Goleta Water District

5-Year
Infrastructure Improvement Plan

Adopted by the Board of Directors on January 11, 2011

Goleta Water District

Board of Directors

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Infrastructure Improvement Plan Executive Summary

The Goleta Water District (District) was established in 1944 to provide water service to the Goleta Valley area of Santa Barbara County. The District currently provides water to approximately 16,600 customer accounts within a service area encompassing approximately 45 square miles, and serving a population of approximately 85,000 people. Portions of the District's infrastructure were constructed 50-60 years ago. Rehabilitation or replacement of older facilities and those facilities that do not meet current standards or regulations is necessary to maintain a reliable and sustainable water distribution system.

The District recognizes the need to assess and evaluate its water infrastructure to determine the need for improvements, maintenance and replacement of specific components within the system. This Infrastructure Improvement Plan (IIP) addresses the key infrastructure improvement needs for the next 5 years and also lists additional projects that should be evaluated on an annual basis.

Since no current plan existed prior to developing this IIP, staff began its assessment by identifying all necessary and potential infrastructure projects. Over 120 projects were identified. Detailed project descriptions were then developed for each project and a systematic scoring process was initiated to prioritize the projects. Section I of the IIP provides detailed information regarding these criteria and how they were applied to each project.

Section II of the IIP includes a listing and description of the projects that were identified as necessary for implementation within the next five years. These projects were divided into two categories. The first grouping contains the projects that were considered necessary due to a regulatory requirement or because they were designated as critical to the District's operations. Definitions of these two categories are provided in Section I. The second group recommended for implementation is comprised of the projects that are vital to the sustainable operations of the District. They were placed in the five year time frame because they scored high in the evaluation process. A detailed explanation of the scoring process is provided in Section I of this report.

The estimated cost for all of the projects that are proposed for the next 5 years is approximately $16.7 million. To put this expenditure in perspective, it represents an investment in the community of approximately $1,000 per customer account over the next 5 years, or $200 per customer account per year.

It is important to note that if the District's entire infrastructure were to be replaced, the total reconstruction cost is estimated at $709 million. This cost includes all waterlines, appurtenances, reservoirs, water treatment facilities, meters, service lines, hydrants, valves, booster stations and wells. The largest cost is the reconstruction of the waterlines due to the high cost of installation and street restoration work that is required. For the District's 16,600 customer accounts this equates to a value of approximately $42,700 worth of infrastructure per customer account in today's dollars.

Finally, Section III of this IIP includes a listing and description of all other identified projects that were not included in the 5-year plan. This group includes 86 additional projects with a projected cost of approximately $108 million. The entire list of projects will be re-evaluated on an ongoing basis.

It is the recommendation of District staff that the projects designated in the five-year plan be approved for implementation according to the timeline provided in the 5-Year Infrastructure Improvement Plan Matrix in Section II, and contingent upon available funding.

INFRASTRUCTURE IMPROVEMENT PLAN (IIP) OVERVIEW

1.1 Introduction

The District's Operating Budget for Fiscal Year 2010-11 (Budget) was approved by the Board of Directors on May 25, 2010. The Budget contained within it a 5-year Capital Improvements Program for infrastructure improvement and new infrastructure as well as a 5-year Maintenance Program for responsive repairs and preventative maintenance. During the Board's Budget considerations it was noted that a more extensive analysis of these areas would be performed. This IIP constitutes a more complete and thorough analysis by taking a comprehensive look at the District's needs for infrastructure improvement and preventative maintenance.

This IIP is divided into three sections:

1. Section I – Infrastructure Improvement Plan Overview
2. Section II – 5-Year Proposed Infrastructure Improvement Projects
3. Section III – Appendix Projects for Future Consideration

1.2 Background

The last master planning effort undertaken by the District was the 2001 Water System Reliability & Rehabilitation Study (2001 Study). The current IIP considered the recommendations of the 2001 Study, which included the following three basic recommendations:

1. *Further groundwater studies are needed to confirm the Central Basin's storage, injection and extraction capacities, recharge rates and the number/location of groundwater wells, water quality/treatment issues, regulatory/legal requirements, and provide a preliminary design for well rehabilitation requirements and/or new wells.*
2. *There is a potential for the capacity of the South Coast Conduit to be exceeded. However, it may be possible for the COMB member agencies to manage their water supplies in such a way that all of the member agencies are not peaking off of the South Coast Conduit simultaneously. This could reduce in scale, or potentially eliminate the need to construct a new pipeline parallel to the South Coast Conduit. The District should work with the other COMB member agencies to pursue such alternatives before proceeding with the construction of a new pipeline dedicated to providing water directly to the Corona Del Mar WTP.*
3. *Continue coordination efforts with the United States Bureau of Reclamation (USBR) relative to the USBR's on-going seismic vulnerability study for Glen Annie Dam and also on the possibility of procuring ownership, or the use of, Glen Annie Reservoir. The District could use the reservoir to supplement its well water supply in times of drought or emergency or during peak seasonal demand periods. The reservoir could also provide water, if delivered through an air gap, to supplement the District's reclamation system.*

The 2001 Study recommended a total of $24,428,000 in improvements to the existing system by 2020. These recommended projects have been further evaluated and included in this report as they met the evaluation criteria.

1.3 Purpose

This Infrastructure Improvement Plan has been prepared to identify the District's infrastructure improvement needs, and to budget for and schedule the required improvements for the next five years. In addition to evaluating projects, the Infrastructure Improvement Plan identifies funding sources.

It should be noted that unusual and unforeseen events such as main breaks and sudden failures of equipment are not included in the Infrastructure Improvement Plan. For public agencies such as Goleta Water District, costs associated with these types of unusual and unforeseen events are typically dealt with out of the agency's reserves.

The Infrastructure Improvement Plan is intended to serve many purposes:

1. Infrastructure Improvement Plan

Along with approval of the FY 2010-11 Budget, the District's Board approved refinancing of the District's debt and issuance of Certificates of Participation (COP) for infrastructure improvement projects in the amount of $5 million. This allows the District to pursue some much needed work on its infrastructure. However, with this comes an important responsibility. It is the intent of this IIP to properly apply the funds to those projects that are of the highest priority to the District and its operations. This IIP clearly explains the methodology for selecting and prioritizing projects.

2. Cost of Service Study and Rate Analysis

District staff has been directed by the Board of Directors to pursue a cost of service analysis as a foundational document to assess current rates and fee structures. It has been since 2005 that this has been done on a comprehensive basis. The information in this IIP is a vital piece of the cost of service analysis. It is one of many factors that will be considered in the overall cost of service.

3. Budget Development

Part 2 of the District's FY 2010-11 Budget has within it a section on 5-year funding requirements, which includes a preliminary maintenance program and an infrastructure improvement program. When this was presented to the Board for approval, staff indicated it would return with a more thorough and detailed plan. This is accomplished in the IIP. Going forward with the 2011-12 Budget, the IIP will inform the Budget development efforts.

4. Communication to the Board and Customers

It is critical that District customers and Board members understand the needs of the infrastructure. Staff has asked itself some very basic questions in order to develop the IIP. Some fundamental questions that were asked were:

- What are the regulatory requirements that must be met?
- How is critical need defined?
- What constitutes an "important" project?
- How are costs estimated?
- How are projects prioritized?
- How can staff communicate to customers and the Board the details and importance of what is involved in maintaining the infrastructure?

By asking these questions as a starting point, staff have come to a common and consistent understanding of the needs of the system, and will utilize this information to communicate these needs to District customers and the Board.

1.4 Project Evaluation Methodology to Prioritize Infrastructure Improvement Projects

An evaluation matrix was designed to identify top priority projects based on an initial screening and scoring of the projects. Various criteria were used to compare and evaluate projects against each other. Staff compiled a comprehensive list of proposed projects and listed these projects within the evaluation matrix spreadsheet. The proposed projects were then evaluated in three steps as described below.

Step 1

An initial screening of projects was accomplished in Step 1 by answering "Yes" or "No" to three key questions.

1. Is there a regulatory requirement for the project? (Yes or No).
2. Is there a critical need for the project? (Yes or No).
3. Is the project eligible for COP funding under the COP guidelines? (Yes or No).

Question 3 is based on the rules for expending the funds from the COP. COP utilization criteria are explained in more detail in Section 1.5 of this Overview.

If there is a particular regulatory requirement or a critical need for the project, the project is given top priority. These top priority projects are identified as "Regulatory Requirement or Critical Need". These projects must move forward for implementation and funding in the 5-year time frame. Therefore, scoring these projects was not necessary. Projects qualifying as Regulatory Requirement or Critical Need may be funded all or in part by COP funds.

"Regulatory Requirement" projects fall under two categories. The first category consists of projects subject to the requirements of state, federal or local regulatory agencies, with noncompliance resulting in fines or other adverse actions. The second category involves the action of another government agency impacting a District facility where the jurisdictional authority of the other agency is superior to that of the District. For example, the County of Santa Barbara has jurisdiction over road rights-of-way, street improvements and storm drain improvements within Santa Barbara County. If the County is constructing a new storm drain and District facilities are impacted, the County has superior jurisdictional authority to that of the District, and the impacted District facilities must be relocated at District expense to comply with that authority. Regulatory (R) indicates that there is a regulatory requirement for the proposed project.

A "Critical Need" project involves a water related facility or a piece of equipment that has failed, or has a greater than 50% probability of failure within one year. This failure would result in one of the following consequences:

- Diminished service levels.
- Place the water operations in jeopardy of non-compliance with a regulated standard.
- Personal injury.
- Property damage.

Critical (C) indicates that there is a critical need for the proposed project.

