity System Improvements

2013 Scope of Work for Long-term Replacement: Wastewater from existing homes located along the northern edge of Lake Sherwood is collected by individual residential buried fiberglass raw sewage tanks approximately 1,000 gallons in capacity located along the northern edge of Lake Sherwood. From these tanks, decanted wastewater is conveyed by 2-inch piping to an existing buried 4-inch PVC gravity collection pipeline along the edge of the. The 4-inch gravity collection pipeline transports decanted wastewater to the Lakeside Lift Station.

During the development of the 2013 CIP, VRSD operations staff provided detailed input that the maintenance of the raw sewage tanks posed both a safety and reliability issue for staff. Sizing of the pipelines was considered inadequate based on typical industry standards. Abandoning the existing residential sewage collection tanks and gravity collection pipeline was therefore recommended in the 2013 CIP report with construction of a new residential vacuum pressure collection system to replace the individual residential septic receiving tanks, filters, and gravity pipeline to the Lakeside Lift Station. A 4-inch vacuum pressure collection pipeline would be installed in Trentham Road with construction of a new vacuum pressure system pump station near the intersection of Trentham Road and Lake Sherwood Drive. Wastewater flows from the vacuum pump station would be discharged to the existing 12-inch gravity sewer in Lake Sherwood Drive. A new gravity manhole on existing 12-inch gravity would also be a part of the proposed improvements. A conceptual line-item breakdown and cost estimate for the design-build delivery of the North Shore Variable Gravity System replacement is provided in Appendix B.

Current Status – A review of current operations and maintenance procedures for the North Shore Gravity Sewer System was undertaken with District staff during this CIP update. Several issues regarding the cleaning of residential solids holding tanks were resolved, including the cleaning and maintenance of individual filter systems that significantly increased efficiencies, and resolved clogging issues. Along with improvements made to the Lakeside Lift Station since 2013, many of the operational issues previously experienced have been resolved to an acceptable level. Currently, staff believes that near term operation of the gravity system can continue using existing facilities, however, concern remains for its long-term operation and planning for an eventual replacement deemed warranted.

Following approval of the 2013 CIP by the District, design and bid documents for a vacuum pressure collection system at the North Shore of Lake Sherwood were developed using a design-build delivery type of procurement. The bids for the project were at the upper threshold of the District's capabilities from a capital standpoint. It was decided to further investigate near term solutions from an operation and maintenance perspective and delay implementation of a more costly permanent solution. District staff implemented the improvements at each residential collection point as discussed above and established an effective maintenance protocol to ensure proper operation of the overall system. The District intends to reassess long term capital project alternatives along the North Short collection system over the course of the current near term planning horizon of five years. For the purposes of this CIP update, a place holder budget of \$750,000 in 2023 dollars is used for future planning, design, and construction of a long-term wastewater collection alternative at North Shore.

3.1.8. Bell Canyon Lift Station Replacement

2013 Scope of Work - The 2013 CIP report did not recommend any work to be done at the Bell Canyon Lift Station.

Current Status - Discussions with staff during development of this update suggested that budget considerations be given for the replacement of this station due to the age of the facility and significant access issues at the site. To maintain service, a new wetwell would be constructed within the area between the existing station and the roadway. This would allow for ease of access from the roadway for pump access and maintenance. The existing standby generator may need to be temporarily relocated to accommodate construction. A new station floor slab would be constructed, and new electrical and control panels would be installed at the opposite end of the station from the wetwell. The new station tie-ins to the existing force main would be provided with a magnetic flow meter and appropriate valving. The elevation differential between the roadway and pump existing pump station slab is estimated to be approximately nine to ten feet. The station would be enclosed in a masonry block structure with a metal deck roof rated for 120# live load minimum. Access hatches would be provided above the wet well and station panels. A mandoor would be installed at the far end of the station away from the roadway where the elevation change is greatest. The final design of the station building would consider visual aesthetics and sound attenuation to be compatible with the residential neighborhood. A conceptual line-item breakdown and cost estimate for the station's replacement is provided in Appendix B. This project is considered to take place outside of the District's near term 5-year planning horizon.

3.1.9. Other Wastewater Assets Not a Part of the 2013 CIP

3.1.9.1. Wastewater Collection System – Pipelines

Although there are no immediate issues associated with the general condition of the District's wastewater collection system, concern over potential major failures due to the age of portions of the system as well as damage that can occur during seismic events should be considered in the budgeting process for future CIP efforts.

Based on discussions with District staff, it is considered prudent that a reserve be established under the CIP budgeting process that could be used to address future issues related to wastewater pipelines within the District's service area. Reserve amounts of \$300,000 per year during the near-term planning horizon of 5 years and \$200,000 per year from year 5 through

10 are recommended based on input from staff. Reserve funding beyond year 10 of the planning cycle will be evaluated at a future date. The reserves identified would be used for funding, or partial funding, of infrastructure associated with the following areas:

- **Gravity Sewer Collection System Repair/Replacement** - no current issues within the District's sewer collection system, which would be considered a part of the District's current CIP effort, have been identified. Most ongoing collection system pipeline maintenance, repair, and replacement efforts would be funded through the District's ongoing O&M budgeting process.
- **Manholes** - no significant issues associated with sewer manholes within the wastewater collection system have been identified that would be considered a part of the District's current CIP effort. Ongoing manhole maintenance, repair, and replacement would be funded through the District's ongoing O&M budgeting process.
- **Trunk Line To LA Co. Ln-Bel** - no significant issue associated with the sewer trunkline has been identified that would be considered a part of the District's current CIP effort. It is anticipated that should a failure of the line occur due to age deterioration or seismic events, a CIP project would be established and paid for using existing reserves or through debt service. Ongoing inspections of the line would be funded through the District's ongoing O&M budgeting process.
- **Force Main Replacements & MOPO** - no significant issues associated with the sewer force mains within the collection system have been identified that would be considered a part of the District's current CIP effort. It is anticipated that should a force main failure occur due to age deterioration or seismic events, a CIP project would be established and paid for using existing reserves or through debt service. Ongoing inspections and cleaning of the line would be funded through the District's ongoing O&M budgeting process.

3.1.10. JPA Tapia Plant Projects (capital repair & replacement), JPA Pure Water Project

The funds for repair and replacement projects at the Tapia Water Reclamation Facility as well as the capital associated with the Pure Water Project are determined by the Las Virgenes-Triunfo Joint Powers Authority (JPA). The portion of the funding obligation assigned to the District is budgeted under the CIP. Staff provide annual obligated costs, which are input into the 2023 CIP update presented herein. Costs are shown under Funding Departments 210 and 410.

3.2. WATER INFRASTRUCTURE; FUNDING DEPARTMENT 310

3.2.1. Potable Water System Hydraulic Modeling

2013 Scope of Work - The 2013 CIP report recommended development of a system-wide potable water hydraulic model, which would optimize system operation and reliability. The dynamic model would eliminate the need for unnecessary pumping, allow optimal control of pressure reducing stations, and evaluate system storage capacity to meet varying demands and fire flows.

Current Status – This study has been completed by a consultant to the District and is therefore no longer considered a part of the District’s CIP efforts.

3.2.2. Replacement of Manual Read Water Meters to Automated Water Meter Readers

2013 Scope of Work - Replacement of existing manual read water meters to automated water meter readers throughout the District’s service areas was recommended as part of the 2013 CIP report. Through discussions with operations and administrative staff at the District, as well as field checks of existing system elements, it was determined that there were issues associated with poor accuracy of existing manual read water meters, which likely leads to a significant loss of revenue. Replacement of the meters would also reduce District staff labor costs for manually reading meters.

Current Status – This meter replacement project has been completed since the 2013 CIP Report and is therefore no longer considered a part of the District’s CIP efforts. Future costs for periodic replacements and upgrades would be included in the District’s O&M budgeting process.

3.2.3. Water System SCADA Communications Study.

2013 Scope of Work - The 2013 CIP report recommended the preparation of a system wide SCADA communications study to determine the best approach for connecting localized SCADA facilities to a District centralized monitoring and control station. The study would develop the requirements for a system that will provide a reliable and uniform system to connect existing facilities to the District central monitoring station for staff to readily respond to emergencies and potential problems at within the water infrastructure system. Should this study be undertaken by the District, it is suggested that the work be integrated with the recommended wastewater system assessment as previously discussed herein.

Current Status - This study has been completed by VRSD and is therefore no longer considered a part of the District’s CIP efforts.

3.2.4. Lindero Pump Station Improvements

2013 Scope of Work - Recommendations in the 2013 CIP Report for the Lindero Pump Station included upgrading the existing ventilation system to maintain an acceptable ambient room temperature, installation of new VFD’s, control and SCADA systems. The preliminary engineering investigation to be done as part of the improvements project would evaluate installing this equipment outside of the building due to existing space limitations. The existing pumps have reached their life expectancy and require excessive maintenance, therefore replacement of existing pumps 1 and 3 would be a part of the improvements. The pump station is not fenced and easily accessible from the street and installation of site security measures to protect equipment and structure in accordance with the District’s June 2012 Security Vulnerability Assessment Study was recommended. The suggested improvements would improve health and safety conditions for staff while performing maintenance inside the existing building. They would also improve pump station reliability and provide operational flexibility to better manage demands. Security risks and potential vandalism at lift station site and building would be mitigated.

Current Status – Since preparation of the 2013 CIP, SCADA upgrades have been completed at the station. New pump motors have been installed on two of the three pumps and electrical improvements have also been made by VRSD field crews. Roof repairs have been made, however the truss support system installed is not adequate and bowing of the cross beam is evident. Ventilation issues remain and additional fan and

intake louver capacity is still needed. It was agreed with District staff that installation of a heavy duty 6-foot double mandoor would improve maintenance access and should be budgeted for station improvements. The existing standby generator is currently capable of servicing only one pump in operation and staff considers increasing capacity to serve two pumps is warranted. Other miscellaneous roof and exterior building repairs are also needed at the station. Some of these improvements can be undertaken under the District's O&M budget, however, a conceptual estimate of \$250,000 for all required work at the station may be considered for near-term planning should the work be performed as a single project under the CIP.

3.2.5. Deerhill Pump Station Improvements

2013 Scope of Work – Replacement of the control and SCADA system for the Deerhill Pump Station was included as one of the recommended projects in the 2013 CIP report. The upgrade was intended to optimize the reliability of the station and standardize the control system used by the District for station operation. Cost for removal of existing CLA-VAL pump control valves and replacing them with variable frequency drives was included in the 2013 report with the recommendation that a preliminary design study be undertaken further document the need for valve replacement. The proposed project would improve pump station reliability and provide operational flexibility to better manage demands.

Current Status – SCADA upgrades have been completed at the station by VRSD field crews. Some electrical improvements have also been performed and District staff consider any additional work needed at the station can be undertaken under the O&M budgeting process. Staff have also maintained the existing CLA-VAL pump control valves and do not see a benefit at this time in replacing them with VFDs for pump control. Given the work completed since the 2013 CIP Report, no other significant issues at the station have been identified that would be considered a part of the District's current CIP effort.

3.2.6. Savoy Pump Station Replacement

2013 Scope of Work – At the conceptual level for recommended improvements, the CIP report identified the removal of existing pumping equipment, elimination of the existing vault structure and installation of vertical pumps and new control/SCADA equipment at grade level. New controls and SCADA system would be provided to optimize the reliability of the station and standardize the control system used by the District for station operation. A new pump station building would be constructed with sound mitigating design features to house pumps and control equipment. The improvements would improve health and safety conditions for staff performing maintenance inside. Increased operation and maintenance efficiencies would be realized, and operational flexibility would be enhanced to better manage demands.

Recommendations for performing a further detailed engineering study for replacement or improvements for the Savoy Water Pump Station were included as a part of the 2013 CIP report. The study would evaluate comparative costs and other factors and identify the optimal alternative for pump station replacement. The identification of a preferred design concept would lead to the establishment of a final project budget and implementation schedule.

Current Status – Replacement of the pump station remains on the District's CIP for the near-term horizon of 5 years. In addition to the scope identified in the 2013 CIP Report, staff intends to include resurfacing of the access road to the Savoy Reservoir due to continued deterioration of its surface over the past 10 years. The conceptual costs for the new station are primarily based on the scope identified in 2013. A

conceptual line-item breakdown and cost estimate for the station's replacement is provided in Appendix B. Additional grading of the site to place the station further away from the edge of the access road and provide a natural visual barrier is included in the revised costs. Landscaping cost to further enhance visual aesthetics is included. An acoustical study would be a part of the station design with recommendations for sound attenuation included in the conceptual construction cost identified in these updates.

3.2.7. Lambourne Pump Station Improvements

2013 Scope of Work – Improvements at the Lambourne Pump Station include installation of a SCADA system to monitor station operation. A connection for manual tie-in of a portable diesel generator with a manual transfer switch would be provided. Site security improvements would be further evaluated and included as part of the project in accordance with the District's June 2012 Security Vulnerability Assessment Study.

Current Status – SCADA upgrades at the station have been completed by VRSD field crews. Site security has not been an issue since the 2013 CIP Report and staff does not believe improvements are necessary as identified in the June 2012 Security Vulnerability Assessment Study. The station boosts system pressure to approximately 25 residential homes located in the service area that can't be supplied at the desired service pressures directly by the Deerhill Tank due to elevation difference. Although standby power availability has not been an issue for station operation, should a manual tie-in for standby power be installed, this work would be addressed under the District's annual O&M budgeting process. Procurement of a trailer mounted generator would also be an O&M item if required.

3.2.8. Smoketree Pump Station Replacement

2013 Scope of Work – Preliminary investigations for improvements at the Smoketree Pump Station would further evaluate system pressures and demands to determine whether the station could potentially be eliminated. The 2013 CIP report addresses improvements should the abandonment of the pump station not be possible, which include demolition of the existing pump station in its entirety and construction of a new station on-site. The new station would include a SCADA system, hook up for a portable generator with manual transfer switch. Assessments during preliminary design would verify requirements for inclusion of a hydropneumatic tank as part of the new station design. The improvements would improve health and safety conditions for staff while performing maintenance inside the existing building, increase efficiencies and provide additional operational flexibility to better manage demands.

Current Status – Field measurements taken during preparation of this conceptual update identified an incremental increase of system pressure through the station from approximately 84 psi to 94 psi. Improvements completed since the 2013 CIP Report includes a service tie-in from Las Virgenes Municipal Water District. The addition of this tie-in could provide additional system pressure to the Conifer Pressure Zone and the 25 residential homes located in the zone that are served by the station. It is recommended that the District use the recently completed hydraulic model for the potable water system to further define the impact of the Las Virgenes tie-in on this small service area. This would better support a decision to abandon the Smoketree station while still maintaining acceptable service pressure to these homes.

Should the hydraulic analysis determine that the station would still be required to maintain service area pressures, a conceptual line-item scope and estimate has been prepared for planning purposes and is included in Appendix B.

3.2.9. Other Potable Water Assets Not a Part of the 2013 CIP

- 3.2.9.1. Savoy Lower Sutton V Reservoir** - no significant issue at the reservoir has been identified that would be considered a part of the District's current CIP effort. Ongoing repair, replacement and upgrades at the site would be funded through the District's ongoing O&M budgeting process.
- 3.2.9.2. Oak Canyon Reservoir** - no significant issue at the reservoir has been identified that would be considered a part of the District's current CIP effort. Ongoing repair, replacement and upgrades at the site would be funded through the District's ongoing O&M budgeting process.
- 3.2.9.3. Deerhill Reservoir** - no significant issue at the reservoir has been identified that would be considered a part of the District's current CIP effort. Ongoing repair, replacement and upgrades at the site would be funded through the District's ongoing O&M budgeting process.
- 3.2.9.4. Kilburn Tank** - no significant issue at the tank has been identified that would be considered a part of the District's current CIP effort. Ongoing repair, replacement and upgrades at the site would be funded through the District's ongoing O&M budgeting process.
- 3.2.9.5. Potable Water Reservoirs (general)** – Although there is no immediate need for major repair, rehabilitation or replacement associated with the District's potable water reservoirs, it was agreed with staff that establishing a reserve to expedite such efforts would be a proactive approach to address unforeseen issues. A reserve of \$250,000 per year will be established for the first 5 years of the CIP planning period, \$150,000 per year for years 6 through 10 and an amount to be determined in the future for years 11 through 20.
- 3.2.9.6. Water Distribution Pipelines** - no current issues associated with water pipelines within the District's distribution system, which would be considered a part of the District's current CIP effort, have been identified. Most ongoing pipeline maintenance, repair, and replacement efforts would be funded through the District's ongoing O&M budgeting process. However, concern over potential major failures as well as emerging issues related to chemical safety should be considered in the budgeting process for future CIP efforts.