Table 1: Regulatory Requirement and/or Critical Need Projects

G1-1.1	CDMWTP Backwash Basin Improvement Project	Cap Fund	R&C
G1-1.2	CDMWTP Sludge Drying Beds 1 and 2 Construction Project	Cap Fund	R&C
G1-1.3	CDMWTP Sludge Drying Bed 3 Construction Project	COP	R&C
G1-1.4	CDMWTP Overflow Basin Construction Project	COP	R&C
G1-2a	Arc Flash Protection Improvements - COP funded	COP	R&C
G1-2b	Arc Flash Protection Improvements - Capital Fund	Cap Fund	R&C
G1-3	Recycled Water Booster Station Electrical Upgrades (at GSD)	Cap Fund	R&C
G1-4	CDMWTP Leach Field Replacement	COP	R&C
G1-5	LUFT Seal and Cap Monitoring Wells	COP	R
G1-6	Caltrans - Calle Real Waterline Relocation Project	COP	R
G1-7	SB County El Embarcadero Improvements Project	COP	R
G1-8	City-SanJose Creek Waterline Relocation for Creek Widening	Cap Fund	R
G1-9	City-Los Carneros Waterline Relocation for Bridge Replacement	Cap Fund	R
G1-10	City-SanJose Creek Waterline Relocation for Hollister Bridge Replacement	Cap Fund	R
G1-11	Recycled Waterline Relocation Project at Goleta Beach	Cap Fund	R
G1-12	Lateral 14 - Waterline Replacement Project	COP	C
G1-13	Valve Replacement Program	Cap Fund	C
G1-14	Polybutylene Service Line Replacement Program	Cap Fund	C
G1-15	Copper Service Line Replacement Program	Cap Fund	C
G1-16a	Pressure Reducing Valve & Combination Air Valve Repair & Replacement Program - COP Funded	COP	C
G1-16b	Pressure Reducing Valve & Combination Air Valve Repair & Replacement Program - Capital Fund	Cap Fund	C

Step 2
All other projects that do not qualify as a regulatory requirement project or critical need project were evaluated, and the highest scoring projects were considered the most important and prioritized accordingly. These projects are vital to the sustained operations of the District, but do not fall within the definitions of Regulatory Requirement or Critical Need as defined above.

In order to identify the position of a project within the District's infrastructure, they are organized and categorized in the following way:

- Water supply and/or production reliability.
- Maintenance, distribution system replacement, or new distribution system projects.
- Financial focus is included based strictly on the financial value to the District.

Projects that are not categorized as Regulatory Requirement or Critical Need are scored based on "evaluation criteria". The most relevant evaluation criteria are identified and utilized in the matrix. In this case, the following evaluation criteria are utilized:

- Reliability of Service
- O&M Impact
- Employee Health & Safety Upgrade
- Size of Population Benefited
- Depreciable Age of Facility
- Resource Conservation
- Co-Funding Potential

The evaluation criteria are given "weighting factors" to assign more weight to those criteria that are considered more important. The weighting factors for the seven evaluation criteria are not equal. The seven criteria are divided into three groups with a common weighting factor applied to the criteria in each group. The common weighting factor applied to the criteria in each group is assigned based on that criteria group's overall importance to the operation of the water facilities and to the provision of water service to our customers. The three distinct groups are listed below in order of importance.

- **Reliability of Service; Employee Health & Safety Upgrade; Size of Population Benefited.** This is the highest priority group, with an assigned weighting factor of 9. This group of criteria directly affects the District's customers, the general community, or District employees' health and safety.
- **O&M Impact; Resource Conservation; Co-Funding Potential.** This is the middle priority group, with an assigned weighting factor of 6.5. This group of criteria has a financial effect either on the cost benefit of the project, additional cost savings, or cost to fund resource conservation efforts. Therefore, these three criteria were assigned the same weighting factor.
- **Depreciable Service Life of Facility.** This is the lowest priority criterion, with an assigned weighting factor of 3.5. This criterion is based on the age of the facility only and evaluated on the number of years that the particular facility has exceeded its depreciable life. Once an asset has been in useful operation beyond its depreciable useful life, it has a potential for sudden failure without any signs of impending failure. Therefore, even though an asset is operating satisfactorily, due to the potential for failure based on age, this criterion is included as an additional justification of a project's importance.

Description of Scoring Parameters

Proposed projects were scored by a staff project review team. Projects were scored on a scale from 0 to 3 for each of the evaluation criteria. The scoring parameters are described as follows.

Reliability of Service:
- Improves reliability of service to population of over 20,000 = 3
- Improves reliability to population of 2,000 to 20,000 = 2
- Improves reliability to population less than 2,000 = 1

O&M Impact:
- Reduces non-labor cost associated by more than $20K/yr = 3
- Reduces non-labor cost between $10K and $20K/yr = 2
- Reduces non-labor cost between $5K and $10K/yr = 1
- Reduces non-labor cost less than $5K/yr = 0

Employee Health & Safety Upgrade:
- Provides OSHA recommended health & safety upgrades = 3
- Provides upgrades recommended by the District Safety Comm. = 2
- Provides desirable upgrades = 1
- If no upgrade related to worker health & safety = 0

Size of Population Benefited:
- Benefits a population of over 20,000 = 3
- Benefits a population of 2,000 to 20,000 = 2
- Benefits a population less than 2,000 = 1

Depreciable Service Life of Facility:

Replaces facility that has reached this point in its depreciable life:
- greater than 200% = 3
- by 150% to 200% = 2
- by 100% to 150% = 1
- If facility is less than depreciable life = 0

Resource Conservation:
- High conservation of water and power = 3
- Moderate conservation of water or power = 2
- Other environmental benefit = 1
- If no resource conservation = 0

Co-Funding Potential:

Reasonable potential for co-funding:
- Over $100K = 3
- Between $50K and $100K = 2
- Between $10K and $50K = 1
- Less than $10K = 0

Discretionary:

Up to a maximum of 25 points that can be added to any project's total score based on the below criteria that has not been completely reflected in the formal scoring criteria developed:

- Critical timing of the project
- Magnitude of risk or benefits that the project addresses or obtains
- Important information obtained from the project that assists in the development of future projects
- Other critical aspects that a particular project's score does not reflect

Table 2: 5-Year Infrastructure Improvement Plan Scoring

		Reliability of Service		O&M Impact		Employee Health & Safety Upgrade		Size of Population Benefitted		Depreciable Service Life of Facility		Resource Conservation		Co-Funding Potential			
		WF = 9		WF = 6.5		WF = 9		WF = 9		WF = 3.5		WF = 6.5		WF = 6.5			
Ind.	PROJECT NAME/DESCRIPTION	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Discr.	**Total Score**
G2-1	Transmission Main Valve Installation at Patterson	3	27	3	20	1	9	3	27	0	0	2	13	0	0	0	**96**
G2-2	Recycled Water GSD Booster Station Pump Rebuild Project	1	9	3	20	3	27	1	9	1	4	3	20	0	0	0	**88**
G2-3	Distribution System Hydraulic Model Update	3	27	1	7	0	0	3	27	0	0	3	20	0	0	0	**80**
G2-4	San Ricardo Well Rehab Project (Prop 50)	3	27	0	0	0	0	3	27	0	0	1	7	3	20	0	**80**
G3-1	Corrosion Protection Project	3	27	3	20	1	9	3	27	0	0	2	13	0	0	0	**96**
G3-2	Fleet Replacement Program	3	27	2	13	1	9	3	27	2	7	1	7	0	0	0	**90**
G3-3	Construction Equipment Replacement Program	3	27	2	13	1	9	3	27	2	7	1	7	0	0	0	**90**
G3-4	Update and Upgrade the District's Computer Software and Network Systems	3	27	2	13	0	0	3	27	2	7	2	13	0	0	0	**87**
G3-5	Upsizing of Pipelines	2	18	1	7	0	0	2	18	0	0	2	13	3	20	10	**85**
G3-6	Radio Read Meters in Difficult Access Routes	2	18	1	7	2	18	2	18	1	4	2	13	1	7	0	**84**
G3-7	CDMWTP Modicon Compact PLC Replacement	3	27	1	7	0	0	3	27	3	11	2	13	0	0	0	**84**
G3-8	CDMWTP Filter Media Replacement (1 Filter)	3	27	0	0	0	0	3	27	1	4	2	13	0	0	10	**81**
G3-9	CDMWTP Access Road Improvements	3	27	0	0	1	9	3	27	3	11	0	0	0	0	7	**81**
G3-10	Cathedral Oaks-Hwy 101 Overcrossing Project (Phase 1)	2	18	0	0	0	0	2	18	0	0	2	13	2	13	20	**81**
G3-11	Equipment for Fire Flow Testing and Flushing	2	18	0	0	1	9	2	18	3	11	0	0	0	0	24	**80**
G4-1	Meter Replacement Program	3	27	2	13	0	0	3	27	1	4	2	13	0	0	0	**84**
G4-2	Van Horne Turbine Generator Replacement & Hydro-Electric Study	0	0	3	20	0	0	3	27	2	7	2	13	2	13	10	**90**

For a given project and evaluation criteria, the individual score is multiplied by the weighting factor to arrive at the "weighted score". The weighting factors yield a higher weighted score for those criteria that are considered more important, and a lower weighted score for those criteria that are considered less important. For each project in the matrix, the weighted scores for each criterion are then added up to arrive at the "Total Score" for the project. The maximum Total Score is 150. A higher score indicates a high priority for implementation.

Projects receiving a score of 80 or greater were considered for implementation and funding in the 5-Year Infrastructure Improvement Plan. The remaining projects scoring less than 80 are not recommended for implementation within the next five years due to budget constraints. Therefore, the Project Descriptions and Cost Estimates for these projects have been moved to the Appendix of the 5-Year Infrastructure Improvement Plan document, and will be considered further in the future.

Step 3

In this final step, project cost is considered. Individual project costs are estimated and listed. Estimated project costs include engineering, final design, construction, construction management, and a contingency, as applicable. Project costs for these top priority and top scoring projects were totaled, and a 5-Year Infrastructure Improvement Plan was developed. The 5-Year Infrastructure Improvement Plan creates a schedule for implementing the top priority projects, and establishes approximate expenditures for the next five years.

Table 2 provides the scoring for each of the projects that received a score of 80 or higher.

1.5 Funding

Certificates of Participation (COP)

In August 2010, the Goleta Water District Finance Corporation raised $5 million through a COP issuance, which is a tax-exempt debt structure and subject to IRS regulations. The timing of spending COP money is required to approximate the useful life of acquired assets. For this reason the following criteria must be met:

1. No more than 5% of COP proceeds may be spent on immediate operating expenses.
2. The remaining 95% of COP proceeds must be spent on items that comply with the District's capitalization policy.
3. The depreciation of purchased assets must not be faster than the principal payment schedule.

Projects in this IIP were selected for COP funding by first identifying only those that satisfy the above IRS regulations, and further prioritizing according to regulatory requirements and/or critical needs. Timing of spending was also considered, whereas projects expected to be fully complete within the three-year time frame were ranked higher than those which carry into later years.

Capitalization Policy

The District capitalizes its assets, which have an expected useful life of more than one year and a value of $5,000 or more. Exceptions to this include certain office equipment, which may be valued at less than $5,000, but which have a useful life of considerably more than one year.

Expenditures on existing assets (amounts added to the carrying amount of the asset) must be capitalized when they improve the condition of the asset beyond its originally assessed standard of performance or capacity. This can occur through an increase in the annual service capacity provided by the asset, or increasing the useful life of the asset. Expenditures that do not meet the above criteria or merely restore the asset to its original function must be expensed as repairs and maintenance as incurred.

Capital assets are acquired and/or constructed and capitalized at historical cost. Donated assets are recorded at estimated fair market value at the date of donation. Upon retirement or other disposition of capital assets, the cost and related accumulated depreciation are removed from the respective balances and any gains or losses are recognized. Depreciation is recorded on a straight-line basis over the estimated useful lives of the assets as follows:

- Transmission and distribution system 50 years
- Service lines 33 1/3 years
- Wells and water treatment equipment 5-25 years
- Other equipment and vehicles 5-11 years

1.6 Cost Estimates

Cost estimates have been prepared for all projects within the Infrastructure Improvement Plan. The central aspect of each cost estimate is an estimate of the construction cost for the project. As a project moves forward from the conceptual phase to the study/preliminary engineering phase, through final design and then into construction, more and more becomes known about the project and its costs. Eventually, upon completion of the project, the final cost becomes a known quantity. Note that all estimated costs presented in the Infrastructure Improvement Plan are based on current 2010 dollars. Estimated costs for future years do not include inflation factors. When budgeting in future years, costs must be adjusted for inflation as appropriate.

Some of the projects identified in the IIP are in progress (i.e., some preliminary engineering or final design work has been completed). For these projects, more is known about the scope of the project and cost estimates are more detailed and include less contingency. However, many projects identified in the Infrastructure Improvement Plan are in the conceptual phase. For these projects, the cost estimates are less detailed and contain greater contingency.

District project management includes oversight of staff when the engineering work is performed in-house, as well as consultant oversight when consultants are used to provide engineering and other professional services. Project management tasks typically involve staff within the Operations and Engineering Departments.

District construction management, testing and inspection costs generally range from 10% to 20% of the construction cost. District construction management, testing and inspection include oversight of construction contractors performing the construction of District infrastructure improvements. Construction management tasks typically involve staff within the Operations and Engineering Departments.

1.7 Overview of Capital Requirements

The tables and charts in this section provide an overview of the proposed capital requirements.

Table 1 shows the Regulatory Requirement and/or Critical Need Projects and their funding source.

Table 2 shows the 5-Year Infrastructure Improvement Plan scoring.

Table 3 and Chart 1 provide a view of the capital requirements over the 5-year period as well as the estimated funding for those projects that will be considered in the longer term.

Table 4 and Chart 2 provide the 5-year capital requirements by evaluation category.

Table 5 and Chart 3 provide a view of the 5-year capital requirements by infrastructure type.

Table 6 and Chart 4 provide a view of the 5-year capital requirements by the type of water system that is benefited.

Table 3: Total Capital Requirements and Spending Schedule

	Group Description	Total Cost	2010-11	2011-12	2012-13	2013-14	2014-15	Beyond 2014-15
1	Regulatory / Critical	$12,008,000	$1,405,000	$ 4,302,250	$3,640,250	$1,240,250	$1,220,250	$200,000
2	Water Supply or Production Reliability	69,419,000	-	535,000	1,147,000	108,000	50,000	67,579,000
3	Infrastructure - New, Replacement, or Maintenance	33,397,000	255,000	390,000	349,000	423,000	761,000	31,219,000
4	Financial Benefit	9,929,000	-	305,000	189,000	201,000	177,000	9,057,000
TOTAL		**$124,753,000**	**$1,660,000**	**$5,532,250**	**$5,325,250**	**$1,972,250**	**$ 2,208,250**	**$108,055,000**

Chart 1: Total Capital Requirements and Spending Schedule

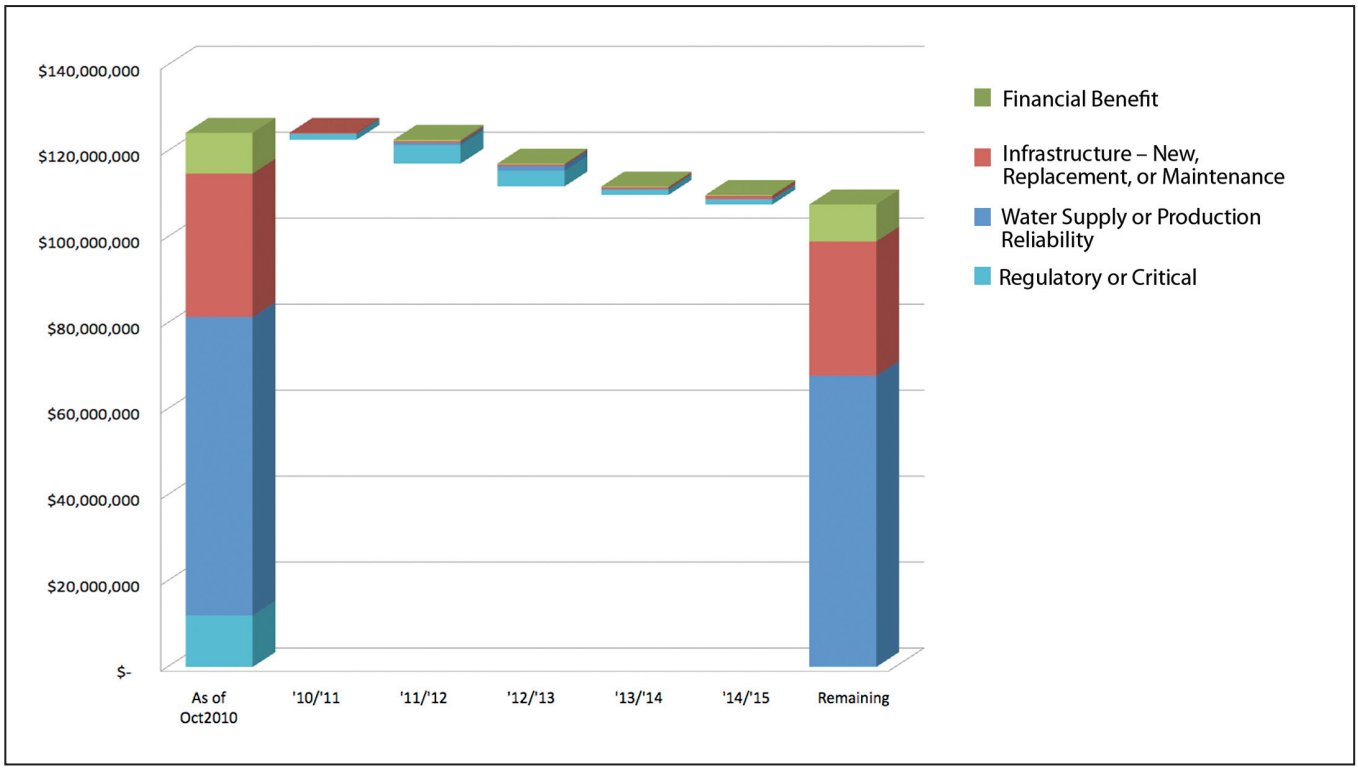


Table 4: Total 5-Year Capital Requirements by Evaluation Category

	Group Description	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL
1	Regulatory or Critical	$1,405,000	$4,302,250	$3,640,250	$1,240,250	$1,220,250	$11,808,000
2	Water Supply or Production Reliability	-	535,000	1,147,000	108,000	50,000	1,840,000
3	Infrastructure - New, Replacement, or Maintenance	255,000	390,000	349,000	423,000	761,000	2,178,000
4	Financial Benefit	-	305,000	189,000	201,000	177,000	872,000
TOTAL		**$1,660,000**	**$5,532,250**	**$5,325,250**	**$1,972,250**	**$2,208,250**	**$16,698,000**