Along with concern over the possibility of significant pipeline failures that may occur during seismic events, recent studies by nonprofit environmental advocacy groups have expressed concerns about the health consequences from chemicals in PVC pipes leaching into the drinking water. The EPA has not yet provided any guidance regarding the findings of the studies and confirms the agency has no requirements for plumbing materials except that they be lead free and conform to current standards such as those related to testing for plumbing materials under NSF/ANSI 61. Several major municipalities, such as the City of Rochester, do not use PVC or CPVC for water service material, but rather opt for alternatives

such as copper and cross-linked polyethylene pipes, which do not contain polyvinyl chloride or vinyl chloride.

Based on discussions with District staff, it is considered prudent that a reserve be established under the CIP budgeting process that could be used to address future issues with potable water pipelines within the District's service area as presented above. Reserve amounts of \$250,000 per year during the near-term planning horizon of 5 years and \$150,000 per year from year 5 through 10 have been suggested by staff. Reserve funding beyond year 10 of the planning cycle will be evaluated at a future date.

- 3.2.9.7. Hydrants** - no significant issue associated with water hydrants within the potable water distribution system has been identified that would be considered a part of the District's current CIP effort. Ongoing hydrant maintenance, repair, and replacement would be funded through the District's ongoing O&M budgeting process.

3.3. RECYCLED WATER INFRASTRUCTURE; FUNDING DEPARTMENT 410

3.3.1. Regency Hills Recycled Water Pump Station Replacement

2013 Scope of Work – The 2013 CIP report recommends undertaking a preliminary engineering study to identify the final scope for replacement of, or improvements to, the Regency Hills Recycled Water Pump Station. The study would identify the preferred design concept and establish a more accurate project budget and implementation schedule. Due to the age and condition of existing equipment and systems at this location, for the purposes of CIP development, it was suggested that demolition and replacement of the existing pump station in its entirety be budgeted for at this conceptual level. Preliminary engineering would evaluate relocation of the existing pump station to a new site to facilitate access for maintenance and operation. The new station would enhance the reliable delivery of recycled water and improve health and safety conditions for staff while performing maintenance inside existing below grade vault. A new SCADA and control system would be included as part of the project to monitor pump station operation and maintenance.

It should be noted that additional engineering analysis would be needed to confirm the results of this initial study and identify the recommended design concepts for abandoning this lift station and diverting the existing wastewater flows by gravity to the District's collection system.

Current Status – Since the 2013 CIP Report, SCADA system improvements have been made at the station as well as some electrical improvements. Other operation and maintenance concerns as outlined in the 2013 report remain. Although the current station operation has been reliably maintained, replacement of the facility as discussed previously continues to be a part of the District's CIP planning effort. Based on input from the District, recommendations for replacement of the station with a more accessible above grade structure have been eliminated and current conceptual improvements are based on maintaining the existing station footprint. It is anticipated that the replacement project will be scheduled beyond the 5-year planning cycle and future upgrades consider future condition of the facility at that time. A conceptual line-item breakdown and cost estimate for the station's replacement is shown in Appendix B.

3.3.2. Hillcrest and Oak Park North Apartments Recycled Water Improvements and Retrofit

2013 Scope of Work – The proposed improvements and retrofits at the Hillcrest and Oak Park North Apartments were to include installation of approximately 1000 feet of 4-inch PVC recycled water distribution pipelines. Modifications and retrofits of existing onsite facilities would be undertaken to allow for the use of recycled water. It was suggested that the project would reduce potable water demands and maximize use of available recycled water at cost effective rates.

Current Status – The District no longer has responsibility for this system and the proposed CIP improvements have been eliminated from further consideration.

3.3.3. Capris Tract without Lindero Greenbelt Recycled Water Improvements and Retrofit

2013 Scope of Work – The proposed improvements would include installation of approximately 1000 feet of 4-inch PVC recycled water distribution pipelines. Modifications and retrofits of existing onsite facilities would be undertaken to allow for the use of recycled water. It was suggested the project would reduce potable water demands and maximize use of available recycled water at cost effective rates.

Current Status – The District no longer has responsibility for this system and the proposed CIP improvements have been eliminated from further consideration.

3.3.4. Mae Boyer Pump Station Rehabilitation

2013 Scope of Work - The 2013 CIP report did not recommend any work to be done at the Mae Boyer Pump Station.

Current Status – There are limited immediate needs at the Mae Boyer Pump Station and a capital project is not anticipated for the near-term planning horizon of 5 years. Some aesthetic improvements to the building exterior and additional landscaping will be needed, however, these improvements would be done under the District’s annual O&M budgeting process. The District does anticipate a CIP will be required within the long-term planning period of 10 to 20 years and would include rehabilitation of the station due primarily to the age of the facility. A major rehabilitation project would include upgrades and replacement of pumps, mechanical components, electrical systems, controls, lighting, ventilation and building upgrades or replacement. A conceptual line-item budget for improvements at the Mae Boyer Pump Station is presented in Appendix B. Given that the scope for this CIP review does not include a detailed assessment of the station and preliminary design of improvements, the conceptual estimate should be considered a placeholder budget for forecasting purposes within the long-term planning horizon. A further detailed engineering study for replacement or improvements for station would evaluate comparative costs and other factors and identify the optimal alternative for pump station rehabilitation/replacement. The identification of a preferred design concept would lead to the establishment of a final project budget and implementation schedule.

3.3.5. Recycled Water Reservoir (Savoy)

2013 Scope of Work - The 2013 CIP report did not recommend any work to be done at the Savoy Reclaimed Water Reservoir.

Current Status – During site visits during development of the CIP update, concerns regarding site security at the reservoir were discussed with staff. It is suggested that the District implement recommendations

presented in the 2022 Security Study and undertake an additional assessment for security at the reclaimed reservoir site. For budgeting of the 2023 CIP update, a project reserve amount of \$175,000 will be allocated for security improvements at the site. Biannual dive inspections of the reservoir interior should also be included in the O&M budget to proactively address any issues related with the condition of the reservoir concrete.

3.3.6. Recycled Water Distribution System

3.3.6.1. Recycled Water Distribution Pipelines - Oak Park/North Ranch (north) - no significant issue associated with the Oak Park/North Ranch system has been identified that would be considered a part of the District's current CIP effort. It is anticipated that should a failure of a portion of the system occur due to age deterioration or seismic events, a CIP project would be established and paid for using existing reserves or through debt service.

3.3.6.2. Recycled Water Distribution Pipelines - Lake Sherwood (south) - no significant issue associated with the Lake Sherwood system has been identified that would be considered a part of the District's current CIP effort. It is anticipated that should a failure of a portion of the system occur due to age deterioration or seismic events, a CIP project would be established and paid for using existing reserves or through debt service. Given the small size of the recycled water system compared to either the sewer collection or potable water distribution systems, it is felt that a separate reserve is not necessary for recycled water pipelines. Routine repairs of the system would be funded through the District's ongoing O&M budgeting process.

Recognizing that unforeseen events may create system failures that require capital projects, it is considered prudent to establish a reserve for both storage and distribution facilities. Given the small size of the recycled water system compared to either the sewer collection or potable water distribution systems, a smaller annual reserve for those systems is warranted. Based on discussions with District staff, a reserve amount of \$150,000 per year is suggested during the near-term planning horizon of 5 years and \$100,000 per year from year 5 through 10 under the CIP budgeting process. Reserve funding beyond year 10 of the planning cycle will be evaluated at a future date. Routine repairs of the system would be funded through the District's ongoing O&M budgeting process.

3.4. SHARED FACILITIES

Deerhill Operations Center / New District Offices

2013 Scope of Work – No improvements were identified for the existing Deerhill Operations Building as part of the 2013 CIP Report

Current Status – The work at the Deerhill Operations Center is broken down into two CIP efforts. The first addresses the near-term needs within the 5-year planning window. The second is the planning, design and construction of new District offices and operations center at the Deerhill site, which would be undertaken beyond the 10-year planning horizon of this CIP update.

Limited space for field crews and operations and maintenance activities is provided for in the current space. Based on discussions with staff, it was considered necessary to address several immediate needs at the existing Deerhill Operations Building to support ongoing operations and maintenance activities. These improvements would be addressed in the near-term planning horizon of 5 years.

The upgrade project would include the following general areas of work as shown below in Table 3.1.

Table 3.1 – Existing Deerhill Operations Center Near Term Upgrades

General Scope of Proposed Upgrades
Clearing, Grading & Miscellaneous Paving
Expansion of Maintenance Shop Space and Capabilities
Site Improvements for On-site Storage, Vehicles, Parts Including Cover
Interior Storage Area
Fleet Maintenance Area
Laydown Area
Security Fencing

A conceptual line-item conceptual budget for near-term improvements at the existing Deerhill Operations Center is presented in Appendix B

The District is in the first year of a 10-year lease on commercial space located on North Westlake Boulevard in Westlake Village. The total leased commercial space is approximately 6,000 square feet. It is considered prudent to explore the conceptual needs of the District from both an administrative and O&M perspective that would be addressed through the construction of new District offices, which would be constructed once the current commercial lease is terminated after 10 years. Based on discussions with District staff, the building is sized to accommodate 15 technical and administrative staff as well as 10 field staff. Conceptual needs for District Board room and support space as well as public areas are included. Maintenance and fleet service areas are identified along with personnel areas to support staff. For long-term budgeting purposes, a line-item conceptual scope and cost estimate was prepared and is presented in Appendix B. It is recommended that the District undertake a preliminary architectural study to better define the building space, aesthetics, and exterior site development. Conceptual development for the new operations center includes the following space planning considerations presented in Table 3.2 below. The line-item conceptual scope shown in Appendix B provides estimates of area sizing.

Table 3.2 – New District Offices Long Term Replacement

Space Planning Summary	
Entrance	Board
Entrance Lobby	Board Room
Information Desk/ Waiting Area	Executive Conference Room
Shared Spaces	Board Room Coffee & Kitchenette
Public Education & Community Room	Board Room Vestibule & Waiting Area
Training Room	Board Room Equipment and Furniture Storage
Large Conference Room	Office Space
Small Conference Room	General Manager

File Storage	Director of Operations
Secure File Room	Field Superintendent
Furniture/Equipment Storage	Finance
Intern Work Area	Human Resources
Restrooms	Technical & Management Staff
Fitness Room	Visitor Offices
Kitchen/Break Room	Floating Field Office
Coffee Station	Field Services
Copy/Work Room	Field Staff Break Room & Common Area
Employee Entrance/Entrance Vestibule	Women’s Locker Room and Personnel Area
General Storage	Men’s Locker Room and Personnel Area
	Interior Storage Area - Parts & Equipment
	Fleet Maintenance Area
	Maintenance Shop

4. COST ESTIMATING AND CONSTRUCTION INFLATION PROJECTIONS

4.1. COST ESTIMATING

It should be noted that improvements and functional descriptions presented in the 2013 CIP report were conceptual in nature and intended to establish a general scope of work to be considered in constructing the District’s CIP. The prioritization of project areas is meant to establish the basis of an initial capital improvement program for the District. Conceptual cost present planning level estimates that are used for establishing funding needs and are not intended to represent bid estimates. Estimates are expressed in Q1 2013 dollars based on an ENR Heavy Construction Cost Index (CCI) = 9449 with no allowance for inflation or financing costs.

Cost estimates were prepared for the CIP to provide comparative order of magnitude costs for project areas assessed. These conceptual estimates were prepared in general conformity with the guidelines of the American Association of Cost Engineers (AACE) for a Class 4 estimate. This class of estimate is considered a feasibility study estimate. It is used for strategic business and budgetary planning. Class 4 estimates are generally prepared based on limited information and subsequently have moderately wide accuracy ranges. They are typically used for project screening, determination of feasibility, concept evaluation, and preliminary budget approval.

The Class 4 estimating process is undertaken during the early stage of front-end engineering and design (FEED), or Pre-FEED. This level of project definition is a preliminary step taken before basic engineering level work and is sometimes undertaken to confirm the technical and economic feasibility of the project. The development of projects is considered conceptual, and the accuracy of the estimates should consider such a level of definition. Prior to the scheduling the implementation of a specific capital improvement project, the District would develop a Class 3 estimates to form the basis for budget authorization, appropriation, and/or funding. Class 3 estimates are typically prepared to support full project funding requests and become the first of the project phase “control estimate” against which all actual costs and resources will be monitored for variations to the budget.

Recognizing the early conceptual level of development undertaken to define the scope of work for projects identified herein, several factors are then applied to obtain conceptual capital costs estimates. The applied factors include the following:

- Planning, Engineering, and Construction Management @ 25%
- Contractor Overhead and Profit @ 15%
- Bonds and Insurance @ 3%
- Mobilization / Demobilization @ 5%
- Contractor General Conditions @ 7%
- Contingency (based on complexity and level of development) @25% or 35%

Cost factors associated with legal, environmental, and administrative efforts were not included in the estimates presented in the CIP report.

4.2. CONSTRUCTION INFLATION PROJECTIONS

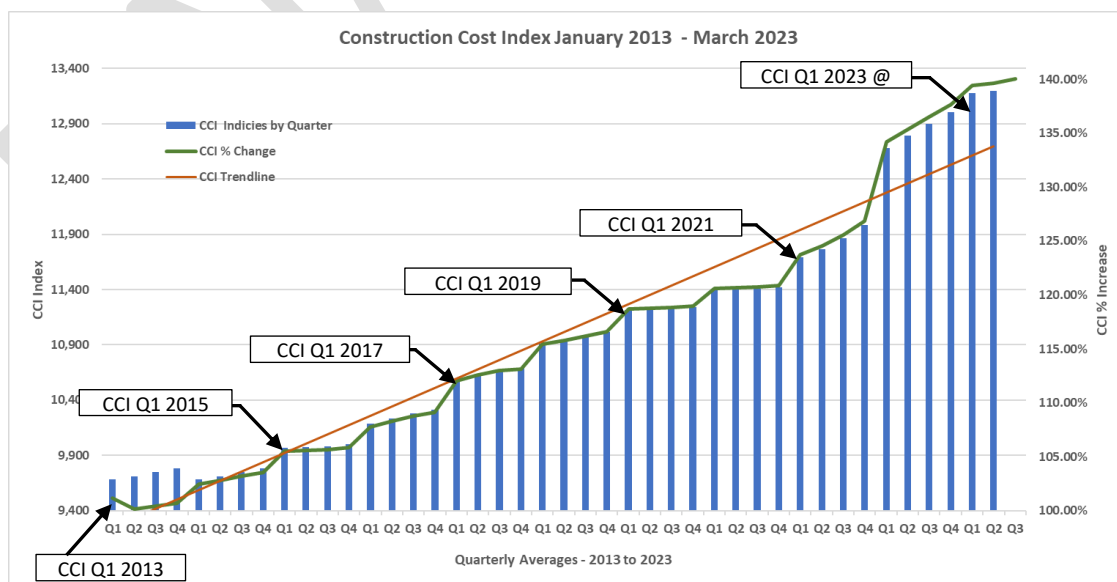
Although year-over-year increase in heavy construction costs between Q1 2021 and Q1 2022 was 8.4% as labor and material costs rose significantly, escalation was 4% between Q1 2022 and Q1 2023, it is projected that increases should stabilize to the 3%-4% in 2024, on par with historical averages.

Overall cost inflation for materials is expected to begin cooling by the end of 2023 and return to more typical levels by mid-2024. However, given the large number of construction inputs, many of which are often subject to geopolitical risks such as tariffs and sanctions, costs for some materials may remain volatile.