Chart 2: Total 5-Year Capital Spending Schedule

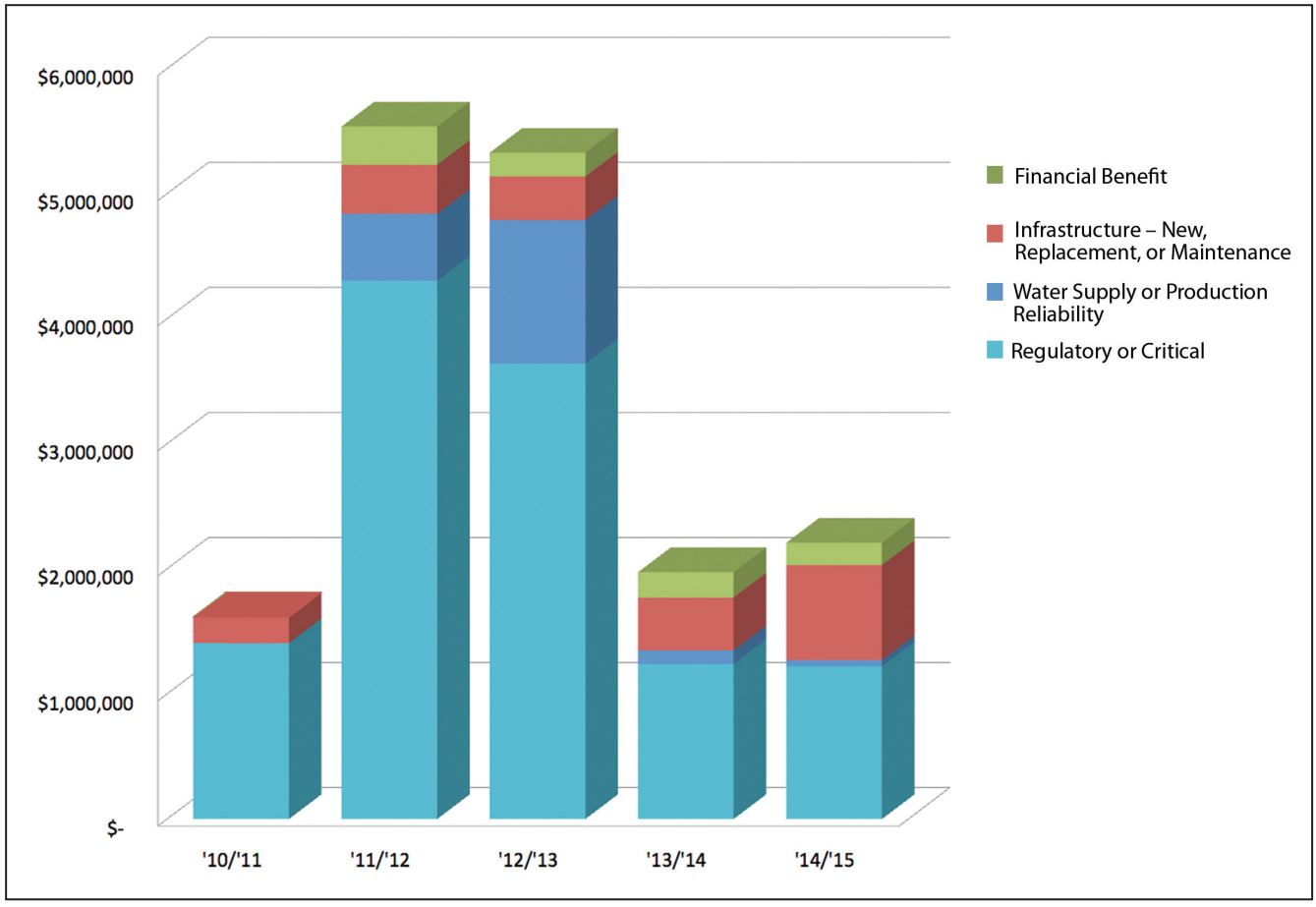


Table 5: Capital Improvement Plan, 5-Year Spending by Infrastructure Type

Infastructure	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL
Treatment	$1,180,000	$2,725,000	$2,130,000	$224,000	$412,000	$6,671,000
Well	-	557,000	1,147,000	-	-	1,704,000
Distribution	480,000	2,250,250	2,048,250	1,748,250	1,796,250	8,323,000
Storage	-	-	-	-	-	-
TOTAL	**$1,660,000**	**$5,532,250**	**$5,325,250**	**$1,972,250**	**$2,208,250**	**$16,698,000**

Chart 3: Capital Improvement Plan, 5-Year Spending by Infrastructure Type

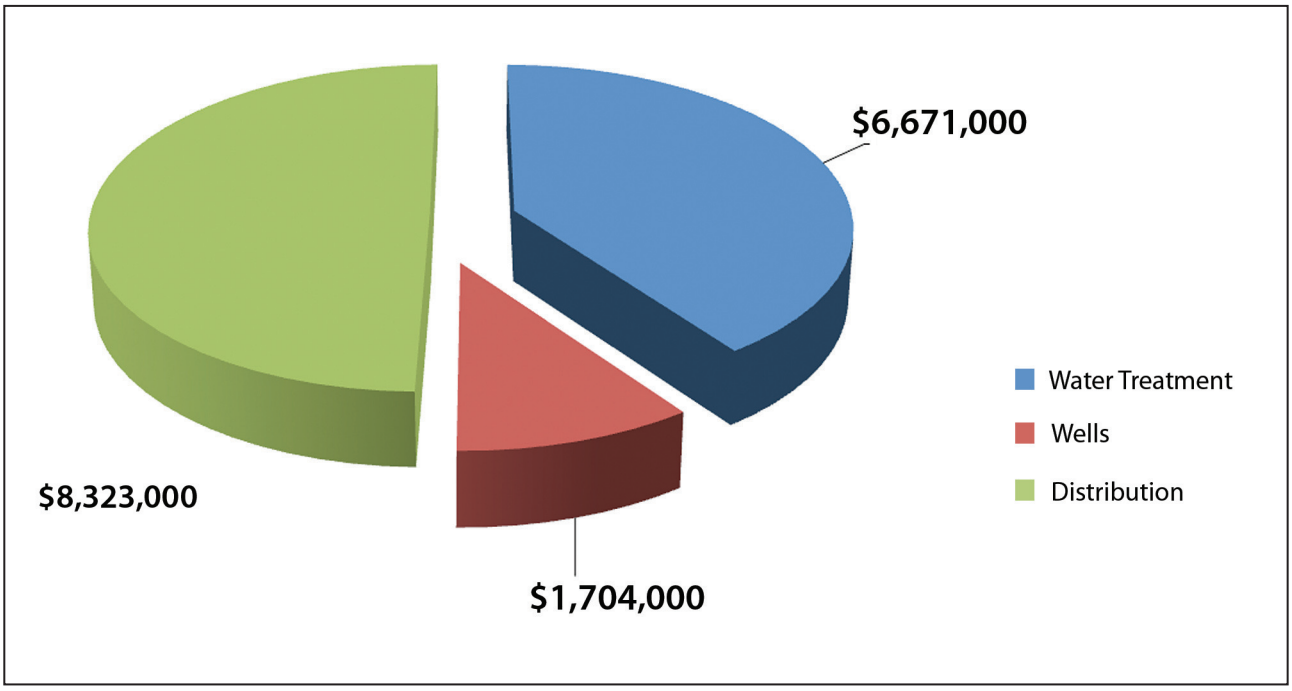
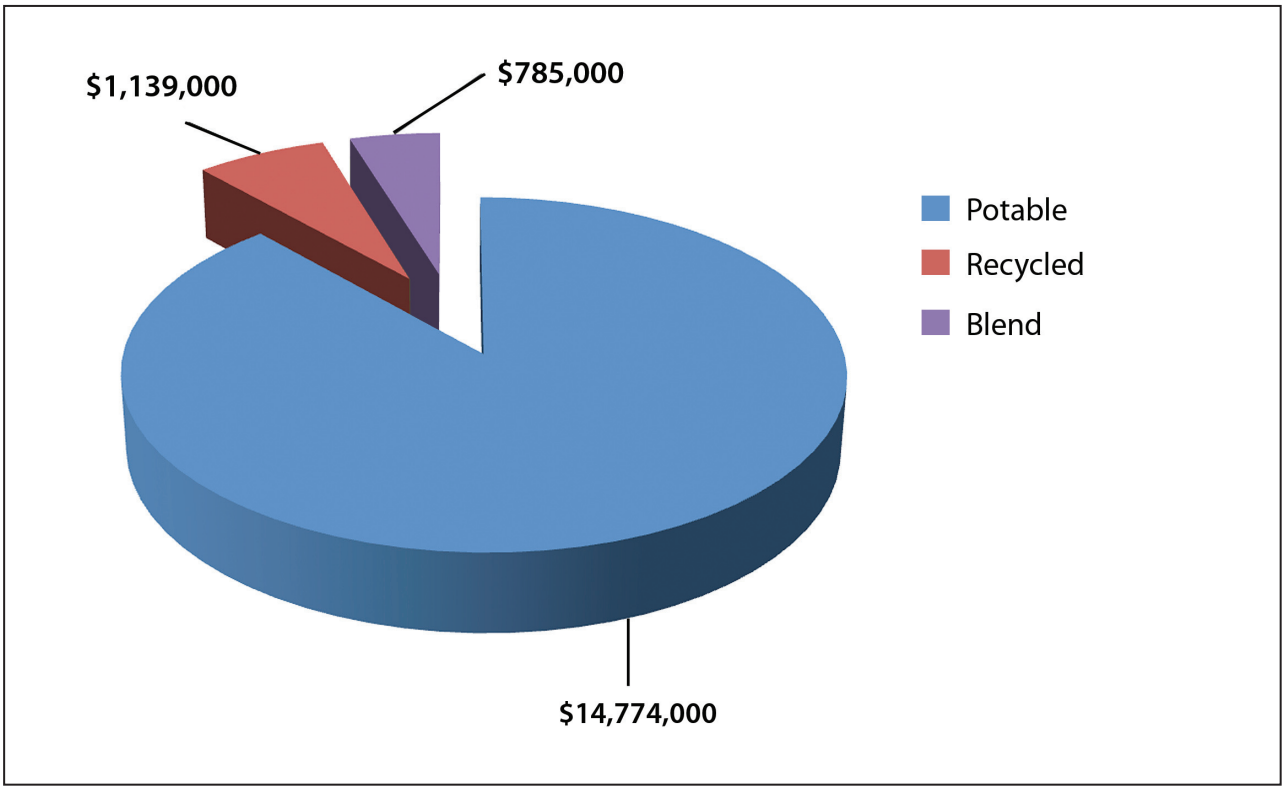


Table 6: Capital Improvement Plan, 5-Year Spending by System

Infastructure	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL
Potable	$1,660,000	$4,805,250	$5,136,250	$1,671,250	$1,501,250	$14,774,000
Recycled	-	509,000	-	100,000	530,000	1,139,000
Blend	-	218,000	189,000	201,000	177,000	$785,000
TOTAL	**$1,660,000**	**$5,532,250**	**$5,325,250**	**$1,972,250**	**$2,208,250**	**$16,698,000**

Chart 4: Capital Improvement Plan, 5-Year Spending



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5-Year Proposed Infrastructure Improvement Projects

Table 7: 5-Year Infrastructure Improvement Plan Matrix

Ref.	Project Name	Funding Source	Score	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL 5 year spend	3-year COP spend
Regulatory Requirement and/or Critical Need										
G1-1.1	CDMWTP Backwash Basin Improvement Project	Cap Fund	R&C	$ -	$ -	$53,000	$150,000	$ -	$203,000	$ -
G1-1.2	CDMWTP Sludge Drying Beds 1 and 2 Construction Project	Cap Fund	R&C	-	-	2,077,000	-	-	2,077,000	-
G1-1.3	CDMWTP Sludge Drying Bed 3 Construction Project	COP	R&C	600,000	1,334,000	-	-	-	1,934,000	1,934,000
G1-1.4	CDMWTP Overflow Basin Construction Project	COP	R&C	550,000	1,101,000	-	-	-	1,651,000	1,651,000
G1-2a	Arc Flash Protection Improvements - COP funded	COP	R&C	176,000	127,250	127,250	-	-	430,500	430,500
G1-2b	Arc Flash Protection Improvements - Capital Fund	Cap Fund	R&C	-	-	-	127,250	127,250	254,500	-
G1-3	Recycled Water Booster Station Electrical Upgrades (at GSD)	Cap Fund	R&C	-	474,000	-	-	-	474,000	-
G1-4	CDMWTP Leach Field Replacement	COP	R&C	30,000	138,000	-	-	-	168,000	168,000
G1-5	LUFT Seal and Cap Monitoring Wells	COP	R	-	57,000	-	-	-	57,000	57,000
G1-6	Caltrans - Calle Real Waterline Relocation Project	COP	R	2,000	10,000	70,000	-	-	82,000	82,000
G1-7	SB County El Embarcadero Improvements Project	COP	R	47,000	75,000	-	-	-	122,000	122,000
G1-8	City-SanJose Creek Waterline Relocation for Creek Widening	Cap Fund	R	-	300,000	-	-	-	300,000	-
G1-9	City-Los Carneros Waterline Relocation for Bridge Replacement	Cap Fund	R	-	250,000	750,000	-	-	1,000,000	-
G1-10	City-SanJose Creek Waterline Relocation for Hollister Bridge Replacement	Cap Fund	R	-	-	-	300,000	-	300,000	-
G1-11	Recycled Waterline Relocation Project at Goleta Beach	Cap Fund	R	-	-	-	100,000	530,000	630,000	-
G1-12	Lateral 14 - Waterline Replacement Project	COP	C	-	99,000	-	-	-	99,000	99,000
G1-13	Valve Replacement Program	Cap Fund	C	-	297,000	155,000	155,000	155,000	762,000	-
G1-14	Polybutylene Service Line Replacement Program	Cap Fund	C	-	-	78,000	78,000	78,000	234,000	-
G1-15	Copper Service Line Replacement Program	Cap Fund	C	-	-	319,000	319,000	319,000	957,000	-
G1-16a	Pressure Reducing Valve & Combination Air Valve Repair & Replacement Program - COP Funded	COP	C	-	40,000	11,000	-	-	51,000	51,000
G1-16b	Pressure Reducing Valve & Combination Air Valve Repair & Replacement Program - Capital Fund	Cap Fund	C	-	-	-	11,000	11,000	22,000	-
Subtotal				**$1,405,000**	**$4,302,250**	**$3,640,250**	**$1,240,250**	**$1,220,250**	**$11,808,000**	**$4,594,500**
Projects Vital to Sustain Infrastructure										
Water Supply/Production Reliability Projects										
G2-1	Transmission Main Valve Installation at Patterson	Cap Fund	96	-	-	-	108,000	-	108,000	-
G2-2	Recycled Water GSD Booster Station Pump Rebuild Project	Cap Fund	88	-	35,000	-	-	-	35,000	-
G2-3	Distribution System Hydraulic Model Update	Cap Fund	80	-	-	-	-	50,000	50,000	-
G2-4	San Ricardo Well Rehab Project (Prop 50)	Cap/Grants	80	-	500,000	1,147,000	-	-	1,647,000	-
Infrastructure and Equipment - Replacement, New, & Maintenance Projects										
G3-1	Corrosion Protection Project	Cap Fund	96	-	152,000	125,000	125,000	125,000	527,000	-
G3-2	Fleet Replacement Program	Cap Fund	90	-	-	80,500	80,500	80,500	241,500	-
G3-3	Construction Equipment Replacement Program	Cap Fund	90	-	-	57,500	57,500	57,500	172,500	-
G3-4	Update and Upgrade the District's Computer Software and Network Systems	Cap Fund	87	-	57,000	57,000	57,000	57,000	228,000	-
G3-5	Upsizing of Pipelines	Cap Fund	85	-	86,000	86,000	86,000	86,000	344,000	-
G3-6	Radio Read Meters in Difficult Access Routes	Cap Fund	84	-	23,000	51,000	63,000	39,000	176,000	-
G3-7	CDMWTP Modicon Compact PLC Replacement	Cap Fund	84	-	-	-	74,000	-	74,000	-
G3-8	CDMWTP Filter Media Replacement (1 Filter)	Cap Fund	81	-	152,000	-	-	-	152,000	-
G3-9	CDMWTP Access Road Improvements	Cap Fund	81	-	-	-	-	412,000	412,000	-
G3-10	Cathedral Oaks-Hwy 101 Overcrossing Project (Phase 1)	COP	81	245,000	-	-	-	-	245,000	245,000
G3-11	Equipment for Fire Flow Testing and Flushing	COP	80	10,000					10,000	10,000
Financial Benefit Projects										
G4-1	Meter Replacement Program	Cap Fund	84	-	81,000	81,000	81,000	81,000	324,000	-
G4-2	Van Horne Turbine Generator Replacement & Hydro-Electric Study	Cap Fund	90	-	144,000	-	-	-	144,000	-
TOTAL SPENDING - ALL PROJECTS				**$1,660,000**	**$5,532,250**	**$5,325,250**	**$1,972,250**	**$2,208,250**	**$16,698,000**	**$4,849,500**
SPENDING ON COP-FUNDED PROJECTS ONLY				**$1,660,000**	**$2,981,250**	**$208,250**	**$ -**	**$ -**	**$4,849,500**	**$4,849,500**

Regulatory Requirement or Critical Need Projects

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Project Name: CDMWTP Backwash Basin Improvement Project

I.I.P. Group No: G1-1.1
GWD Project Number: 10-4002A

Project Score: N/A (Regulatory and Critical)

Backwash Basin

Summary

This project involves the installation of redesigned piping, baffles, and other system improvements to improve the operation and efficiency of the Filter Backwash Recovery Basin (FBRB) at the Corona del Mar Water Treatment Plant (CDMWTP). The FBRB was designed and constructed in 1973 along with the original plant. This was long before the current turbidity regulations were enacted by the California Department of Public Health (CDPH). The design is no longer capable of meeting these standards during periods of high turbidity, moreover, inefficient design increases the operating costs of CDMWTP.

The proposed improvements, together with the reconstructed sludge drying beds (SDB), will provide a state-of-the-art filter backwashing and sludge removal operation. This will provide a long-term solution to meet current regulatory requirements. CDMWTP has a direct impact on 16,600 potable water customer accounts.

Background

This project was identified and recommended in engineering studies for the plant upgrade project in 2006. The project was included in the scope of work completed in 2007. During the construction phase of the project, it was eliminated due to budgetary issues at the time.

Naturally occurring particulates found in raw water processed through CDMWTP are treated and removed in the clarification filtration process. As they are removed, these particulates along with the chemicals used to remove them create a by-product known as sludge. The sludge collects in the bottom of the clarifiers and is discharged directly to the sludge drying beds. The sludge that accumulates on the filters is "backwashed" off the filters and discharged to the Filter Backwash Recovery Basin (FBRB). During normal operations, sludge in the FBRB settles out, and clear water is pumped from the top of the basin and "recycled" to the head of the Plant, thus conserving water.

The water must be returned back into the plant for re-processing, because the District does not have a Central Coast Regional Water Quality Control Board discharge permit that allows the backwash water to be discharged into the environment. It is highly unlikely that the District could obtain such a discharge permit without needing to meet much more stringent requirements than are required for the current operation. Therefore, this water must be treated through settling and at times filtration through the SDB to maintain the water quality that is required by the California Department of Public Health (CDPH).

During periods of heavy rain, turbidity from Lake Cachuma substantially increases. Turbidity consists of suspended solids in the water, which is measured in Nephelometric Turbidity Units (NTU). A nephelometer measures turbidity in water samples through the use of refracted light. This elevated level can last for several weeks and the resultant turbidity levels in the FBRB can remain for the same time period. Due to the high sludge production, backwash water during this time period must be retained at the plant. While short-term elevations in turbidity levels in the backwash water can be handled, long term elevations cannot, and require a CDPH waiver, allowing temporary non-compliance with the standards. The proposed improvements will eliminate the need to obtain these waivers from the CDPH. During heavy rain events, backwash water turbidity in the FBRB can be in the range of 4 to 7 NTU; the standard is 2 NTU.

Need for Project

The extra efficiency and capacity that will be provided by improving the FBRB is needed to meet CDPH regulatory requirements relating to the handling, storage, and removal of the Plant's sludge which is generated from the Plant's clarification and filtration processes. Given these requirements the turbidity of backwash water, when it is returned to the head-works of the plant, must be less than 2 NTU.

The additional efficiency and capacity gained by completing these improvements, along with the the reconstruction of SDB 3 (project G1-1.3), SDB 1 and 2 (project G1-1.2) and construction of the overflow basin (project G1-1.4) will greatly enhance operations and the ability of the District to remain in compliance with regulations, moreover preclude the need for CDPH waivers.

Project Description

The project consists of the installation of piping, baffles, and other improvements to improve settling time and efficiency of the FBRB. A previously designed upgrade to the basin will be analyzed and enhanced as necessary with the project to assure that the resulting project will meet all current regulatory requirements.

This project, together with the reconstructed sludge drying bed system, will provide a state-of-the-art filter backwashing and sludge removal operation and will provide a long-term solution to meet current regulations. The planning and implementation steps are as follows:

- Analyze and assess previously designed upgrade, re-engineer as needed.
- Develop an operation sequence plan while construction activities are taking place.
- Begin construction of the FBRB improvements.

Obtaining or updating permits from the following agencies will be included in the project:

- CDPH – sets regulations on surface water treatment facilities and water distribution system operations.
- Central Coast Regional Water Quality Control Board (CRWQCB) - sets regulations on construction of sludge storage facilities and the removal of stored sludge.

Project Budget

	COP Funding	Capital Fund	Total Budget
Backwash Basin Improvement		$ 203,000	$ 203,000
Total Budget:		$ 203,000	**$ 203,000**

Project Schedule

Engineering: FY 2012-13, Construction: FY 2013-14

CDMWTP Sludge Drying Beds 1 and 2 Construction Project

I.I.P. Group No: G1-1.2
GWD Project Number: 10-4002B

Project Score: N/A (Regulatory and Critical)

Sludge Drying Beds 1&2

Summary

The reconstruction of Sludge Drying Beds (SDB) 1 and 2 at the Corona del Mar Water Treatment Plant (CDMWTP) is critical to meet operational capacity of the beds and current California Department of Public Health (CDPH) regulatory requirements. The capacity is causing the SDB to fall short in their ability to process the amount of sludge, and at times backwash water, that the system requires.

These SDB have been in operation since 1973 and have never been re-constructed nor received any substantial maintenance. They are now at the end of their useful life and need rebuilding. Due to their age, they are estimated to need new sub-drain systems, liners, and filtering sand. Once the existing sludge and excess material is removed and disposed of, a thorough inspection will determine if any of the components are salvageable.

All of the sludge and water that is processed by the SDB must be contained and either returned to the plant under CDPH regulations, or hauled to a landfill for proper disposal under Central Coast Regional Water Quality Control Board (CRWQCB) regulations. Therefore, the condition of the SDB is critical to maintain regulatory compliance. CDMWTP has a direct impact on 16,600 potable water customer accounts.