Supply chain-related disruptions should begin to ease, but ongoing global labor and component shortages will hamper production and logistics capacity. As a result, long lead times and material shortages will likely continue in the short term.

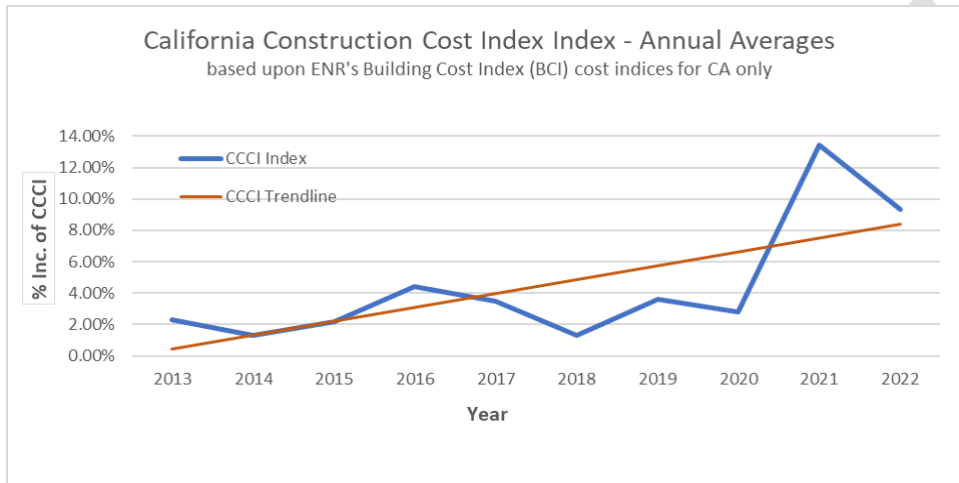
Figure 4.1 below represents the nationwide ENR Heavy Construction Cost Index (CCI) from the first quarter of 2013 through Q1 of 2023.

Figure 4.1 – Graph of Nationwide CCI Indices 2013 to 2023



The California Construction Cost Index (CCCI) is developed based upon Building Cost Index (BCI) cost indices average for San Francisco and Los Angeles only as produced by Engineering News Record (ENR). The BCI annual averages presented in Figure 4.2 below reflect trends more in line with residential and commercial construction, which can be impacted to a greater degree by inflationary influences, supply chain issues, etc. It does, however, support the trends seen in heavy construction nationwide and the near-term inflationary projections suggested in this report.

Figure 4.2 – Graph of CCCI Indices Over Prior 10-Year Period



The data above indicates that historical CCI increases appear to be approximately 4% per year, which can be used for planning level projections when considering CIP development. The estimates utilized herein will use this planning level projection for construction cost estimates based on the 2013 CIP report as presented herein.

5. CONCEPTUAL CAPITAL ESTIMATES AND PROJECTIONS

5.1. COST ESTIMATES - GENERAL

A summary of the 20-year CIP expenditures in 2023 dollars is presented below in Table 5.1. The expenditures include annual reserve amounts as discussed in Section 3.

Table 5.1 – Total CIP Expenditures in 2023 Dollars

20-Year CIP Expenditures in 2023 Dollars			
<u>Department</u>	<u>Fund</u>	<u>District Projects Only</u>	<u>Includes JPA Costs</u>
Wastewater	210	\$12,053,229	\$129,992,588
Potable Water	310	\$12,127,158	\$12,127,158
Recycled Water	410	\$4,741,478	\$5,690,029
Total		\$28,921,864	\$147,809,775

The projects identified in Table 5.2 through 5.4 below are based on the scopes discussed in Section 3. The conceptual estimates are presented for each funding department. Where the scope of projects included in this update are similar to the 2013 CIP Report, construction inflation indices projections as discussed in Section 4 were used to project the 2013 conceptual estimates to the revised midpoint of construction using the escalation rates shown. Where scopes of projects identified in 2013 changed, these projects were updated along with their conceptual costs to 2023 dollars. Subsequent updates to the information included herein will reflect the capital planning schedule anticipated by the District based on infrastructure needs and funding.

Appendix B presents the conceptual cost estimate breakdown for each of the projects identified in the CIP update.

5.2. Cost Estimate – New District Offices

On a planning level, for conceptual cost estimating, a 2017 average building construction cost of \$591/SF was used, which is defined by construction management industry parameters for government administration buildings nationwide. Using a 4% average annual cost escalation factor, 2023 building cost is estimated at \$714/SF nationwide. Adding a plus 5% escalation factor for the California market yields a 2023 local unit cost of \$750/SF. Some line items identified in the estimate have been adjusted to reflect obvious differences in area use and their corresponding complexity relative to the average administration building cost per square foot. Contractor costs for overhead & profit, bonds & insurance, mobilization/demobilization, and general conditions are shown below the hard construction costs presented in Appendix B. These costs amount to approximately 30% of the overall unit cost. Average construction line items cost per SF is therefore 70% of the all-in average conceptual construction cost of \$750/SF ($\$714/\text{SF} + 5\%$), or \$525/SF rounded up to the nearest whole dollar.

5.3. Cost Projections

Tables 5.4 and 5.5 show the projected capital outlay over the 20-year CIP planning horizon. The costs are projected to the midpoint of the projects and distributed across its anticipated duration. Projections are based on the estimated costs presented herein. Using the costs escalation factors discussed in Section 4.1, capital outlays are projected to the fiscal year of the expenditures based on the cost escalation from the year the project estimate was established to the midpoint of the project.

Table 5.2 – Wastewater CIP Summary (2023 Dollars)

Description	2023 CIP	Conceptual Project Cost (\$ 2023)	Project Start Year	Annual Reserve (\$/Yr)		
				Year 1 thru 5	Year 6 thru 10	Year 11 thru 20
Wastewater Infrastructure; Funding Department 210						
Wastewater System SCADA Communications Study	No	\$ -	NA	\$ -	\$ -	\$ -
Carlisle Lift Station Improvements	No	\$ -	NA	\$ -	\$ -	\$ -
Polo Lift Station Improvements	No	\$ -	NA	\$ -	\$ -	\$ -
Westlake Lift Station Improvements	Yes	\$ 577,942	2026	\$ -	\$ -	\$ -
North Ranch Lift Station Improvements and Upgrades	No	\$ -	NA	\$ -	\$ -	\$ -
Lakeside Lift Station Improvements	No	\$ -	NA	\$ -	\$ -	\$ -
North Shore Variable Gravity System Improvements	Yes	\$ 750,000	2038	\$ -	\$ -	\$ -
Bell Canyon Lift Station Replacement	Yes	\$ 994,645	2029	\$ -	\$ -	\$ -
Other Wastewater Assets Not a Part of the 2013 CIP						
Wastewater Pipelines	Yes		2024	\$ 300,000	\$ 200,000	TBD
Gravity Sewer Collection System Repair/Replacement	No		NA	\$ -	\$ -	\$ -
Trunk Line To LA Co. Ln-Bel -	No	\$ -	NA	\$ -	\$ -	\$ -
Force Main Replacements & MOPO -	No	\$ -	NA	\$ -	\$ -	\$ -
Manholes -	No	\$ -	NA	\$ -	\$ -	\$ -
Existing Deerhill Operations Upgrades (56% cost allocation to Fund No. 201)		\$ 482,328	2024	\$ -	\$ -	\$ -
New District Offices (56% cost allocation to Fund No. 201)	Yes	\$ 8,733,750	2033	\$ -	\$ -	\$ -
Total Wastewater Assets - Fund No. 201		\$ 11,538,664		\$ 300,000	\$ 200,000	\$ -

Table 5.3 – Potable Water CIP Summary (2023 Dollars)

Description	2023 CIP	Conceptual Project Cost (\$ 2023)	Project Start Year	Annual Reserve (\$/Yr)		
				Year 1 thru 5	Year 6 thru 10	Year 11 thru 20
Potable Water Infrastructure; Funding Department 310						
Potable Water System Hydraulic Modeling	No	\$ -	NA	\$ -	\$ -	\$ -
Replacement of Manual Read Meters to Automated Meter Readers	No	\$ -	NA	\$ -	\$ -	\$ -
Water System SCADA Communications Study.	No	\$ -	NA	\$ -	\$ -	\$ -
Lindero Pump Station Improvements	No	\$ -	NA	\$ -	\$ -	\$ -
Deerhill Pump Station Improvements	No	\$ -	NA	\$ -	\$ -	\$ -
Savoy Pump Station Replacement	Yes	\$ 2,322,007	2027	\$ -	\$ -	\$ -
Lambourne Pump Station Improvements	No	\$ -	NA	\$ -	\$ -	\$ -
Smoketree Pump Station Replacement	Yes	\$ 703,394	2030	\$ -	\$ -	\$ -
Other Potable Water Assets Not a Part of the 2013 CIP				\$ -	\$ -	\$ -
Savoy Lower Sutton V Reservoir -	No	\$ -	NA	\$ -	\$ -	\$ -
Oak Canyon Reservoir	No	\$ -	NA	\$ -	\$ -	\$ -
Deerhill Reservoir	No	\$ -	NA	\$ -	\$ -	\$ -
Kilburn Tank	No	\$ -	NA	\$ -	\$ -	\$ -
Potable Water Reservoirs - General	Yes		2024	\$ 250,000	\$ 150,000	TBD
Water Distribution Pipelines	Yes		2024	\$ 250,000	\$ 150,000	TBD
Hydrants	No	\$ -	NA	\$ -	\$ -	\$ -
Existing Deerhill Operations Upgrades (31% cost allocation to Fund No. 301)		\$ 267,003	2024	\$ -	\$ -	\$ -
New District Offices (31% cost allocation to Fund No. 301)	Yes	\$ 4,834,754	2033	\$ -	\$ -	\$ -
Total Potable Water Assets - Fund No. 301		\$ 8,127,158		\$ 500,000	\$ 300,000	\$ -

Table 5.4 – Recycled Water CIP Summary (2023 Dollars)

Description	2023 CIP	Conceptual Project Cost (\$) 2023	Project Start Year	Annual Reserve (\$/Yr)		
				Year 1 thru 5	Year 6 thru 10	Year 11 thru 20
Recycled Water Infrastructure; Funding Department 410						
Regency Hills Recycled Water Pump Station Replacement	Yes	\$ 593,224	2030	\$ -	\$ -	\$ -
Hillcrest & Oak Park North Apartments Recycled Water Improvements & Retrofit	No	\$ -	NA	\$ -	\$ -	\$ -
Capris Tract without Lindero Greenbelt Recycled Water Improvements & Retrofit	No	\$ -	NA	\$ -	\$ -	\$ -
Mae Boyer Pump Station Rehabilitation	Yes	\$ 583,808	2039	\$ -	\$ -	\$ -
Recycled Water Reservoir Security Improvements (Savoy)	Yes	\$ 175,000	2025	\$ -	\$ -	\$ -
Recycled Water Storage & Distribution System	Yes		2024	\$ 150,000	\$ 100,000	TBD
Recycled Water Distribution Pipelines - Oak Park/North Ranch (north)	No	\$ -	NA	\$ -	\$ -	\$ -
Recycled Water Distribution Pipelines - Lake Sherwood (south)	No	\$ -	NA	\$ -	\$ -	\$ -
Recycled Water Reservoir Upgrades (Savoy)						
Existing Deerhill Operations Upgrades (13% cost allocation to Fund No. 401)	Yes	\$ 111,969	2024	\$ -	\$ -	\$ -
New District Offices (13% cost allocation to Fund No. 401)	Yes	\$ 2,027,478	2033	\$ -	\$ -	\$ -
Total Recycled Water Assets - Fund No. 401		\$ 3,491,479		\$ 150,000	\$ 100,000	\$ -



Table 5.4 - Projected Capital Outlay – Years 1 thru 10 of 20-year CIP Planning Horizon

COST ESTIMATES FOR PLANNING YEARS 1 THROUGH 10
(dollars projected to years shown)

Project Name	Start Planning/Design	Project Duration (months)	CIP Year										TOTAL YRS 1 - 10	
			1 FY 2024-25	2 FY 2025-26	3 FY 2026-27	4 FY 2027-28	5 FY 2028-29	6 FY 2029-30	7 FY 2030-31	8 FY 2031-32	9 FY 2032-33	10 FY 2033-34		
Wastewater Assets														
JPA Pure Water Program	2021	NA	\$7,664,862	\$16,619,435	\$22,593,178	\$42,245,691	\$17,572,622	\$661,177						\$107,356,965
JPA Wastewater Capital Program	2021	NA	\$4,031,616	\$1,800,397	\$857,951	\$864,525	\$732,354	\$573,888	\$573,888	\$573,888	\$573,888	\$573,888		\$10,582,395
Design and Construction of the Westlake Lift Station Improvements (R&R)	2026	14		\$231,177	\$346,765									\$577,942
Design and Construction of Improvements for the Bell Canyon Lift System (R&R)	2029	16							\$387,563	\$710,532	\$193,781			\$1,291,877
Design and Construction of Improvements for the North Shore Gravity System	2038	24												\$0
Gravity Sewer Collection System Repair/Replacement	2024	NA	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$2,500,000
Deerhill Operations Center Upgrades (56% cost allocation)	2024	12	\$255,777	\$255,777										\$511,554
New District Office Complex (56% cost allocation)	2033	36										\$1,371,147	\$1,371,147	\$2,742,293
TOTAL FISCAL YEAR			\$12,252,255	\$19,206,786	\$24,097,894	\$43,410,216	\$18,604,976	\$1,822,628	\$1,484,420	\$967,669	\$2,145,035	\$1,571,147	\$1,571,147	\$125,563,026
WASTEWATER FUNDING LESS JPA OBLIGATION			\$555,777	\$786,954	\$646,765	\$300,000	\$300,000	\$587,563	\$910,532	\$393,781	\$1,571,147	\$1,571,147	\$1,571,147	\$7,623,666
Potable Water Assets														
Design and Construction Savoy Pump Station Replacement	2027	20				\$561,333	\$1,403,332	\$841,999						\$2,806,664
Design and Construction Smoketree Pump Station Replacement	2030	24							\$282,204	\$705,509	\$423,305			\$1,411,018
Potable Water Pipeline Rehabilitation	2024	NA	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$2,000,000
Reservoirs Rehabilitation/Replacement	2024	NA	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$2,000,000
Shared Assets														
Deerhill Operations Center Upgrades (31% cost allocation)	2024	12	\$141,591	\$141,591										\$283,182
New District Office Complex (31% cost allocation)	2033	36										\$759,028	\$759,028	\$1,518,055
TOTAL FISCAL YEAR			\$641,591	\$641,591	\$500,000	\$1,061,333	\$1,903,332	\$1,141,999	\$582,204	\$1,005,509	\$1,482,333	\$1,059,028	\$1,059,028	\$10,018,919
Recycled Water Assets														
JPA Recycled Water Capital Program	2021	NA	\$169,697	\$176,519	\$433,944	\$168,391								\$948,551
Regency Hills Pump Station	2030	24							\$240,347	\$600,868	\$360,521			\$1,201,737
Mae Boyer Pump Station Rehabilitation	2039	20												\$0
Recycled Water Reservoir Security Improvements (Savoy)	2025	NA		\$58,670	\$136,896									\$195,566
Recycled Water Storage & Distribution System	2024	NA	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$1,250,000
Shared Assets														
Deerhill Operations Center Upgrades (13% cost allocation)	2024	12	\$59,377	\$59,377										\$118,754
New District Office Complex (13% cost allocation)	2033	36										\$318,302	\$318,302	\$636,604
TOTAL FISCAL YEAR			\$379,074	\$444,566	\$720,840	\$318,391	\$150,000	\$100,000	\$340,347	\$700,868	\$778,823	\$418,302	\$418,302	\$4,351,211
RECYCLED WATER FUNDING LESS JPA OBLIGATION			\$209,377	\$268,047	\$286,896	\$150,000	\$150,000	\$100,000	\$340,347	\$700,868	\$778,823	\$418,302	\$418,302	\$3,402,660
Annual Expenditures														
	Segment		FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34		TOTAL
	WW	Fund 210	\$12,252,255	\$19,206,786	\$24,097,894	\$43,410,216	\$18,604,976	\$1,822,628	\$1,484,420	\$967,669	\$2,145,035	\$1,571,147		\$125,563,026
	PW	Fund 310	\$641,591	\$641,591	\$500,000	\$1,061,333	\$1,903,332	\$1,141,999	\$582,204	\$1,005,509	\$1,482,333	\$1,059,028		\$10,018,919
	RW	Fund 410	\$209,377	\$268,047	\$286,896	\$150,000	\$150,000	\$100,000	\$340,347	\$700,868	\$778,823	\$418,302		\$3,402,660
TOTAL ALL FUNDS			\$13,103,223	\$20,116,423	\$24,884,790	\$44,621,549	\$20,658,308	\$3,064,627	\$2,406,971	\$2,674,047	\$4,406,191	\$3,048,476		\$138,984,605
TOTAL ALL FUNDS LESS JPA WW OBLIGATION			\$1,237,048	\$1,520,072	\$999,717	\$1,342,942	\$2,353,332	\$1,829,562	\$1,833,083	\$2,100,159	\$3,832,303	\$3,048,476		\$20,096,694
Cumulative Expenditures														
	Segment		FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34		TOTAL
	WW	Fund 210	\$12,252,255	\$31,459,041	\$55,556,935	\$98,967,151	\$117,572,127	\$119,394,755	\$120,879,175	\$121,846,845	\$123,991,879	\$125,563,026		\$125,563,026
	PW	Fund 310	\$641,591	\$1,283,182	\$1,783,182	\$2,844,515	\$4,747,847	\$5,889,846	\$6,472,050	\$7,477,559	\$8,959,892	\$10,018,919		\$10,018,919
	RW	Fund 410	\$209,377	\$477,423	\$764,319	\$914,319	\$1,064,319	\$1,164,319	\$1,504,667	\$2,205,535	\$2,984,358	\$3,402,660		\$3,402,660
TOTAL ALL FUNDS			\$13,103,223	\$33,219,646	\$58,104,436	\$102,725,985	\$123,384,293	\$126,448,920	\$128,855,892	\$131,529,939	\$135,936,129	\$138,984,605		\$138,984,605



Table 5.5 - Projected Capital Outlay – Years 11 thru 20 with Summary Totals Over 20-year CIP Planning Horizon

COST ESTIMATES FOR PLANNING YEARS 11 THROUGH 20 WITH SUMMARY TOTALS FOR FULL 20 YEAR CIP PLANNING PERIOD
(dollars projected to years shown)

Project Name	Start Planning/Design	Project Duration (months)	CIP Year										TOTAL YRS 1 - 10	TOTAL YRS 11 - 20	TOTAL YRS 1 - 20		
			11 FY 2034-35	12 FY 2035-36	13 FY 2036-37	14 FY 2037-38	15 FY 2038-39	16 FY 2039-40	17 FY 2040-41	18 FY 2041-42	19 FY 2042-43	20 FY 2043-44					
Wastewater Assets																	
JPA Pure Water Program	2021	NA													\$107,356,965	\$0	\$107,356,965
JPA Wastewater Capital Program	2021	NA													\$10,582,395	\$0	\$10,582,395
Design and Construction of the Westlake Lift Station Improvements (R&R)	2026	14													\$577,942	\$0	\$577,942
Design and Construction of Improvements for the Bell Canyon Lift System (R&R)	2029	16													\$1,291,877	\$0	\$1,291,877
Design and Construction of Improvements for the North Shore Gravity System	2038	24				\$491,650	\$913,064								\$0	\$1,404,714	\$1,404,714
Gravity Sewer Collection System Repair/Replacement	2024	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$2,500,000	\$0	\$2,500,000
															\$0	\$0	\$0
Deerhill Operations Center Upgrades (56% cost allocation)	2024	12													\$511,554	\$0	\$511,554
New District Office Complex (56% cost allocation)	2033	36	\$2,056,720	\$2,056,720	\$4,113,440	\$2,742,293									\$2,742,293	\$10,969,173	\$13,711,466
TOTAL FISCAL YEAR			\$2,056,720	\$2,056,720	\$4,113,440	\$3,233,943	\$913,064	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$125,563,026	\$12,373,887	\$137,936,913
WASTEWATER FUNDING LESS JPA OBLIGATION			\$2,056,720	\$2,056,720	\$4,113,440	\$3,233,943	\$913,064	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,623,666	\$12,373,887	\$19,997,553
Potable Water Assets																	
Design and Construction Savoy Pump Station Replacement	2027	20													\$2,806,664	\$0	\$2,806,664
Design and Construction Smoke Tree Pump Station Replacement	2030	24													\$1,411,018	\$0	\$1,411,018
Potable Water Pipeline Rehabilitation	2024	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$2,000,000	\$0	\$2,000,000
Reservoirs Rehabilitation/Replacement	2024	NA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$2,000,000	\$0	\$2,000,000
Shared Assets																	
Deerhill Operations Center Upgrades (31% cost allocation)	2024	12													\$283,182	\$0	\$283,182
New District Office Complex (31% cost allocation)	2033	36	\$1,138,541	\$1,138,541	\$2,277,083	\$1,518,055									\$1,518,055	\$6,072,221	\$7,590,276
TOTAL FISCAL YEAR			\$1,138,541	\$1,138,541	\$2,277,083	\$1,518,055	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,018,919	\$6,072,221	\$16,091,140
Recycled Water Assets																	
JPA Recycled Water Capital Program	2021	NA													\$948,551	\$0	\$948,551
Regency Hills Pump Station	2030	24													\$1,201,737	\$0	\$1,201,737
Mae Boyer Pump Station Rehabilitation	2039	20							\$338,930	\$564,883	\$225,953				\$0	\$1,129,766	\$1,129,766
Recycled Water Reservoir Security Improvements (Savoy)	#REF!	NA													\$195,566	\$0	\$195,566
Recycled Water Storage & Distribution System	2024														\$1,250,000	\$0	\$1,250,000
Shared Assets																	
Deerhill Operations Center Upgrades (13% cost allocation)	2024	12													\$118,754	\$0	\$118,754
New District Office Complex (13% cost allocation)	2033	36	\$477,453	\$477,453	\$954,906	\$636,604									\$636,604	\$2,546,415	\$3,183,019
TOTAL FISCAL YEAR			\$477,453	\$477,453	\$954,906	\$636,604	\$0	\$338,930	\$564,883	\$225,953	\$0	\$0	\$0	\$0	\$4,351,211	\$3,676,181	\$8,027,392
RECYCLED WATER FUNDING LESS JPA OBLIGATION			\$477,453	\$477,453	\$954,906	\$636,604	\$0	\$338,930	\$564,883	\$225,953	\$0	\$0	\$0	\$0	\$3,402,660	\$3,676,181	\$7,078,841
Annual Expenditures																	
	Segment		FY 2034-35	FY 2035-36	FY 2036-37	FY 2037-38	FY 2038-39	FY 2039-40	FY 2040-41	FY 2041-42	FY 2042-43	FY 2043-44	TOTAL	TOTAL	TOTAL		
Annual Expenditures	WW	Fund 210	\$2,056,720	\$2,056,720	\$4,113,440	\$3,233,943	\$913,064	\$0	\$0	\$0	\$0	\$0	\$125,563,026	\$12,373,887	\$137,936,913		
	PW	Fund 310	\$1,138,541	\$1,138,541	\$2,277,083	\$1,518,055	\$0	\$0	\$0	\$0	\$0	\$0	\$10,018,919	\$6,072,221	\$16,091,140		
	RW	Fund 410	\$477,453	\$477,453	\$954,906	\$636,604	\$0	\$338,930	\$564,883	\$225,953	\$0	\$0	\$0	\$3,676,181	\$7,078,841		
TOTAL ALL FUNDS			\$3,672,714	\$3,672,714	\$7,345,428	\$5,388,602	\$913,064	\$338,930	\$564,883	\$225,953	\$0	\$0	\$138,984,605	\$22,122,288	\$161,106,894		
TOTAL ALL FUNDS LESS JPA WW OBLIGATION			\$3,672,714	\$3,672,714	\$7,345,428	\$5,388,602	\$913,064	\$338,930	\$564,883	\$225,953	\$0	\$0	\$21,045,245	\$22,122,288	\$43,167,534		
Cumulative Expenditures																	
	Segment		FY 2034-35	FY 2035-36	FY 2036-37	FY 2037-38	FY 2038-39	FY 2039-40	FY 2040-41	FY 2041-42	FY 2042-43	FY 2043-44	TOTAL	TOTAL	TOTAL		
Cumulative Expenditures	WW	Fund 210	\$2,056,720	\$4,113,440	\$8,226,879	\$11,460,823	\$12,373,887	\$12,373,887	\$12,373,887	\$12,373,887	\$12,373,887	\$12,373,887	\$125,563,026	\$12,373,887	\$137,936,913		
	PW	Fund 310	\$1,138,541	\$2,277,083	\$4,554,165	\$6,072,221	\$6,072,221	\$6,072,221	\$6,072,221	\$6,072,221	\$6,072,221	\$6,072,221	\$10,018,919	\$6,072,221	\$16,091,140		
	RW	Fund 410	\$477,453	\$954,906	\$1,909,811	\$2,546,415	\$2,546,415	\$2,885,345	\$3,450,228	\$3,676,181	\$3,676,181	\$3,676,181	\$3,676,181	\$3,676,181	\$7,078,841		
TOTAL ALL FUNDS			\$3,672,714	\$7,345,428	\$14,690,856	\$20,079,458	\$20,992,522	\$21,331,452	\$21,896,335	\$22,122,288	\$22,122,288	\$22,122,288	\$138,984,605	\$22,122,288	\$161,106,894		

Over the 20-year planning period, approximately eighty percent (80%) of the Districts capital outlay in 2023 dollars is associated with projects shared with the JPA. A summary of these costs is presented in Table 5.6 below.

Table 5.6 – Summary of Capital Requirements Over 20 Year Planning Horizon

<u>Description</u>	<u>Total Capital (2023 dollars)</u>
JPA Pure Water Program -	\$107,356,965
JPA Wastewater Capital Program -	\$10,582,395
JPA Recycled Water Capital Program -	\$948,551
TWSD Service Area Capital Projects -	\$28,921,864

Most of the CIP costs are incurred in the first six years of the District’s current CIP planning cycle and are related to the Pure Water Program. The relationship of the funding requirements for projects with and without the obligation to the JPA can be easily seen when comparing Figures 5.1 and 5.2 below.

Figure 5.1 – Capital Expenditures Including JPA Obligations

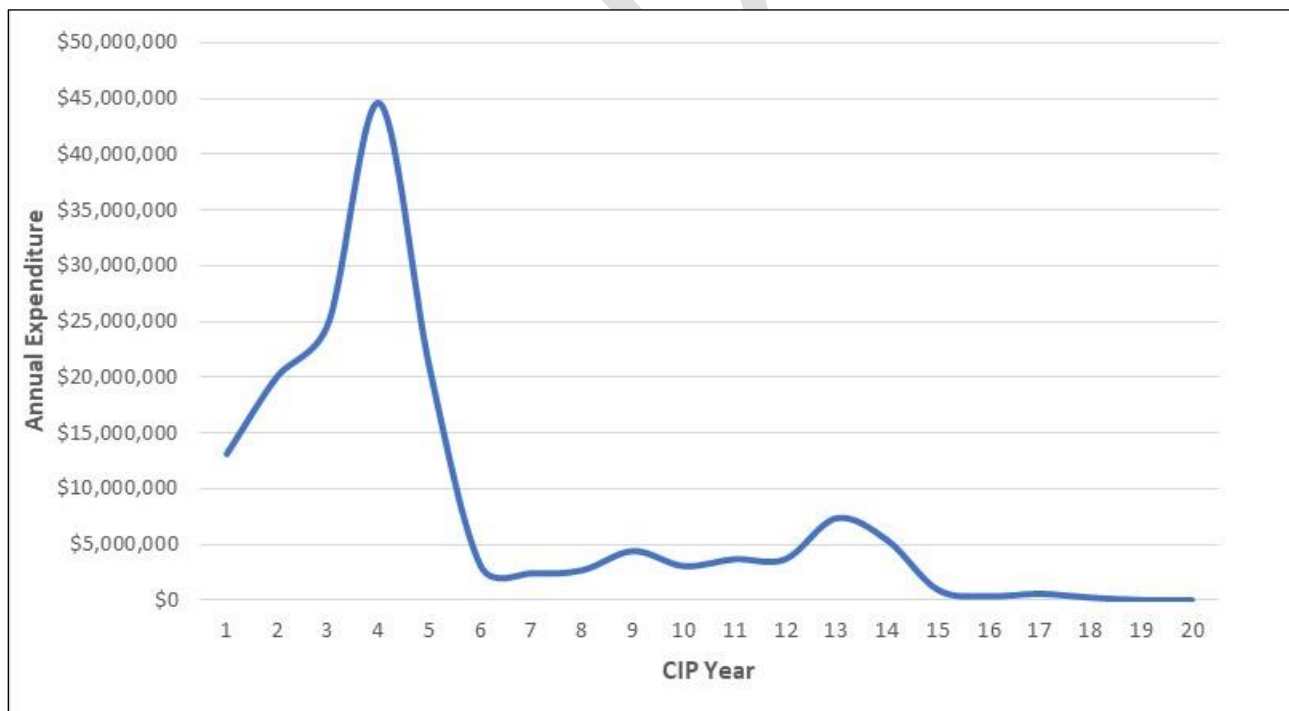


Figure 5.2 - Capital Expenditures Not Including JPA Obligations

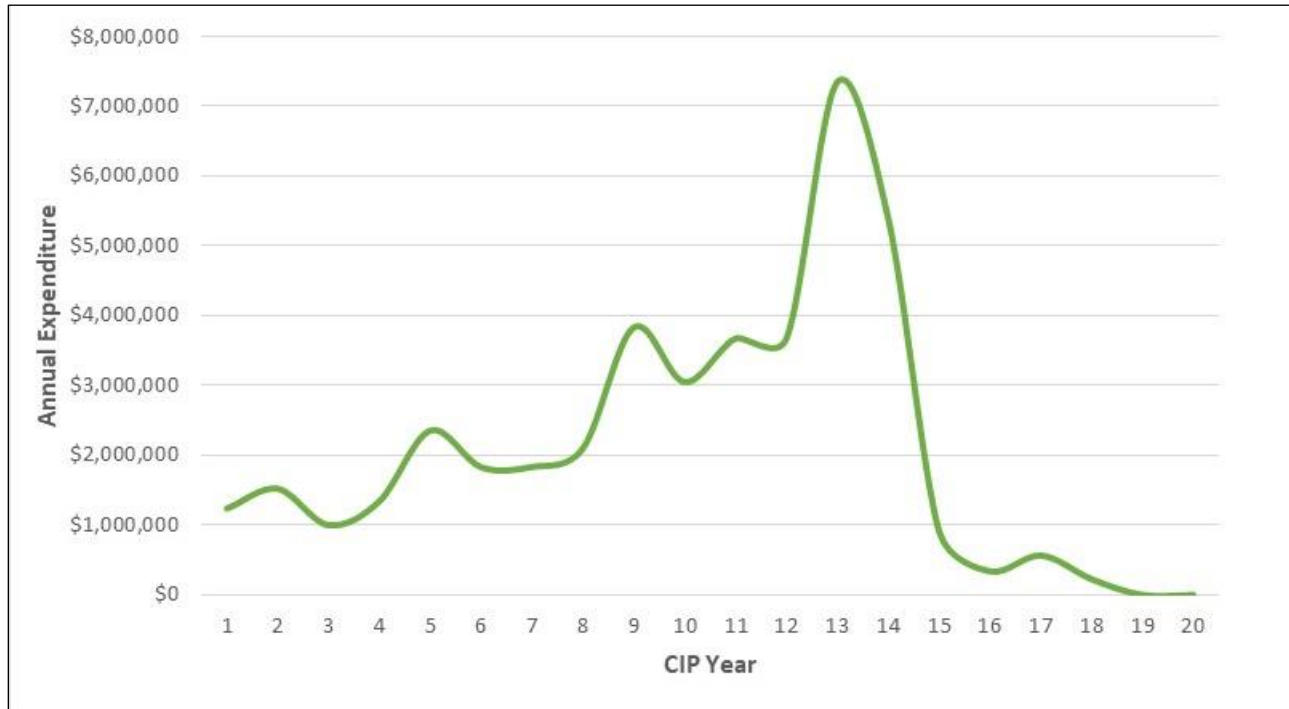


Figure 5.3 shows the annual requirement for capital broken down into their respective fund. JPA obligations are not presented to see the infrastructure improvements solely associated more clearly with projects within the District’s service area. Figure 5.4 presents the flow of capital with each area of JPA funding included. The magnitude of the capital outlay for the Pure Water Program overshadows other areas of funding, therefore, the graph uses a secondary axis to show those costs.