Background

Naturally occurring particulates found in the raw water coming to the plant are treated and removed both in the clarification process and filtration process. The by-product of the sedimentation process is sludge. The sludge collects in the bottom of the clarifiers and is discharged directly to the SDBs. The sludge that accumulates on the filters is "backwashed" off the filters and discharged to the Filter Backwash Recovery Basin (FBRB). During normal operations, sludge in the FBRB settles out, and clear water is pumped from the top of the basin and "recycled" to the head of the Plant, thus conserving water. The sludge from the FBRB ends up in the SDB.

The CDMWTP currently has two SDBs. SDB 1 and 2 were constructed in 1973 at the time of the original plant construction. Normally, one SDB is in operation and accepting sludge from the clarifier units and the discharge from the FBRB. The other SDB is not accepting any sludge or water and is "offline". This facilitates the drying of the sludge that has accumulated in the SDB. Once the sludge has dried sufficiently, the sludge in the SDB that is offline is hauled off-site for disposal into an approved landfill.

The drying process in the SDBs is accomplished by letting the sludge and solids drain water through the sand and gravel system into the underdrain collection system of the SDB. The water that is collected is returned to the CDMWTP

head-works under the same regulations that the FBRB water is returned and must meet the turbidity standard of less than 2.0 NTU. Turbidity consists of suspended solids in the water, which is measured in Nephelometric Turbidity Units (NTU). A nephelometer measures turbidity in water samples through the use of refracted light.

Need for Project

This project is needed to meet CRWQCB requirements which regulate the proper handling, storage, and removal of the Plant's sludge, which is generated from the clarification and filtration processes. This project is also needed to meet CDPH regulatory standards, which require the turbidity of sludge filtered water and backwash water, when it is returned to the head-works of the CDMWTP, to be less than 2 NTU.

The existing SDB are 37 years old and the critical components of the filtering sand, underdrain collection systems, and the impermeable liner needs a detailed evaluation as to its condition and ability to meet current regulatory standards.

The efficiency and capacity gained by reconstructing SDB 1 and 2, along with the reconstruction of SDB 3 (project G1-1.3), FBRB improvements (project G1-1.1) and construction of the overflow basin (project G1-1.4) will greatly enhance operations and the ability of the District to remain in compliance with regulations, preclude the need for CDPH waivers, and provide an up-to-date sludge and backwash processing system.

Failing to complete this project would prevent the District from consistently meeting current regulatory standards. The existing two SDBs are already unable to handle high turbidity events.

Project Description

The first step in the reconstruction of SDBs 1 and 2 will be to excavate out all material, including sand, sludge, and gravel down to the sub-drain systems and liners. At that point, a thorough inspection can be completed to assess whether any of the original components can be salvaged. The beds will then be reconstructed to restore their original funcionality as described in the sequence below:

- Excavate and dispose of sludge, sand and any extra soil.
- Remove old sub-drain systems and bed liner.
- Construct new sub-drain pipeline systems.
- Install impermeable bed liner.
- Place sand filter material and collection pipes above liner.

Obtaining or updating the following permits (as necessary) will be included in the project:

- California Department of Public Health (CDPH) – sets regulations on surface water treatment facilities and water distribution system operations.
- Central Coast Regional Water Quality Control Board (CRWQCB) - sets regulations on construction of sludge storage facilities and the removal of stored sludge.

Project Budget

	COP Funding	Capital Fund	Total Budget
CDMWTP Sludge Drying Beds 1 and 2		$2,077,000	$2,077,000
Total Budget:		**$2,077,000**	**$2,077,000**

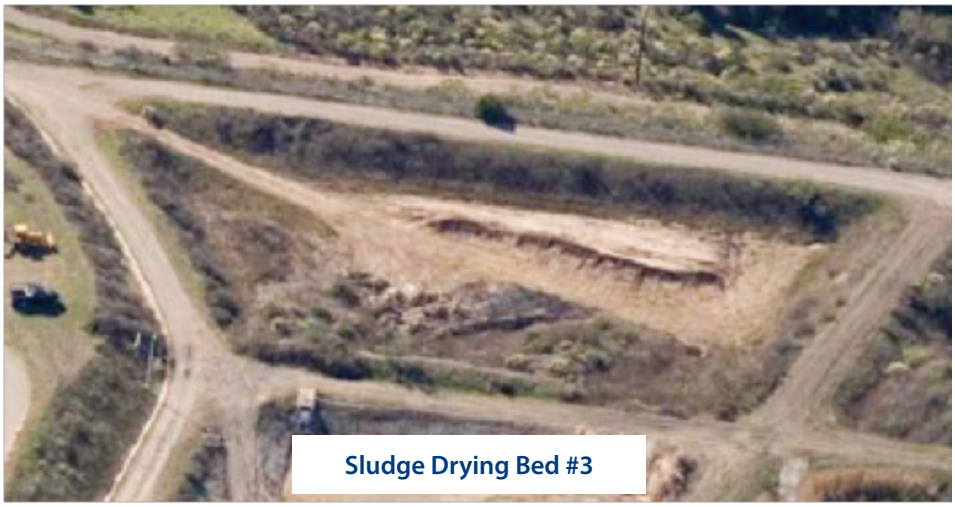
Project Schedule

Engineering: FY 2014-15,
Construction: FY 2014-15

CDMWTP Sludge Drying Bed 3 Construction Project

I.I.P. Group No: G1-1.3
GWD Project Number: 10-4002C

Project Score: N/A (Regulatory and Critical)



Sludge Drying Bed #3

Summary

This project involves the completion of Sludge Drying Bed (SDB) 3. SDB 3 was previously rough graded, but never completed. Currently there are two drying beds, SDB 1 and SDB 2, in operation.

The construction of the third SDB will allow two SDBs to be in continuous operation and allow for a more efficient sludge drying process. It will also provide the additional needed capacity to handle high turbidity events. Periods of high turbidity occur during rainfall events when the water delivered from Lake Cachuma has unusually high levels of turbidity. Currently, the District has to obtain a verbal waiver from the California Department of Public of Health (CDPH) to temporarily allow the District to exceed turbidity standards in the sludge and backwash water that must be returned to the Corona del Mar Water Treatment Plant (CDMWTP) head-works for the plant to remain operational. The SDB 3 eliminates the need for a waiver by providing the needed capacity to process sludge water that meets CDPH standards. CDMWTP has a direct impact on 16,600 potable water customer accounts.

This additional capacity provided by SDB 3 will allow sufficient time for the sun and piping system to remove additional moisture from the sludge. This provides the advantage of producing dry, crumbly sludge cake with a solids content in the range of 45 -50%, for ease of removal and and hauling to an acceptable landfill. This reduction in water content is critical in reducing the cost of transporting the dry sludge to a landfill. Heavy sludge, with more water, is costly to transport.

Background

Naturally occurring particulates found in the raw water coming to the plant are treated and removed both in the clarification process and filtration process. As they are removed, these particulates along with the chemicals used to remove them create a by-product known as sludge. The sludge collects in the bottom of the clarifiers and is discharged directly to the SDBs. The sludge that accumulates on the filters is "backwashed" off the filters and discharged to the Filter Backwash Recovery Basin (FBRB). During normal operations, sludge in the FBRB settles out, and clear water is pumped from the top of the basin and "recycled" to the head of the Plant, thus conserving water. The settled sludge flows to the SDB.

The CDMWTP currently has two SDBs. SDB 1 and 2 were constructed in 1973, at the time of the original plant construction. Normally, one SDB is in operation and accepting sludge from the clarifier units and the discharge from the FBRB. The other SDB is not accepting any sludge or water and is "offline". This faciliatates the drying of the sludge that has accumulated in the SDB. Once the sludge has dried sufficiently, the sludge in the SDB that is offline is hauled off-site for disposal into an approved landfill.

The completion of SDB 3 was identified and recommended in the CDMWTP upgrade project analysis and design in 2006. It was included in the scope of work in the design-build 2006 CDMWTP improvements completed in 2007. However, it was eliminated during the construction phase due to budgetary constraints.

The drying process in the SDB is accomplished by letting the sludge and solids drain water through a sand and gravel system at the bottom of the bed and into an underdrain collection system located under the sand and gravel. The water that is collected is returned to the CDMWTP head-works under the same regulations that the FBRB water is returned and must meet the turbidity standard of less than 2.0 NTU.

The need for SDB 3 is magnified during high turbidity events that occur when rainfall greatly increases the turbidity of the water delivered from Lake Cachuma. During these high turbidity events, additional backwash water is discharged into the two existing SDBs and there is insufficient capacity to adequately filter the additional water that is received from the FBRB. This requires the District to obtain a verbal waiver from the CDPH to temporarily allow the District to exceed turbidity standards for water returned from the sludge/backwash process to the headworks of the plant.

Need for Project

The project is needed to meet CDPH regulatory requirements. These requirements state that the turbidity of sludge filtered water and backwash water, when it is returned to the head-works of the CDMWTP, must be less than 2 NTU.

The additional efficiency and capacity gained by completing SDB 3, along with the the reconstruction of SDB 1 and 2 (project G1-1.2), FBRB improvements (project G1-1.1) and construction of the overflow basin (project G1-1.4) will greatly enhance operations and the ability of the District to remain in compliance with regulations, as well as preclude the need for CDPH compliance waivers.

Failing to complete this project would prevent the District from consistently meeting current and future regulatory standards.

Project Description

This project involves completing the construction of SDB 3.

Construction outline:

1. Excavate and dispose of stored sludge and excess soil to expose the sub-grade below the bed.
2. Construct sub-drain pipeline systems.
3. Install impermeable bed liner.
4. Place sand filter material and collection pipes above liner.

Obtaining or updating permits from the following regulators will be included in the project:

- California Department of Public Health (CDPH) – sets regulations on surface water treatment facilities and water distribution system operations.
- Central Coast Regional Water Quality Control Board (CRWQCB) - sets regulations on construction of sludge storage facilities and the removal of stored sludge.