Figure 5.3 - Annual Expenditures Per Fund (JPA obligation not included)

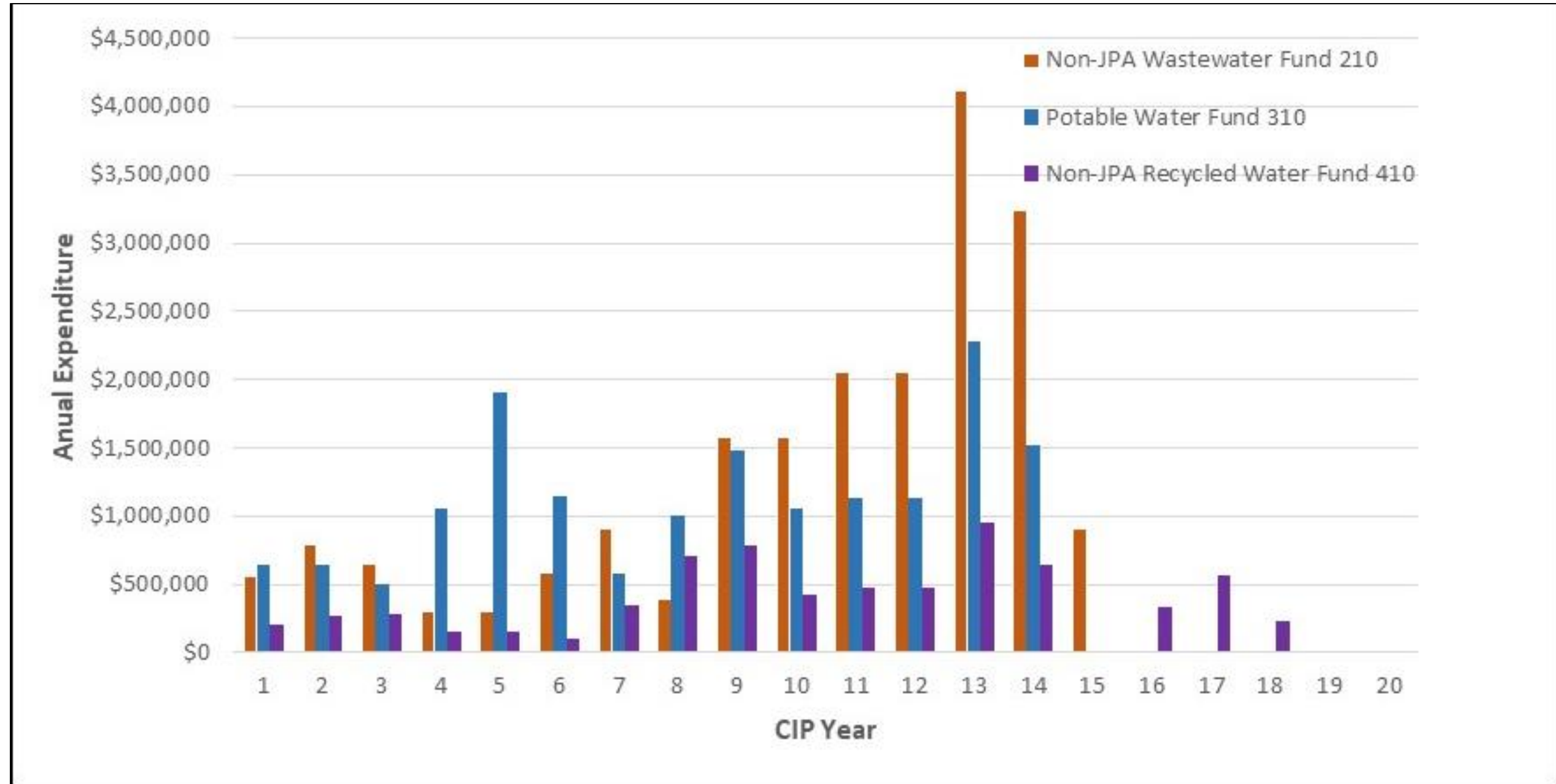
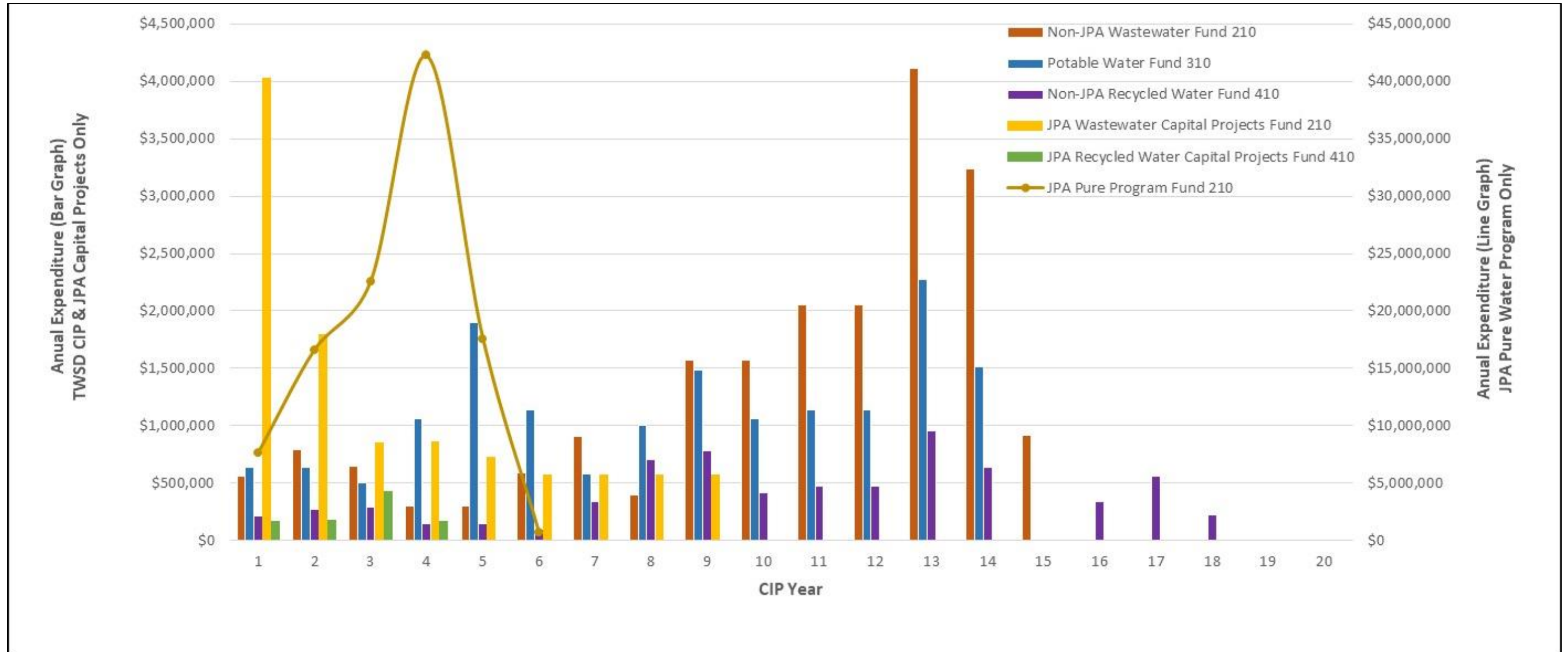


Figure 5.4 – Annual Expenditures Per Fund (JPA obligation shown separately)



Appendix A - FACILITY ASSETS LISTING

A high-level review of the District’s Facility Assets database was undertaken to determine ways the CIP effort could be integrated into the tracking of existing assets. This effort could assist in funding projections and ensuring that all assets are being considered while identifying long-term maintenance costs as well as repair and replacement costs. Although this effort in reviewing the District’s last CIP efforts does not include assessing any current or ongoing CMMS or CMOM systems that may be employed by the District, it is suggested that a wholistic evaluation of financial, planning, operation and maintenance systems be performed at a conceptual level to determine an approach for a more detailed assessment that would lead to an optimum solution for integrating databases and managing assets.

The following table was developed from the District’s March 2023 Facility Asset database. Asset areas, such as laterals, tract sewer systems, meter boxes, fleet, etc., were consolidated for this initial review. Assets that were designated as “no replacement” in the District’s database were not included with the assets identified in Table 2. It is intended that these assets be reviewed with the District to ensure that all areas are evaluated for inclusion in budgeting processes related to capital improvements and that consideration for funding of reserves for future repair and/or replacement efforts are properly allocated.

Table A1 - TWSD Capital Improvements Evaluation - Asset Listing (April 2023)
(Land & Easement assets have been removed as not a part of asset evaluation)

Asset Number	Description	Type	Acq Price	Accum Depreciation	NBV	Replacement Value 1%	Replacement Value 2%
Wastewater Assets - Funding Dept 210							
Multi	Laterals	Laterals	\$356,432	\$338,146	\$18,286	\$584,845	\$957,591
Multi	Tract Sewer Systems	Sewer System	\$13,161,418	\$8,927,518	\$4,233,900	\$21,047,957	\$34,439,590
Multi	Bell Cyn Sewer System	Sewer System	\$985,388	\$985,388	\$0	\$1,577,214	\$2,531,827
336	Force Main Extensions	Force Main Extensions	\$15,852	\$8,609	\$7,243	\$20,043	\$32,823
337	Trunk Ln To La Co Ln-Bel	Trunk Line	\$920,653	\$674,884	\$245,769	\$1,514,070	\$2,477,933
454	Generator- Diesel Engine	Equipment	\$16,286	\$16,286	\$0	\$0	\$0
550	Potrero Bridge Swr Repla	Sewer System	\$145,906	\$60,970	\$84,936	\$0	\$0
Multi	Workstation & Printer For CMOM	Equipment	\$20,510	\$20,510	\$0	\$21,126	\$21,759
560	Saddlebrow Ext Proj 252	Sewer Extensions	\$532,533	\$187,932	\$344,602	\$875,757	\$1,433,276
563	Dappalgray Ext Project 251	Sewer Extensions	\$78,836	\$29,761	\$49,076	\$129,592	\$212,110
565	Rpd 85-360	Misc	\$33,832	\$22,009	\$11,823	\$55,577	\$90,977
569	Manhole Rehab	Improvement	\$43,761	\$19,395	\$24,367	\$0	\$0
570	CMOM	Equipment	\$163,649	\$139,886	\$23,763	\$189,975	\$220,232
571	Cntry Vill 11 Laterals	Laterals	\$95,992	\$36,658	\$59,334	\$157,807	\$258,286
573	Bell Cyn Swr Ext Proj 46	Sewer Extensions	\$108,953	\$41,066	\$67,887	\$179,123	\$293,172
583	Swr Sunrise Assisted Living	Sewer Connection	\$8,910	\$3,077	\$5,833	\$14,589	\$23,897
585	BC Lift Station Impro	Improvements	\$395,436	\$119,745	\$275,691	\$650,282	\$1,064,267
611	Buckskin Back Up Generator	Equipment	\$28,372	\$28,372	\$0	\$31,330	\$34,574
612	Lake Sherwood Back Up Generator	Equipment	\$66,507	\$66,507	\$0	\$73,455	\$81,061
613	Deerhill Back Up Generator	Equipment	\$93,776	\$93,776	\$0	\$103,577	\$114,302
614	Portable Emergency Ww Pump	Pump	\$48,213	\$43,794	\$4,419	\$53,247	\$58,760
617	Polo Lift Station	WW System	\$64,554	\$2,152	\$62,402	\$96,063	\$142,477
618	Lakeside Lift Station Imp	WW System	\$98,845	\$3,295	\$95,550	\$147,118	\$218,193
619	Westlake Lift Sta Abandonment	WW System	\$0	\$0	\$0	\$0	\$0

620	Bell Canyon Sewer Main	RW System	\$36,580	\$0	\$36,580	\$54,414	\$80,710
622	Computer Software-Transition	Central Admin	\$38,208	\$4,549	\$33,660	\$42,195	\$46,565
624	Sewer Automation	WW Software	\$54,680	\$27,340	\$27,340	\$60,390	\$66,644
626	Computer Equipment - Transition	CA-Equipment	\$56,599	\$6,738	\$49,861	\$62,510	\$68,983
627	Furniture & Fixtures-Transition	CA-Equipment	\$0	\$0	\$0	-\$49	-\$60
629	Blackbird Lindero Mainline Rehab	WW System	\$7,613	\$0	\$7,613	\$11,285	\$16,748
630	Printer/Copier	CA-Equipment	\$3,640	\$520	\$3,120	\$3,895	\$4,174
Multi	Fleet	Other Equipment	\$54,396	\$7,771	\$46,626	\$58,284	\$62,447
636	Printer/Copier	CA-Equipment	\$3,725	\$532	\$3,193	\$3,987	\$4,271
Total Wastewater Assets			\$17,740,054	\$11,917,184	\$5,822,871	\$27,819,657	\$45,057,589
Potable Water Assets - Funding Dept 310							
16	Lindero Pumping Plant	Pump Station	\$63,210	\$46,853	\$16,357	\$94,062	\$139,510
17	2infebco Bckflow Pressure	Equipment	\$11,553	\$8,563	\$2,990	\$17,152	\$25,449
18	Supply Sys Reservoir Pip	Reservoir	\$65,864	\$48,822	\$17,042	\$98,014	\$145,370
21	R#1 Conifr/Xfer Tank Fr M	Transfer Tank	\$14,028	\$10,398	\$3,630	\$20,837	\$30,914
29	R#3 Kilbrn Grading Upper	Improvements	\$53,238	\$39,463	\$13,775	\$0	\$0
30	R#3 Kilburn Tank 864-000	Tank	\$215,758	\$159,931	\$55,827	\$321,185	\$476,342
31	R#3 Kilburn Retaining Wa	Improvements	\$37,175	\$27,556	\$9,619	\$0	\$0
33	R#4 Savoy Lower Sutton V	Tank	\$828,803	\$614,352	\$214,451	\$1,233,926	\$1,829,969
35	R#5 New Deerhill Reservoir	Reservoir	\$1,740,106	\$1,029,630	\$710,476	\$2,590,732	\$3,842,162
	Water Distribution Pipelines	Trans And Dist Mains	\$5,371,192	\$3,893,447	\$1,477,746	\$7,994,529	\$11,856,786
Multi	Hydrants	Hydrant	\$691,481	\$501,671	\$189,810	\$1,027,712	\$1,524,583
136	Kanan Pump Station	Pump Station	\$332,867	\$332,867	\$0	\$406,139	\$494,599
137	Kanan Transformer Pad	Improvements	\$31,956	\$31,956	\$0	\$38,970	\$47,461
138	Pumping Eq L.P.S. Plumbin	Equipment	\$128,029	\$128,029	\$0	\$156,198	\$190,220
139	Lindero PS Electrical	Equipment	\$32,289	\$32,289	\$0	\$39,377	\$47,955
140	Lindero PS Motors/Pumps	Pumps	\$39,498	\$39,498	\$0	\$48,173	\$58,668
141	Lindero PS Telemetry	Equipment	\$20,809	\$20,809	\$0	\$25,369	\$30,897
142	Pumping Eq Savoy PS Lwr	Pump Station	\$507,017	\$507,017	\$0	\$618,635	\$753,376
146	Pumping Eq Deerhill PS	Pump Station	\$1,740,106	\$1,740,106	\$0	\$2,123,238	\$2,585,681
147	Deerhill Pump Station	Pump Station	\$0	\$0	\$0	\$0	\$0

149	Deerhill Booser Pump Station	Pump Station	\$0	\$0	\$0	\$0	\$0
Multi	Service Boxes	Service Boxes	\$947,257	\$947,257	\$0	\$1,213,748	\$1,552,890
Multi	Main Meters	Main Meter	\$205,525	\$205,525	\$0	\$262,979	\$336,513
453	Tank Site Safety Fencing	Improvement	\$6,550	\$6,550	\$0	\$0	\$0
554	Fencing Smoketree Booste	Improvement	\$8,476	\$8,476	\$0	\$10,320	\$12,570
555	Sampling Stations (9)	Sampling Stations	\$38,447	\$38,447	\$0	\$42,459	\$46,856
559	Potable Water Tract 4524	Potable Water Tract	\$18,013	\$10,784	\$7,229	\$26,770	\$39,713
562	Savoy Seismic Retro	Improvement	\$221,067	\$106,294	\$114,773	\$0	\$0
567	Oak Canyon Reservoir	Tank	\$11,620,187	\$2,348,246	\$9,271,941	\$17,300,826	\$25,657,773
568	SCADA	SCADA	\$94,080	\$94,080	\$0	\$103,913	\$114,672
572	Smoketree Pump Roof	Improvement	\$7,478	\$7,085	\$393	\$0	\$0
577	Tract Water 4517-3 Lksh	Potable Water Tract	\$122,397	\$45,129	\$77,268	\$201,234	\$329,358
578	Tract Water 4517-4	Potable Water Tract	\$125,621	\$46,318	\$79,303	\$206,536	\$338,035
580	Seismic Mitigation Kilbu	Improvement	\$177,776	\$75,941	\$101,835	\$0	\$0
602	Mix Tank	Equipment	\$47,574	\$11,699	\$35,876	\$87,209	\$159,097
615	Automated Meters	Automated Meters	\$2,385,924	\$923,732	\$1,462,191	\$2,911,258	\$3,545,333
616	Hydraulic Model	PW System	\$138,914	\$138,914	\$0	\$145,994	\$153,367
622	Computer Software-Transition	Central Admin	\$21,151	\$18,060	\$0	\$0	\$0
625	PW Upgrade & Automation	PW Software	\$43,682	\$21,841	\$21,841	\$48,242	\$53,237
628	Kilburn Water Reservoir Access Road	PW System	\$168,354	\$5,261	\$163,093	\$250,607	\$371,672
Total Potable Water Assets			\$28,323,451	\$14,272,894	\$14,047,466	\$39,666,341	\$56,791,027
Recycled Water Assets - Funding Dept 410							
296	Re-Water Line Sys -Oak Park	Rewater Line Sys	\$3,688,923	\$2,372,449	\$1,316,475	\$5,555,640	\$8,342,224
553	T-4517 RW Booster Pump Station	Rewater Booster Pump	\$225,000	\$119,459	\$105,541	\$334,945	\$496,749
615	Automated Meters	Automated Meters	\$55,185	\$21,374	\$33,811	\$67,315	\$81,978
621	Regency Pump Sta Design - RW	RW System	\$91,244	\$10,645	\$80,599	\$135,800	\$201,409
622	Computer Software-Transition	Central Admin	\$8,870	\$18,060	\$0	\$0	\$0
623	RW System (CMWD)	RW System	\$11,733,979	\$1,808,988	\$9,924,991	\$17,470,247	\$25,909,031
626	Computer Equipment - Transition	CA-Equipment	\$13,139	\$0	\$0	\$0	\$0

627	Furniture & Fixtures-Transition	CA-Equipment	\$0	\$0	\$0	\$0	\$0
630	Printer/Copier	CA-Equipment	\$845	\$121	\$724	\$899	\$963
Multi	Fleet	Other Equipment	\$12,628	\$1,804	\$10,824	\$13,503	\$14,468
636	Printer/Copier	CA-Equipment	\$865	\$124	\$741	\$920	\$986
Total Recycled Water Assets			\$15,830,678	\$4,353,024	\$11,473,705	\$23,579,269	\$35,047,808
Total All Capital Assets (Replacement)			\$61,894,183	\$30,543,102	\$31,344,042	\$91,065,266	\$136,896,424
			\$47,390,946				
Assets Confirmed Not Included In Budgeting For Replacement as Part of CIP							
445	Freezer	Equipment	\$159	\$159	\$0	\$0	\$0
447	Trailer- Used- Office 8x	Equipment	\$2,340	\$2,340	\$0	\$0	\$0
549	Sewr Line Study Sp46-54	Misc	\$12,737	\$9,924	\$2,814	\$20,884	\$34,199
561	Grinder Pump Proj 280	Improvement	\$255,724	\$113,630	\$142,094	\$380,689	\$564,587
574	Sherwood Inspection	Misc	\$37,546	\$12,578	\$24,968	\$0	\$0
12	8in Flag Valve Water Tower	Misc	\$3,233	\$2,395	\$838	\$0	\$0
13	Structures- Misc	Misc	\$1,386	\$1,386	\$0	\$0	\$0
14	Structure- Pre-Existing	Misc	\$49,699	\$36,838	\$12,861	\$0	\$0
15	Structure/Kanan Road Ext V	Misc	\$578	\$578	\$0	\$0	\$0
19	R#1 Conifer Res Preexist	Misc	\$631	\$631	\$0	\$0	\$0
20	R#1 Conifer Clean Paint T	Improvements	\$0	\$0	\$0	\$0	\$0
22	R#1 Conifer Grade Access	Improvements	\$0	\$0	\$0	\$0	\$0
23	R#1 Conifer Grade Tank Ba	Improvements	\$0	\$0	\$0	\$0	\$0
24	R#1/Conifer Trench For Ut	Improvements	\$982	\$982	\$0	\$0	\$0
25	R#1conifer Lower 12inline	Improvements	\$3,647	\$2,703	\$944	\$0	\$0
26	R#1conifer Repair Rd To	Improvements	\$3,437	\$2,548	\$889	\$0	\$0
27	R#1conifer Screen Overfl	Improvements	\$140	\$140	\$0	\$0	\$0
28	R#1 Conifer Replace Alti	Improvements	\$8,768	\$6,499	\$2,269	\$0	\$0
32	R#3 Kilburn Innsp Kilburn	Misc	\$26,233	\$19,081	\$7,152	\$0	\$0
34	R#4 Savoy Transmitter Pu	Improvements	\$4,068	\$3,016	\$1,052	\$0	\$0

36	R#5 Deerhill 2.1 Mil Gal	Improvements	\$0	\$0	\$0	\$0	\$0
37	R#5 Deerhill Fire Dept H	Improvements	\$0	\$0	\$0	\$0	\$0
38	R#5 Deerhill Access Road	Improvements	\$0	\$0	\$0	\$0	\$0
39	Supply Mains	Misc	\$491	\$491	\$0	\$0	\$0
40	Supply Main Tie-In Kanan	Misc	\$772	\$772	\$0	\$0	\$0
41	Supply Main Tr 3157	Misc	\$421	\$421	\$0	\$0	\$0
42	Supply Main Tr 2960	Misc	\$421	\$421	\$0	\$0	\$0
43	Supply Main Tr 3157	Misc	\$561	\$561	\$0	\$0	\$0
44	Fire Mains	Misc	\$4,700	\$3,484	\$1,216	\$0	\$0
132	Pumping Eq Conifer Ps Pr	Improvements	\$1,405	\$1,405	\$0	\$1,692	\$2,063
133	Conifer Tad Pipeline Aba	Improvements	\$115	\$115	\$0	\$118	\$147
134	Conifer Excess Cable Chr	Improvements	\$345	\$345	\$0	\$399	\$488
135	Shelves For Kanan Station	Improvements	\$1,509	\$1,509	\$0	\$1,819	\$2,218
143	Savoy Auto Pressure Cntr	Improvements	\$2,050	\$2,050	\$0	\$2,479	\$3,022
144	Savoy 4in Sce Duct	Improvements	\$4,756	\$4,756	\$0	\$5,781	\$7,043
145	Pumping Eq Various 88a	Equipment	\$4,514	\$4,514	\$0	\$5,486	\$6,683
148	Deerhill Meter Maint Fac	Meter Maint Facility	\$0	\$0	\$0	\$0	\$0
Total			\$433,368	\$236,273	\$197,096	\$419,348	\$620,451

Appendix B – CONCEPTUAL CIP ESTIMATES

The following estimates have been prepared in accordance with the project scopes discussed in Section 3 and the cost projection methodology in Section 4. Future dollars are projected to the project midpoint and spread through the project duration as shown in the estimates and included in Tables 5.4 and 5.5.

FINAL DRAFT

Westlake Lift Station

Projected Future Value of Project Costs			
Total 2013 Cost	Estimated Project Start Year	Estimated Duration (months)	Future Value @ Project Midpoint - 4% Annual Escalation Rate
\$ 339,256	2026	14	\$577,942

Westlake Sewer Lift Station Improvements Conceptual Project Cost Estimate					
Description	Quantity	Unit	Unit Cost	Total Cost 2013	Total Cost Project @ Midpoint
Demolition of Existing Facilities	1	LS	\$ 15,000	\$ 15,000	\$ 25,553
New 6 foot diameter Wet Well with T-Lock	1	LS	\$ 25,000	\$ 25,000	\$ 42,589
Wet Well Top Slab & Hatch	1	LS	\$ 16,000	\$ 16,000	\$ 27,257
Submersible Pumps	2	EA	\$ 5,000	\$ 10,000	\$ 17,036
Check Valves (Swing)	2	EA	\$ 2,500	\$ 5,000	\$ 8,518
Isolation Valves (Butterfly)	2	EA	\$ 1,500	\$ 3,000	\$ 5,111
Mechanical Piping	1	LS	\$ 5,000	\$ 5,000	\$ 8,518
Meter/Valve Vault & SS Hatch	1	LS	\$ 4,000	\$ 4,000	\$ 6,814
Flow Meter in Vault	1	LS	\$ 3,500	\$ 3,500	\$ 5,962
Site Work (includes tree removal)	1	LS	\$ 12,000	\$ 12,000	\$ 20,443
AC Pavement	400	SF	\$ 7	\$ 2,600	\$ 4,429
Excavation, Backfill, and Compaction	100	CY	\$ 100	\$ 10,000	\$ 17,036
Yard Piping	20	LF	\$ 300	\$ 6,000	\$ 10,221
Chain Link Fence	0	LF	\$ 20	\$ -	\$ -
Gates	0	EA	\$ 1,000	\$ -	\$ -
Electrical	1	LS	\$ 35,000	\$ 35,000	\$ 59,624
Generator	0	LS	\$ 25,000	\$ -	\$ -
Instrumentation and SCADA	1	LS	\$ 18,000	\$ 18,000	\$ 30,664
Startup and Testing	1	LS	\$ 5,000	\$ 5,000	\$ 8,518
TOTAL CONSTRUCTION COST - NEW BELL CANYON LIFT STATION				\$ 175,100	\$ 298,293
Planning, Engineering, and Construction Management @ 25%		25%		\$ 43,775	\$ 74,573
Contractor Overhead and Profit @ 15%		15%		\$ 26,265	\$ 44,744
Bonds and Insurance @ 3 %		3%		\$ 5,253	\$ 8,949
Mobilization / Demobilization @ 5%		5%		\$ 8,755	\$ 14,915
Contractor General Conditions @ 7%		7%		\$ 12,257	\$ 20,880
PROJECT TOTAL SOFT COSTS				\$ 96,305	\$ 164,061
Project Contingency		25%		\$ 67,851	\$ 115,588
TOTAL PROJECT COST				\$ 339,256	\$ 577,942

Year Conceptual Estimate Completed 2023

Bell Canyon Lift Station Replacement

Projected Future Value of Project Costs			
Total 2023 Cost	Estimated Project Start Year	Estimated Duration (months)	Future Value @ Project Midpoint - 4% Annual Escalation Rate
\$ 994,645	2029	16	\$ 1,291,877

DESCRIPTION OF ITEM	QTY. (EST)	UNIT	UNIT COST	EXTENDED COST
GENERAL				
Material Testing	1	LS	\$ 2,500	\$ 2,500
Construction Staking	1	LS	\$ 2,500	\$ 2,500
Traffic Control	1	LS	\$ 1,000	\$ 1,000
Startup & Testing	1	LS	\$ 4,000	\$ 4,000
Incidentals	1	LS	\$ 10,000	\$ 10,000
LIFT STATION SITE IMPROVEMENTS				
Concrete Slab @ Curb Area for Stationing of Servicing Trucks (includes base)	20	SY	\$ 85	\$ 1,700
Concrete Driveway Approaches for Truck Loads (both sides of LS)	9	SY	\$ 85	\$ 765
Security Fencing (assumed none required based on station design)	0	LF	\$ 35	\$ -
LIFT STATION				
Furnish Wet Well, 84" Dia Concrete Manhole with Precast Lid & Access Hatch	1	EA	\$ 18,000	\$ 18,000
Install Wet Well	1	LS	\$ 30,000	\$ 30,000
Furnish Valve Box for Discharge with SS Access Hatch	1	EA	\$ 2,000	\$ 2,000
Install Valve Box	1	LS	\$ 1,000	\$ 1,000
Furnish (2) Submersible Pumps, Rail Systems, Cables, And Appurtenances	2	LS	\$ 17,500	\$ 35,000
Telemetry - Controls, (2) Magnetic Flow Meters & Instrumentation	1	LS	\$ 28,000	\$ 28,000
Install Pumps and Control Panel	1	EA	\$ 35,000	\$ 35,000
Lift Station Electrical	1	LS	\$ 24,000	\$ 24,000
Field Instruments	4	EA	\$ 750	\$ 3,000
3" Sch 40 PVC Drainpipe & 3" Floor Drain	1	EA	\$ 1,000	\$ 1,000
New LS Slab (assumed @ 35'X9'X2')	70	CY	\$ 550	\$ 38,500
New LS Masonry Walls (assumed 88' LF X 9' high)	792	SF	\$ 75	\$ 59,400
New LS Metal Deck Roof with Acoustical Provisions (live load @ 120#/SF minimum)	450	SF	\$ 60	\$ 27,000
LS Roof Access Hatches and Man Door	1	LS	\$ 3,000	\$ 3,000
LS Ventilation	1	LS	\$ 2,200	\$ 2,200
3" Sch 40 PVC Drainpipe & 3" Floor Drain	1	EA	\$ 1,000	\$ 1,000
Diesel Standby Generator	1	EA	\$ 30,000	\$ 30,000
72" Sanitary Sewer Manhole (assumed needed for station MOPO and tie-ins)	1	EA	\$ 18,000	\$ 18,000
FORCE MAIN DISCHARGE				
6" PVC Force Main, C-900, Class 150	50	LF	\$ 120	\$ 6,000
Fittings	8	EA	\$ 600	\$ 4,800
Concrete Encasement	10	LF	\$ 70	\$ 700
SANITARY SEWER				
8" PVC Sewer Main	30	LF	\$ 120	\$ 3,600
Connect To Existing Sanitary Main	2	EA	\$ 3,000	\$ 6,000
LIFT STATION GRADING & MISCELLANEOUS				
Temporary Bypass Pumping and MOPO	1	LS	\$ 48,000	\$ 48,000
Excavation	1	LS	\$ 32,000	\$ 32,000
Dewatering	1	LS	\$ 10,000	\$ 10,000
Granular Backfill & Slab Foundation Base	40	Tons	\$ 30	\$ 1,200
Topsoil, Strip/Stockpile & Replace (6")	1	LS	\$ 3,000	\$ 3,000
Replace Landscaping	1	LS	\$ 1,000	\$ 1,000
Erosion Control	1	LS	\$ 500	\$ 500
Remove And Replace Existing Asphalt Pavement, Including Additional Base (both sides of LS)	120	SY	\$ 150	\$ 18,000
TOTAL CONSTRUCTION COST - NEW BELL CANYON LIFT STATION				\$ 513,365.00
Planning, Engineering, and Construction Management @ 25%	1	%age	25%	\$ 128,341
Contractor Overhead and Profit @ 15%	1	%age	15%	\$ 77,005
Bonds and Insurance @ 3%	1	%age	3%	\$ 15,401
Mobilization / Demobilization @ 5%	1	%age	5%	\$ 25,668
Contractor General Conditions @ 7%	1	%age	7%	\$ 35,936
PROJECT TOTAL SOFT COSTS				\$ 282,351
Contingency @ 25%	1		25%	\$ 198,929
TOTAL PROJECT COST - NEW BELL CANYON LIFT STATION				\$ 994,645

**NORTH SHORE WASTEWATER COLLECTION SYSTEM IMPROVEMENTS
CONCEPTUAL COST ESTIMATE**

Prepared April 2023
KEH Group, Inc.