Project Budget

	COP Funding	Capital Fund	Total Budget
CDMWTP Sludge Drying Bed 3	$1,934,000		$1,934,000
Total Budget:	**$1,934,000**		**$1,934,000**

Project Schedule

Engineering: FY 2010-11
Construction: FY 2010-11
FY 2011-12

CDMWTP Overflow Basin Construction Project

I.I.P. Group No: G1-1.4
GWD Project Number: 10-4002D

Project Score: N/A (Regulatory and Critical)

Overflow Basin

Summary

This project will complete the construction of Sludge Drying Bed (SDB) 4 at the Corona del Mar Water Treatment Plant (CDMWTP). It was previously rough graded. This bed will be lined, but will not have a pumping and sludge sub-drain system. It will serve as an important all-purpose sludge, backwash water, and storm water storage area that will have the capability of ensuring District compliance with California Department of Public Health (CDPH) and the Central Coast Regional Water Quality Control Board (CRWQCB) regulations during large storm events, unusually long turbidity periods, or any other incident which may require the assistance of a readily available water or sludge storage area for evaluation, and later, controlled discharge and disposal. The current SDB's and filter backwash and recovery basin cannot meet CDPH regulations for the water that is returned to the plant as a result of these processes. CDMWTP has a direct impact on 16,600 potable water customer accounts.

Background

During periods of heavy rain, turbidity from Lake Cachuma substantially increases. Turbidity consists of suspended solids in the water, which is measured in Nephelometric Turbidity Units (NTU). A nephelometer measures turbidity in water samples through the use of refracted light. This elevated level can last for several weeks and the resultant turbidity levels in the Filter Backwash and Recovery Basin (FBRB) can remain for the same time period. Due to the high sludge production, backwash water during this time period must be retained at the plant. While short-term elevations in turbidity levels in the backwash water can be handled, long term elevations cannot, and require a CDPH waiver, allowing temporary non-compliance with the standards. The proposed improvements will eliminate the need to obtain these waivers from the CDPH. During heavy rain events, backwash water turbidity in the FBRB can be in the range of 4 to 7 NTU; the standard is 2 NTU.

Need for Project

These elevated turbidity levels in the water from lake Cachuma can last for several weeks and the resultant turbidity levels in the FBRB can remain for the same time period. Backwash water during this time period must be retained at the CDMWTP. While short-term elevations in turbidity levels in the backwash water can be handled, long term elevations cannot, and require a CDPH waiver, allowing temporary non-compliance with the turbidity standards.

The proposed improvements will supply the sludge, backwash water, and storm water storage necessary to eliminate the need to obtain these waivers from the CDPH.

Failing to complete this project would prevent the District from consistently meeting current regulatory standards, which would leave the plant in a state of non-compliance with state health regulations.

Project Description

This project will complete the construction of drying bed 4. It was previously rough graded. This bed will be lined, but will not have a sludge sub-drain system. It will serve as an important all-purpose storage area that will have the capability of ensuring District compliance with regulations during large storm events, unusually long turbidity periods, or any other incident which may require the assistance of a readily available water or sludge storage area.

Construction outline:

- Excavate and dispose of stored sludge and excess soil to expose the sub-grade below the bed
- Place impermeable bed liner
- Place finishing fill material

Project Budget

	COP Funding	Capital Fund	Total Budget
Overflow Basin	$1,651,000		$1,651,000
Total Budget:	**$1,651,000**		**$1,651,000**

Project Schedule

Engineering: FY 2010-11
Construction: FY 2010-11 through FY 2011-12

Arc Flash Protection Improvements

I.I.P Group Number: G1-2
Project Number: 10-4003

Project Score: N/A (Regulatory and Critical)

Summary

Arc Flash Protection Improvements is a comprehensive plan to make modifications to the District's electrical equipment based on an initial study. All electrical equipment at 33 District sites will be assessed and modified to create a safer work environment. The improvements will protect personnel from the potential risk of high voltage electrical equipment explosions. The National Fire Protection Association (NFPA) revised their NFPA 70E Standard for Electrical Safety in the Workplace in 2009. The Standard requires the District to perform a study, properly label equipment, provide personal protection equipment (PPE), and make any modifications to existing electrical equipment that is required per the NFPA standard. The project is scheduled to start early 2011 and will take about a year to complete. The improvements do not impact customers directly but do impact the safety of all personnel who perform maintenance or use the existing disconnects.

Background

Arc Flash is the result of a rapid release of energy due to an arcing fault. The resulting explosion can release a large blast at extreme temperatures. The explosion can cause damage to equipment, serious injury, or even death to personnel.

Electrical power from the utility is reduced at the transformer and enters the facilties at the switchgear. From the switchgear, the power is distributed to various distriubution panels, control panels and motor control centers (MCC). It is this type of electrical equipment (cabinets) that has the potential for arc flash events and must be studied and modified. Much of the District equipment was installed years ago. The study will assess if the equipment can be modified or is outdated and needs replacement.

Need for Project

This project is necessary to comply with regulatory requirements based on revisions to the 2009 Edition of the National Fire Protection Association (NFPA) 70E Standard for Electrical Safety in the Workplace.

The Federal Occupational Safety and Health Administration (OSHA) sets standards for occupational safety. OSHA's Subpart S of Part 1910 for electrical regulations referred to the NFPA 70E Standard which has more specific training and PPE information.

The NFPA 70E Standard requires all organizations using voltage greater than 120V to perform a study, properly label equipment, provide personal protection equipment (PPE), and make any modifications to existing electrical equipment required. NFPA 70E is commonly referred to as "arc flash protection". The NFPA 70E Standard expands on OSHA's Standard 29. The current NFPA 70E 2009 Edition lays out a six-point plan to adhere to the standard. The plan is as follows:

1. A facility must provide, and be able to demonstrate, a safety program with defined responsibilities.
2. Perform calculations for the degree of arc flash hazard.
3. Provide correct personal protective equipment (PPE) for workers.
4. Provide training for workers on the hazards of arc flash.
5. Provide appropriate tools for safe working.
6. Place warning labels on equipment.

The NFPA plan represents the minimum to comply with regulatory requirements on short order. The six-point plan does not address modifications to electrical equipment. To comply with the NFPA Standard the District needs to make phased modifications to the equipment over time. Failure to complete this project would cause District non-compliance and could place personnel at risk for injury.

Project Description

A phased alternatives analysis to address the revised NFPA 70E Standard will assess options that range from labeling each piece of equipment to replacement. Labeling on each piece of equipment would state the PPE required and work proceedures.

A study will be performed by a qualified registered electrical engineer contracted by the District who willl review the existing electrical design. Site visits by the electrical engineer will confirm that the electrical work was performed per the design. There are 33 separate sites, including the Water Treatment Plant, wells, booster pump stations, and waterline cathodic protection rectifiers to be assessed. Using the record drawings and accounting for variations, the study will deliver a specific procedure for safe maintenance of the existing equipment and construction drawings for future equipment modifications or replacement at each of the 33 sites. Depending on the site, modifications can include covering exposed bus bars, changing out components such as contactors and overloads. Modification may be cost prohibitive. In this case the entire electrical cabinet may need to be replaced.

Project Budget*

	COP Funding (G1-2a)	Capital Fund (G1-2b)	Total Budget
Study	$165,000		$165,000
Site Specific Training and PPE	$11,000		$11,000
Phased Electrical Equipment Improvements**	$254,500	$254,500	$509,000
Total Budget:	**$430,500**	**$254,500**	**$685,000**

*This project is categorized as G1-2a and G1-2b to show that there are two separate funding sources – COP funding and capital funding, as shown above.

** As necessary based upon the engineering assessment

Project Schedule

Study & Engineering: FY 2010-11
Phased Construction: FY 2010-11 through FY 2014-15

Reference Material

National Fire Protection Association (NFPA), 70E, Standard for Electrical Safety in the Workplace, 2009 Edition

Recycled Water Booster Station Electrical Upgrades (at GSD)

I.I.P. Group No: G1-3
GWD Project Number: 09-3915

Project Score: N/A (Regulatory and Critical)



Summary

The project involves the replacement of 4 Variable Frequency Drives (VFD) and outdated support equipment with 3 new Soft Start motor controllers, a new VFD pump controller, a new Programmable Logic Controller (PLC), and electrical support improvements. This project will provide a critical upgrade to the District's outdated Recycled Water Booster Pumping System to ensure long-term reliability and electrical regulatory compliance with the National Fire Protection Association (NFPA) 70E Standard for Arc Flash Protection.

The soft start design and the high efficiency of the upgrade components will result in lower system component stress, a savings in operating costs, and will ensure that the District can dependably meet future system demands of the 19 large recycled water customers which include UCSB, various golf courses and other large landscaped areas.

Background

The existing Booster Pump facility was constructed in 1993. It is located within the facilities of the Goleta Sanitary District, and is used to deliver all of the recycled water to recycled water customers within the Goleta area. Although the system has adequately met the needs of the District over the years, the electrical components have effectively reached the end of their service life. The 4 motors and pumps are dependable and are not replaced as part of this project.

Need for Project

The four existing VFDs and the existing PLC have outlived their intended useful life and are no longer supported by the original manufacturer. Spare parts are no longer available. The VFDs are subject to frequent problems and shutdowns, and cannot be considered dependable. As the present system ages, it will continue to become less reliable. If any one of the VFDs fail, the District would not be able to meet peak system demands.

Completing the project will greatly increase system reliability, provide a pumping station configuration that is maintainable, and result in operational cost savings. Some cost savings will be due to Operations personnel making fewer service calls. The electrical bill will be reduced due to the PLC and VFD running the 4 motors at the optimum speed. The soft start reduces impact on the equipment resulting in a longer service life. New equipment would also be designed to meet OSHA regulated NFPA 70E standards for Arc Flash Protection.

Project Description

This project consists of a system upgrade to the Recycled Water Booster Pumping Station. The project includes:

- Removing 4 obsolete VFDs.
- Removing 1 PLC.
- Installing 1 new VFD pump controller.
- Installing 3 new Soft Start motor controllers.
- Installing 1 new PLC and new software with programming.
- Install electrical modifications for a future 125 HP pump.
- Insuring facility complies with Arc Flash Protection standards.