Since the development of the 2013 CIP Report, District staff have made improvements to increase the reliability and efficiency of the North Shore Wastewater Collection System. Near term upgrades are not considered a priority and permanent alternatives will be reassessed over the next 5 year planing horizon. The 2023 CIP Update will use a placeholder estimate of \$750,000 2023 Dollars for planning purposes relative to future improvements for the system.

2023 Capital Planning Placeholder Estimate	Projected Future Value of Project Costs			
	Total 2023 Cost	Estimated Project Start Year	Estimated Duration (months)	Future Value @ Project Midpoint - 4% Annual Escalation Rate
	\$750,000	2038	24	\$1,404,714

Conceptual Cost Estimate Development Date @ 2023
Cost Escalation from Development Date of Conceptual Estimate @ 187.3%

NOTE:
THE TABLE BELOW IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT USED FOR DEVELOPMENT OF THE 2023 CIP UPDATE

**Lake Shore/Lakeside Design Build Construction 75% Cost Estimate Used a Part of the 2013 CIP Report
Lakeside Lift Station Submersible Lift Station Replacement and NSVGGs/Vacuum System Upgrade**

Conceptual Cost Estimate Development Date @ 2017
Cost Escalation from Development Date of Conceptual Estimate @ 187.3%

Description	Quantity	Unit	Unit Cost	Total Cost	Total Cost Project @ Midpoint	Projected Future Value of Project Costs			
						Total 2017 Cost	Estimated Project Start Year	Estimated Duration (months)	Future Value @ Project Midpoint - 4% Annual Escalation Rate
General Conditions						\$2,432,448	2038	24	\$4,555,908
Easements & Title Reports	1	LS	\$10,000.00	\$10,000	\$18,730				
Mobilization / Demobilization	1	LS	\$20,000.00	\$20,000	\$37,459				
Demolition and Disposal of Existing Material	1	LS	\$20,000.00	\$20,000	\$37,459				
Temporary Staging Area	1	LS	\$5,000.00	\$5,000	\$9,365				
Contractor General Requirements	1	LS	\$100,000.00	\$100,000	\$187,297				
Rental of Bypass Pumping Equipment	2	Months	\$15,000.00	\$30,000	\$56,189				
Bypass Pumping Equipment Setup	1	LS	\$20,000.00	\$20,000	\$37,459				
Barge rental during construction, estimated 30 days	1	LS	\$45,000.00	\$45,000	\$84,284				
Operating Cost Bypass Pump Station	2	Months	\$5,000.00	\$10,000	\$18,730				
Contractor Temporary Facilities	5	Months	\$2,500.00	\$12,500	\$23,412				
Startup and Testing	1	LS	\$60,000.00	\$60,000	\$112,378				
General Conditions Subtotal				\$332,500	\$622,763				
Site Work & Yard Piping									
Replace Existing Pumps with Grinder Pumps	2	EA	\$15,000.00	\$30,000	\$56,189				
Vacuum System valve and Pits, locations	16	EA	\$4,465.00	\$71,440	\$133,805				
Dedicated Air Vents	16	EA	\$350.00	\$5,600	\$10,489				
Specialty Spare Parts and Tools	1	LS	\$8,500.00	\$8,500	\$15,920				
Package Vacuum Station, lump sum	1	EA	\$74,000.00	\$74,000	\$138,600				
Installation Costs (Vacuum Station)	1	EA	\$15,000.00	\$15,000	\$28,095				
Housing for Vacuum Station	1	EA	\$25,000.00	\$25,000	\$46,824				
4-inch VG gravity sewer improvements	350	LF	\$65.00	\$22,750	\$42,610				
Repairs as needed to 4-inch VG gravity sewer	1	EA	\$5,000.00	\$5,000	\$9,365				
New 4-inch laterals on-site	660	LF	\$100.00	\$66,000	\$123,616				
New 4-inch parallel gravity sewer	2000	LF	\$100.00	\$200,000	\$374,594				
Connect laterals to 4-inch Sewer and Bypass	16	EA	\$1,000.00	\$16,000	\$29,968				
Abandonment of Existing Collection Tanks	16	EA	\$1,200.00	\$19,200	\$35,961				
Grinder Pump Retrofit (4 homes and tie-ins to 8-inch sewer)	4	EA	\$25,000.00	\$100,000	\$187,297				
Demolition and Disposal of Existing Equipment	1	LS	\$5,000.00	\$5,000	\$9,365				
Grading & Drainage, Etc.	1	LS	\$5,000.00	\$5,000	\$9,365				
Crushed Rock	100	Cy	\$75.00	\$7,500	\$14,047				
New Chain Link Fence	80	LF	\$35.00	\$2,800	\$5,244				
New Chain 20 foot Double Gate	1	EA	\$15,000.00	\$15,000	\$28,095				
Site Work & Yard Piping Subtotal				\$663,790	\$1,243,260				
Concrete & Metals									
Concrete Pad for Piping and Valves	5	CY	\$550.00	\$2,750	\$5,151				
Hatches (4x4 Stainless Steel H20)	1	EA	\$8,500.00	\$8,500	\$15,920				
Concrete & Metals Subtotal				\$11,250	\$21,071				
Paintings and Coatings									
T-Lok Liner for New Wet Well	1	LS	\$17,500.00	\$17,500	\$32,777				
Polyurethane Coating (Interior of emergency overflow basin)	1	LS	\$12,500.00	\$12,500	\$23,412				
Miscellaneous Coatings	1	LS	\$10,000.00	\$10,000	\$18,730				
Painting and Coating Subtotal				\$40,000	\$74,919				
Mechanical Equipment & Piping									
Standby Self Priming Pump and Shed	1	EA	\$30,000.00	\$30,000	\$56,189				
Soft Starter Motors	2	EA	\$7,500.00	\$15,000	\$28,095				
Modify Existing Discharge Piping & Valves	1	EA	\$7,500.00	\$7,500	\$14,047				
8-inch Isolation Valves (Plug)	2	EA	\$2,000.00	\$4,000	\$7,492				
10-inch Isolation Valves (Plug)	1	EA	\$2,250.00	\$2,250	\$4,214				
12-inch Isolation Valves (Plug)	3	EA	\$3,500.00	\$10,500	\$19,666				
10-inch Isolation Valves (3-way Plug)	2	EA	\$8,000.00	\$16,000	\$29,968				
8" Mechanical Piping Fittings and Appurtenances	150	LF	\$130.00	\$19,500	\$36,523				
10" Mechanical Piping Fittings and Appurtenances	50	LF	\$160.00	\$8,000	\$14,984				
12" Mechanical Piping Fittings and Appurtenances	20	LF	\$200.00	\$4,000	\$7,492				
Piping within Valve Vault	1	LS	\$25,000.00	\$25,000	\$46,824				
Sump pump in valve vault	1	LS	\$1,500.00	\$1,500	\$2,809				
FPI Slide Gate w/ stainless steel frame	1	LS	\$7,000.00	\$7,000	\$13,111				
Packaged Odor Control System	1	LS	\$30,000.00	\$30,000	\$56,189				
Miscellaneous Piping and Site Work	1	LS	\$6,000.00	\$6,000	\$11,238				
Miscellaneous Pressure Gauges, Switches, Air Valves, etc.	1	LS	\$1,500.00	\$1,500	\$2,809				
Magnetic Flow Meter	1	LS	\$4,000.00	\$4,000	\$7,492				
Mechanical Equipment & Piping Subtotal				\$191,750	\$359,142				
Electrical, Instrumentation, & SCADA									
SCADA System Upgrade	1	LS	\$50,000.00	\$50,000	\$93,649				
Conductors and Cable	1	LS	\$4,500.00	\$4,500	\$8,428				
Switchgear	1	LS	\$54,000.00	\$54,000	\$101,141				
Field Instruments	1	LS	\$2,600.00	\$2,600	\$4,870				
SSRV Starters	1	LS	\$75,000.00	\$75,000	\$140,473				
Vacuum Valves/Pits Monitoring Package	16	EA	\$750.00	\$12,000	\$22,476				
Monitoring System Install	16	EA	\$150.00	\$2,400	\$4,495				
Control Panel Modifications	1	LS	\$5,000.00	\$5,000	\$9,365				
Electrical, Instrumentation, & SCADA Subtotal				\$205,500	\$384,896				
Subtotal Construction Cost						\$1,444,790			\$2,706,052
Subtotal with Escalation costs						\$1,589,269			\$2,976,657
Engineering, Bid Support, & Construction Management	21%			\$303,405.90	\$568,271				
Contractor Overhead and Profit	10%			\$158,926.90	\$297,666				
Bonds and Insurance	4%			\$63,570.76	\$119,066				
Subtotal				\$2,115,173	\$3,961,660				
Contingency	15%			\$317,275.88	\$594,249				
TOTAL CONSTRUCTION COST				\$2,432,448	\$4,555,908				

Savoy Pump Station Replacement

Projected Future Value of Project Costs			
Total 2023 Cost	Estimated Project Start Year	Estimated Duration (months)	Future Value @ Project Midpoint - 4% Annual Escalation Rate
\$ 2,322,007	2027	20	\$ 2,806,664

DESCRIPTION OF ITEM	QTY. (EST)	UNIT	UNIT COST	EXTENDED COST
GENERAL				
Material Testing	1	LS	\$ 3,000	\$ 3,000
Survey & Construction Staking	1	LS	\$ 15,000	\$ 15,000
Traffic Control	1	LS	\$ 1,000	\$ 1,000
Startup and Testing	1	LS	\$ 32,000	\$ 32,000
Incidentals	1	LS	\$ 15,000	\$ 15,000
PUMP STATION				
Furnish Horizontal Slit-case Booster Pumps (approx. 40Hp)	3	EA	\$ 16,000	\$ 48,000
Furnish Pump VFD's	3	EA	\$ 10,500	\$ 31,500
Install Pumps and VFDs	3	EA	\$ 15,000	\$ 45,000
Pump Controls, Magnetic Flow Meters	1	LS	\$ 18,000	\$ 18,000
Pump Station Lighting & Electrical	1	LS	\$ 88,000	\$ 88,000
Surge Protection Tanks and Valves	1	LS	\$ 42,000	\$ 42,000
Instrumentation and SCADA	1	LS	\$ 55,000	\$ 55,000
Furnish Vault for Discharge Piping & Flow Meter with SS Access Hatch	1	LS	\$ 11,000	\$ 11,000
Install Valve Box	1	LS	\$ 4,500	\$ 4,500
Isolation Valves (Butterfly)	3	EA	\$ 1,800	\$ 5,400
Mechanical Piping & Fittings	1	LS	\$ 28,000	\$ 28,000
Field Instruments	8	EA	\$ 750	\$ 6,000
3" Sch 40 PVC Drainpipe & 3" Floor Drain	2	EA	\$ 1,000	\$ 2,000
New PS Foundation Slab (assumed @ 35'X15'X2')	39	CY	\$ 550	\$ 21,450
New PS Masonry Walls (assumed 100' LF X 9' high)	900	SF	\$ 75	\$ 67,500
New PS Metal Deck Roof (1' overhang) with Acoustical Provisions (live load @ 120#/SF minimum)	504	SF	\$ 60	\$ 30,240
PS Access Doors	2	LS	\$ 4,000	\$ 8,000
PS Ventilation	1	LS	\$ 12,000	\$ 12,000
PS Acoustical Treatment	1	LS	\$ 10,000	\$ 10,000
Diesel Standby Generator	1	EA	\$ 30,000	\$ 30,000
DISCHARGE PIPING				
6" PVC Discharge Main Tie-in, C-900, Class 150	30	LF	\$ 120	\$ 3,600
Fittings	6	EA	\$ 600	\$ 3,600
Concrete Encasement	10	LF	\$ 70	\$ 700
PUMP STATION SITE WORK, GRADING & MISCELLANEOUS				
Demo Existing Station Components and Disposal	1	LS	\$ 75,000	\$ 75,000
Temporary Bypass Pumping and MOPO	1	LS	\$ 55,000	\$ 55,000
Additional Yard Piping	1	LS	\$ 30,000	\$ 30,000
Excavation, Backfill & Compaction	1200	CY	\$ 75	\$ 90,000
Site Grading	1	LS	\$ 40,000	\$ 40,000
Sheet Flow & Groundwater Control	1	LS	\$ 18,000	\$ 18,000
Erosion Control	1	LS	\$ 1,000	\$ 1,000
Topsoil, Strip/Stockpile & Replace (6")	1	LS	\$ 5,000	\$ 5,000
Granular Backfill & Slab Foundation Base	50	Tons	\$ 30	\$ 1,500
Concrete Platform @ Roadside for Stationing of Servicing Trucks (includes base)	20	SY	\$ 85	\$ 1,700
Concrete Driveway Approach for Truck Loads	9	SY	\$ 85	\$ 765
New AC Pavement (assume approx. 250 feet of paving work extends only to PS with moderate grade realignment)	3750	SF	\$ 8.50	\$ 31,875
Resurfacing of AC Pavement from PS to Savoy Reservoir (assume approx. 1,400 LF of roadway)	1400	LF	\$ 35.00	\$ 49,000
Other PCC Pavement	115	CY	\$ 375	\$ 43,125
Remove and Dispose of Unsuitable Asphalt and Base	1000	SF	\$ 12	\$ 12,000
Retaining Walls (assume masonry block incl. footing & waterproofing 100LF X 6' avg. height)	600	SF	\$ 95	\$ 57,000
Gates	2	EA	\$ 8,000.00	\$ 16,000
Chain Link Fence	800	LF	\$ 17.50	\$ 14,000
Replace and Augment Landscaping	1	LS	\$ 5,000	\$ 5,000
Miscellaneous Site Work	1	LS	\$ 15,000	\$ 15,000
TOTAL CONSTRUCTION COST - NEW SAVOY PUMP STATION				\$ 1,198,455.00
Planning, Engineering, and Construction Management @ 25%	1	%age	25%	\$ 299,614
Contractor Overhead and Profit @ 15%	1	%age	15%	\$ 179,768
Bonds and Insurance @ 3%	1	%age	3%	\$ 35,954
Mobilization / Demobilization @ 5%	1	%age	5%	\$ 59,923
Contractor General Conditions @ 7%	1	%age	7%	\$ 83,892
PROJECT TOTAL SOFT COSTS				\$ 659,150
Contingency @ 25%	1	%age	25%	\$ 464,401
TOTAL PROJECT COST - NEW SAVOY PUMP STATION				\$ 2,322,007

Reclaimed Water Reservoir Security Improvements

Year Conceptual Estimate Completed @ 2023

Reclaimed Water Reservoir (Savoy)		Projected Future Value of Project Costs		
Description	Total 2023 Cost	Estimated Project Start Year	Estimated Duration (months)	Future Value @ Project Midpoint - 4% Annual Escalation Rate
Security Improvements	\$ 175,000	2025	20	\$ 195,566

Smoketree Pump Station Replacement

Input received on the draft 2023 CIP report from the District indicated that testing performed by District staff confirmed service to the residential area served by the Smoketree PS can be provided by increasing pressure in the conifer pressure zone such that the Smoketree PS may not be needed. A reserve of \$500,000 2023 dollars is included in the 2023 CIP for design of tie-ins to the Conifer Pressure Zone, construction of tie-ins and abandonment of the existing pump station.

Projected Future Value of Project Costs				
2023 Capital Planning Placeholder Estimate	Total 2023 Cost	Estimated Project Start Year	Estimated Duration (months)	Future Value @ Project Midpoint - 4% Annual Escalation Rate
	\$500,000	2030	24	\$684,275

Conceptual Cost Estimate Development Date @ 2023
 Cost Escalation from Development Date of Conceptual Estimate @ 136.9%

NOTE:
 THE TABLE BELOW IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT USED FOR DEVELOPMENT OF THE 2023 CIP UPDATE

Conceptual Estimate Based on Complete Conceptual Overhaul of Station Projected Future Costs Based on Conceptual Estimates from TWSD 2013 CIP Report

Conceptual Cost Estimate Development Date @ 2013
 Cost Escalation from Development Date of Conceptual Estimate @ 200.6%

Projected Future Value of Project Costs			
Total 2013 Cost	Estimated Project Start Year	Estimated Duration (months)	Future Value @ Project Midpoint - 4% Annual Escalation Rate
\$ 703,394	2030	18	\$1,411,018

Smoketree Pump Station Replacement Conceptual Project Cost Estimate				
Description	Quantity	Unit	Unit Cost	Total Cost
Demolition of Existing Facilities	1	LS	\$25,000	\$ 25,000
Pumps	3	EA	\$3,500	\$ 10,500
VFD's	3	EA	\$3,000	\$ 9,000
Pump Control / Check Valves (Swing)	3	EA	\$1,000	\$ 3,000
Isolation Valves (Butterfly)	3	EA	\$650	\$ 1,950
Mechanical Piping	1	LS	\$5,000	\$ 5,000
Flow Meter in Vault	1	LS	\$3,500	\$ 3,500
Concrete Slab and Footing	30	CY	\$650	\$ 19,500
Masonry Block Wall Building	300	SF	\$65	\$ 19,500
Metal Deck Roof	300	SF	\$50	\$ 15,000
Miscellaneous Site Work	1	LS	\$15,000	\$ 15,000
AC Pavement	800	SF	\$6.50	\$ 5,200
PCC Pavement	150	CY	\$300	\$ 45,000
Excavation, Backfill, and Compaction	150	CY	\$50	\$ 7,500
Yard Piping	1	LS	\$7,500	\$ 7,500
Chain Link Fence	600	LF	\$15	\$ 9,000
Gates	2	EA	\$5,000	\$ 10,000
Retaining Wall	0	LF	\$100	\$ -
Electrical	1	LS	\$50,000	\$ 50,000
Instrumentation and SCADA	1	LS	\$50,000	\$ 50,000
Startup and Testing	1	LS	\$25,000	\$ 25,000
Total Construction Cost - New Smoketree Pump Station				\$ 336,150
Planning, Engineering, and Construction Management @ 25%		25%		\$ 84,038
Contractor Overhead and Profit @ 15%		15%		\$ 50,423
Bonds and Insurance @ 3 %		3%		\$ 10,085
Mobilization / Demobilization @ 5%		5%		\$ 16,808
Contractor General Conditions @ 7%		7%		\$ 23,531
Project Total Soft Costs				\$ 521,033
Contingency @ 35%		35%		\$ 182,361
TOTAL PROJECT COST - NEW SMOKETREE PUMP STATION				\$ 703,394

Regency Pump Station

Projected Future Value of Project Costs			
Total 2013 Cost	Estimated Project Start Year	Estimated Duration (months)	Future Value @ Project Midpoint - 4% Annual Escalation Rate
\$ 593,224	2030	24	\$1,201,737

Regency Hills Recycled Water Pump Station Replacement Conceptual Project Cost Estimate				
Description	Quantity	Unit	Unit Cost	Total Cost
Demolition of Existing Facilities	1	LS	\$35,000	\$35,000
Pumps	2	EA	\$10,000	\$20,000
VFD's	2	EA	\$5,500	\$11,000
Pump Control / Check Valves (Swing)	2	EA	\$2,000	\$4,000
Isolation Valves (Butterfly)	2	EA	\$1,000	\$2,000
Mechanical Piping	1	LS	\$7,000	\$7,000
Flow Meter in Vault	1	LS	\$7,000	\$7,000
Surge Protection Tanks and Valves	1	LS	\$0	\$0
Site Work	1	LS	\$15,000	\$15,000
Yard Piping	1	LS	\$7,500	\$7,500
Electrical	1	LS	\$75,000	\$75,000
Instrumentation and SCADA	1	LS	\$75,000	\$75,000
Startup and Testing	1	LS	\$25,000	\$25,000
Subtotal Construction Cost				\$283,500
Planning, Engineering, and Construction Management @ 25%		25%		\$70,875
Contractor Overhead and Profit @ 15%		15%		\$42,525
Bonds and Insurance @ 3 %		3%		\$8,505
Mobilization / Demobilization @ 5%		5%		\$14,175
Contractor General Conditions @ 7%		7%		\$19,845
Subtotal				\$439,425
Contingency @ 35%		35%		\$153,799
TOTAL PROJECT COST				\$593,224



Year Conceptual Estimate Completed 2023

Mae Boyer Pump Station Replacement

Projected Future Value of Project Costs			
Total 2023 Cost	Estimated Project Start Year	Estimated Duration (months)	Future Value @ Project Midpoint - 4% Annual Escalation Rate
\$ 583,808	2039	20	\$ 1,129,766

Mae Boyer Recycled Water Pump Station Rehabilitation Conceptual Project Cost Estimate				
Description	Quantity	Unit	Unit Cost	Total Cost
Pumping Facilities				
Demolition/Removal	1	LS	\$ 20,000.00	\$ 20,000.00
Mechanical Equipment	1	LS	\$ 65,000.00	\$ 65,000.00
Electrical & Controls	1	LS	\$ 40,000.00	\$ 40,000.00
Piping	1	LS	\$ 8,000.00	\$ 8,000.00
Ventilation Upgrades	1	LS	\$ 8,000.00	\$ 8,000.00
Startup & Teting	1	LS	\$ 15,000.00	\$ 15,000.00
Subtotal Pumping System				\$ 156,000.00
Building Improvements				
Upgrades to Building Exterior	1	LS	\$ 85,000.00	\$ 85,000.00
Lighting Upgrades	1	LS	\$ 3,000.00	\$ 3,000.00
Ventilation Upgrades	1	LS	\$ 3,000.00	\$ 3,000.00
Landscaping	1	LS	\$ 15,000.00	\$ 15,000.00
Chain Link Fence	1	LS	\$ 7,000.00	\$ 7,000.00
Grading and Paving	1	LS	\$ 10,000.00	\$ 10,000.00
Subtotal Building Improvements				\$ 123,000.00
Subtotal Construction Cost				\$ 279,000.00
Planing, Engineering, and Construction Management @ 25%		25%		\$ 69,750.00
Contractor Overhead and Profit @ 15%		15%		\$ 41,850.00
Bonds and Insurance @ 3%		3%		\$ 8,370.00
Mobilization / Demobilization @ 5%		5%		\$ 13,950.00
Contractor General Conditions @ 7%		7%		\$ 19,530.00
Subtotal				\$ 432,450.00
Contingency @ 35%		35%		\$ 151,357.50
TOTAL PROJECT COST				\$ 583,807.50

Year Conceptual Estimate Completed 2023

Deerhill Operations Center Improvements

Projected Future Value of Project Costs			
Total 2023 Cost	Estimated Project Start Year	Estimated Duration (months)	Future Value @ Project Midpoint - 4% Annual Escalation Rate
Existing Deerhill Operations Center Upgrades			
\$ 861,300	2024	12	\$ 913,490

UPGRADES AT EXISTING DEERHILL OPERATIONS CENTER (5-Year CIP)					
Description		Quantity/ Multiplier		Cost Basis	Extended Cost (\$)
Clearing, Grading & Miscellaneous Paving	N/A	1	N/A	LS	\$ 25,000
Expansion of Maintenance Shop Space and Capabilities	N/A	1	N/A	LS	\$ 140,000
Site Improvements for On-site Storage, Vehicles, Parts Including Cover	N/A	1	N/A	LS	\$ 110,000
Interior Storage Area	N/A	1	N/A	LS	\$ 130,000
Fleet Maintenance Area	N/A	1	N/A	LS	\$ 85,000
Laydown Area	N/A	1	N/A	LS	\$ 20,000
Security Fencing	N/A	1	N/A	LS	\$ 12,000
TOTAL EXISTING DEERHILL OPERATIONS CENTER UPGRADES CONCEPTUAL CONSTRUCTION ESTIMATE					\$ 522,000
Planning, Engineering, and Construction Management @ 25%	N/A	25%	N/A	%age	\$ 130,500
Contractor Overhead and Profit @ 12%	N/A	12%	N/A	%age	\$ 62,640
Bonds and Insurance @ 3 %	N/A	3%	N/A	%age	\$ 15,660
Mobilization / Demobilization @ 5%	N/A	5%	N/A	%age	\$ 26,100
Contractor General Conditions @ 7%	N/A	7%	N/A	%age	\$ 36,540
Project Soft Costs Subtotal	N/A		N/A		\$ 271,440
Contingency @ 25%	N/A	25%	N/A		\$ 67,860
TOTAL PROJECT COST - EXISTING DEERHILL OPERATIONS CENTER UPGRADES					\$ 861,300

Note: Conceptual estimate assumes all work to be performed under a single bid package

New District Office Building Complex

Projected Future Value of Project Costs			
Total 2023 Cost	Estimated Project Start Year	Estimated Duration (months)	Future Value @ Project Midpoint - 4% Annual Escalation Rate
New District Office Building Complex Construction			
\$ 15,595,981	2033	36	\$ 24,484,760

NEW DISTRICT OFFICES (Projected Office Staff @ 15; Projected Field Staff @ 10) (20-year CIP) - 2017 DOLLARS/SF						
Description	Area SqFt	Quantity	Subtotal NSF	Cost/SF (\$)	Extended Cost (\$)	Remarks
Entrance						
Entrance Lobby	800	1	800	\$ 52.5	\$ 420,000	could also include public art gallery
Information Desk/ Waiting Area	120	1	120	\$ 52.5	\$ 63,000	one workstation with displays
Entrance Subtotal			920		\$ 483,000	
Board						
Board Room	1,200	1	1,200	\$ 52.5	\$ 630,000	5 on dais with seats for GM, attorney, secretary, 75 seats, flexible seating and movable acoustic partitions, 40' x 30', recording capabilities, projection screen & flat screen for visual displays
Executive Conference Room	435	1	435	\$ 52.5	\$ 228,375	
Board Room Coffee & Kitchenette	60	1	60	\$ 52.5	\$ 31,500	adjacent to executive conference room
Board Room Vestibule & Waiting Area	200	1	200	\$ 52.5	\$ 105,000	
Board Room Equipment and Furniture Storage	150	1	150	\$ 52.5	\$ 78,750	
Board Subtotal			2,045		\$ 1,073,625	
Office Space						
General Manager	200	1	200	\$ 52.5	\$ 105,000	
Director of Operations	150	1	150	\$ 52.5	\$ 78,750	
Field Superintendent	150	1	150	\$ 52.5	\$ 78,750	
Finance	100	2	200	\$ 52.5	\$ 105,000	
Human Resources	100	1	100	\$ 52.5	\$ 52,500	
Technical & Management Staff	100	10	1,000	\$ 52.5	\$ 525,000	
Visitors Office	100	2	200	\$ 52.5	\$ 105,000	
Floating Field Office	100	1	100	\$ 52.5	\$ 52,500	
Offices Subtotal			1,400		\$ 735,000	
Shared Spaces						
Large Conference Room	300	1	300	\$ 52.5	\$ 157,500	16 person executive conference room, audio-video capabilities, acoustic separation
Small Conference Room	200	2	400	\$ 52.5	\$ 210,000	6 person, audio-video capabilities, acoustic separation
File Storage	150	1	150	\$ 52.5	\$ 78,750	secure, 2 hour rated
Secure File Room	50	1	50	\$ 52.5	\$ 26,250	secure, 2 hour rated, located adjacent to HR
Training Room	600	1	600	\$ 52.5	\$ 315,000	takes place in community room
Public Education & Community Room	800	1	800	\$ 52.5	\$ 420,000	able to subdivide into multiple spaces, 30 person, door to exterior
Furniture/Equipment Storage	150	1	150	\$ 52.5	\$ 78,750	
Intern Work Area	36	4	144	\$ 52.5	\$ 75,600	additional 2 interns space
Restrooms	160	4	640	\$ 52.5	\$ 336,000	2 men's, 2 women's, access to entrance lobby and community room, includes vestibule
Fitness Room	300	1	300	\$ 52.5	\$ 157,500	15'x20"
Kitchen/Break Room	300	1	300	\$ 52.5	\$ 157,500	additional shaded sitting area outside
Coffee Station	20	2	40	\$ 52.5	\$ 21,000	1 in office space area and 1 in public area
Copy/Work Room	100	1	100	\$ 52.5	\$ 52,500	
Employee Entrance/Entrance Vestibule	120	1	120	\$ 52.5	\$ 63,000	
General Storage	150	1	150	\$ 52.5	\$ 78,750	
Shared Spaces Subtotal			4,244		\$ 2,228,100	
Field Services						
Field Staff Break Room & Common Area	260	1	260	\$ 52.5	\$ 136,500	
Locker rooms and personnel areas (separate men's & women's)	500	2	1,000	\$ 510	\$ 510,000	
Interior Storage Area - Parts & Equipment	1200	1	1,200	\$ 320	\$ 384,000	
Fleet Maintenance Area	1600	1	1,600	\$ 380	\$ 608,000	
Maintenance Shop	800	1	800	\$ 580	\$ 464,000	
Shared Spaces Subtotal			4,860		\$ 2,102,500	
Building Support Space Subtotal			13,469		\$ 6,622,225	
30% Core & Circulation (Sqft)	30%		4,041	\$ 340	\$ 1,373,838	
TOTAL NET DISTRICT OFFICE BUILDING			17,510		\$ 7,996,063	
Site and District Offices Buildout						
Moving of District Offices After Expiration of 10-year Lease	N/A	1	N/A	LS	\$ 15,000	
Demolition & Disposal of Existing Structures	N/A	1	N/A	LS	\$ 150,000	
Civil Work/Grading	N/A	1	N/A	LS	\$ 325,000	
Underground Utilities	N/A	1	N/A	LS	\$ 60,000	
Site Lighting	N/A	1	N/A	LS	\$ 25,000	
Roadways Parking & Paving (incl. car cover structures for future solar)	N/A	1	N/A	LS	\$ 175,000	
Security	N/A	1	N/A	LS	\$ 50,000	
IT & Communications	N/A	1	N/A	LS	\$ 75,000	
Furniture & Finishes	N/A	1	N/A	LS	\$ 20,000	
Miscellaneous Buildout Items	N/A	1	N/A	LS	\$ 80,000	
Maintenance Area Outfitting	N/A	1	N/A	LS	\$ 75,000	
Fleet Maintenance Outfitting	N/A	1	N/A	LS	\$ 20,000	
Outside Covered Storage Laydown Area	N/A	1	N/A	LS	\$ 20,000	
Outside Public and Assembly Area	N/A	1	N/A	LS	\$ 35,000	
Landscaping	N/A	1	N/A	LS	\$ 100,000	
Site Fencing	N/A	1	N/A	LS	\$ 20,000	
Flag Pole	N/A	1	N/A	LS	\$ 1,000	
TOTAL SITE AND DISTRICT OFFICE BUILDING COMPLEX BUILDOUT					\$ 1,246,000	
TOTAL NEW DISTRICT OFFICE BUILDING COMPLEX CONCEPTUAL CONSTRUCTION ESTIMATE					\$ 9,242,063	
Planning, Engineering, and Construction Management @ 2.5%	N/A	2.5%	N/A		\$ 2,310,516	
Contractor Overhead and Profit @ 15%	N/A	15%	N/A		\$ 1,386,309	
Bonds and Insurance @ 3%	N/A	3%	N/A		\$ 277,262	
Mobilization / Demobilization @ 5%	N/A	5%	N/A		\$ 462,103	
Contractor General Conditions @ 7%	N/A	7%	N/A		\$ 646,944	
Project Soft Costs Subtotal					\$ 5,083,135	
Contingency @ 25%	N/A	25%	N/A		\$ 1,270,784	
TOTAL PROJECT COST - NEW DISTRICT OFFICE BUILDING COMPLEX					\$ 15,595,981	