Project Budget

	COP Funding	Capital Fund	Total Budget
Remove and Replace Pump Controls		$324,000	$324,000
Electrical Modifications		$150,000	$150,000
Total Budget:		**$474,000**	**$474,000**

Project Schedule

Engineering: Winter 2011 – Spring 2012
Construction: Winter 2011 – Spring 2012

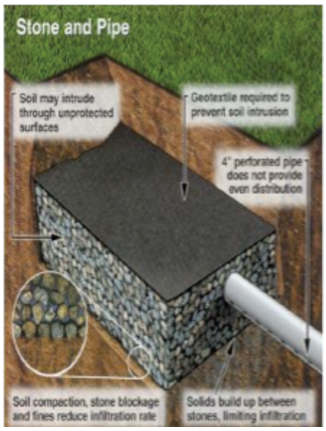
Reference Material

National Fire Protection Association (NFPA), 70E, Standard for Electrical Safety in the Workplace, 2009 Edition

CDMWTP Leach Field Replacement

I.I.P. Group No: G1-4
GWD Project Number: 10-4004

Project Score: N/A (Regulatory and Critical)



Summary

This project consists of an upgrade of the waste water treatment system at the CDMWTP. The existing system was upgraded as part of the 2006 plant upgrades. A treatment system was installed to be able to use the wastewater for irrigation purposes around the plant. The water does not meet true tertiary standards so it is not used for irrigation and is discarded into the old leach field. The project entails an evaluation of the current treatment system and method of disposal and proposed upgrades to meet current wastewater regulations. The project is required to ensure compliance with regulations governing on site disposal of domestic wastewater. The plant cannot have operating personnel utilizing the facility without a proper operating domestic wastewater disposal system. CDMWTP has a direct impact on 16,600 potable water customer accounts.

Background

The existing wastewater treatment system was upgraded in 2006 and utilizes the leach field which was installed in 1955. The area of the existing leach field is located in an area that was previously filled with compacted native soil and is therefore unsuitable by today's standards for supporting a leach field. An evaluation will be conducted to determine if the wastewater may be used for irrigation purposes as originally intended, or if it can be discharged into the old leach field as is the current operation. The evaluation will outline these upgrades that will be needed to meet current regulations for both alternatives.

Need for Project

The wastewater treatment system discharges into the old leach field. An evaluation to institute any recommended upgrades will ensure a wastewater treatment system that meets all the current regulatory requirements for this unique treatment design. The project will evaluate the uniqueness of the wastewater treatment system that discharges its treated wastewater into an existing leach field for compliance with current regulations. The current leach field does not meet regulatory standards to operate as a stand-alone leach field.

Project Description

The project will include design and installation of a replacement waste water system to replace the existing system. Design of the replacement system will include the identification of an appropriate area in the treatment plant vicinity that will accommodate the new leach field if needed to meet all applicable regulations. Appropriate irrigation requirements will be evaluated. Alternatively, proper disposal of the waste water around the water treatment plant facilities will be evaluated if necessary.

Project Budget

	COP Funding	Capital Fund	Total Budget
CDMWTP Leach Field	$168,000		$168,000
Total Budget:	**$168,000**		**$168,000**

Project Schedule

Engineering FY 2010-11
Construction FY 2011-12

LUFT Seal and Cap Monitoring Wells

I.I.P. Group No: G1-5
GWD Project Number: N/A

Project Score: N/A (Regulatory)

Summary

This project involves concrete sealing and capping of 8 monitoring wells which are no longer necessary as a part of the Leaking Underground Fuel Tank (LUFT) remediation program. The project is needed to comply with a regulatory requirement imposed by the County Fire Department, which is acting on behalf of the Regional Water Quality Control Board. The cost of the project will be $57,000, and the work will begin after the County Fire Department Fire Prevention Division (FPD) approves the District's submitted work plan for the sealing and capping of the wells. Protecting the groundwater basin has a direct impact on the 16,600 potable water customer accounts who rely on the groundwater basin for their water supply during various operating conditions.

Background

The GWD LUFT site project was opened in 1988, and has been in a continuous state of remediation and monitoring for the past 22 years. The District removed 3 buried underground fuel tanks which were determined to be leaking into the shallow, perched groundwater table in the general area of the operation yard. A "perched" aquifer is defined as an underground water table that lays on top of a material, in this case a clay layer. The clay layer in the District's aquifer prevents water from migrating from the upper layer into lower water tables.

Holgun, Fahan & Associates (HF&A), has been conducting this program for the District from the start of the LUFT site remediation process. HF&A has been taking samples to track the dissipation of the fuel, and there has been remediation where needed. Remediation takes place by injecting oxygen into various wells. The results of the monitoring and remediation efforts show a reduction in scope is appropriate, because of favorable test results. In addition, as part of the ongoing mitigation efforts, the feasibility of planting poplar trees in the area of the contamination will be investigated to determine if these trees can assist in the dissipation of the fuel.

This reduction in scope was validated in a letter received from the County of Santa Barbara Fire Department Fire Prevention Division on May 18, 2010, which states: "Review of historical analytical data presented in the (last) report indicates that a reduction in the scope and frequency of groundwater monitoring would reduce cost without compromising data quality. Several wells are no longer necessary and must be properly destroyed in accordance with the Santa Barbara County Code of Ordinances." Destroying a well can also be defined as sealing and capping the well.

Need for Project

The LUFT remediation program is required by the Regional Water Quality Control Board. The District's fuel tanks that were found to be leaking in the late 1980's have been removed, but the remediation of the soil and shallow groundwater continues until the soil and groundwater are restored to acceptable standards. The sealing and capping of the monitoring wells are part of the remediation program and protect the groundwater basin from surface water directly entering the groundwater basin through the monitoring wells.

Project Description

The project consists of the seal and capping of 8 monitoring wells that are no longer required for continued monitoring of the LUFT site located in the area of the Goleta Water District's Operation Yard. The wells will be sealed and capped in accordance with procedures outlined in the California Department of Water Resources Bulletin 74-81. Permits will be obtained from the FPD and the City of Goleta. To seal the well, the steel pipe casing is removed and the hole filled with bentonite. The bentonite seals the well because it expands when water comes in contact with it. The cap is concrete and is poured just below grade to a depth of 6 feet.

The project will begin after approval is received from the FPD regarding the District's submitted work plan. Upon sealing and capping the 8 wells, there will be 15 monitoring and remediation wells remaining.

Project Budget

	COP Funding	Capital Fund	Total Budget
Seal and Cap Monitoring Wells	$57,000		$57,000
Total Budget:	**$57,000**		**$57,000**

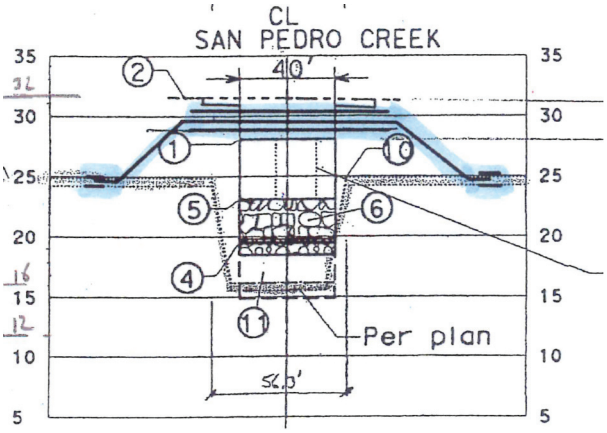
Project Schedule

Seal and Cap Wells Summer 2011

Caltrans - Calle Real Waterline Relocation Project

I.I.P. Group No: G1-6
GWD Project Number: 02-3415

Project Score: N/A (Regulatory)



Summary

This project consists of the replacement of approximately 90' of existing 8" steel waterline which will be realigned to be consistent with a proposed Caltrans box culvert replacement project. At Calle Real by the Fairview Shopping Center over the San Pedro Creek, a double box girder bridge is being replaced with a slab bridge and the creek bed will be lowered. The waterline under the existing creek bed will become exposed if it's not relocated. The work will be performed once the District coordinates the design of the waterline through the bridge with Caltrans. Since Caltrans has regulatory jurisdiction of the public right-of-way when constructing road improvements, the District is required to relocate any affected infrastructure. The project will take 18 months at an estimated cost of $82,000. The project does not have a direct impact on any customers; however failure to relocate the line will have an indirect impact on approximately 500 customer accounts including the Fairview Shopping Center with the elimination of this second waterline into the area.

Background

The double box culvert bridge is being replaced with a 3' thick reinforced concrete slab bridge to address flooding in past years during large storm events. Additionally, the creek bed elevation is being lowered and restored to a natural creek bottom. The elevation of the existing waterline is higher than the proposed creek bed elevation. Lowering the creek bed will expose the waterline and creates the need for the project.

Need for the Project

This project is necessary to comply with the Caltrans regulatory requirement. Caltrans has jurisdictional authority over the right-of-way in this area. With this authority, Caltrans can direct the District to realign, relocate or otherwise adjust their facilities at their own cost to accommodate and conform with the proposed City project. The project will also prevent the waterline from becoming exposed during construction activity and to debris flows down the creek during large storms in the future. The consequence of not relocating the waterline is certain damage. The damage would occur at some point in time either from heavy grading equipment during construction or large debris flow during storm events.

Project Description

The best practical alignment of the waterline is through the bridge. 90' of existing 8" steel waterline will be relocated. It will be relocated through the new slab bridge. On either side of the bridge, the relocated waterline will be constructed of PVC and ductile iron fittings. The vertical alignment of the PVC pipe will change so it is at the correct elevation at the bridge stationing. The PVC material will change to HDPE at the bridge. A larger 14" steel casing pipe will be cast monolithically with the slab bridge to allow HDPE carrier pipe to be jacked through the bridge after it is poured. HDPE is used as the carrier pipe because of its flexibility and the pipe ends can be fused together to reduce the chance of a leak occurring within the bridge.

The District can perform both the engineering and construction tasks. The District will provide a design to Caltrans to include in the overall bridge project. The District will approve Caltrans' final design to ensure the waterline work is shown correctly in the plans and specs.

Project Budget

	COP Funding	Capital Fund	Total Budget
PVC Waterline with Ductile Iron Fittings	$33,400		$33,400
Steel Casing for Fused HDPE Waterline	$48,600		$48,600
Total Budget:	**$82,000**		**$82,000**

Project Schedule

Engineering – FY 2010-11:

Execute Contract with Caltrans	Winter 2010
Design Coordination and Progress Submittal Review	First 3 Quarters of 2011
Approval of Final Design	4th Quarter of 2011

Construction

Preconstruction Activity	1st Quarter of 2012
Install 14" Steel Casing (Construct Bridge)	1st Quarter of 2012
Install 8" HDPE Waterline	1st Quarter of 2012
Install 8" PVC Waterline	1st Quarter of 2012

SB County El Embarcadero Improvements Project

I.I.P. Group No: G1-7
GWD Project Number: 07-3738

Project Score: N/A (Regulatory)

Summary

This project consists of the relocation or adjustment of District facilities in coordination with an upcoming County road improvement project involving Embarcadero del Norte, Embarcadero del Mar, El Embarcadero, and some surrounding streets in the Isla Vista area. The project has a direct impact on 10 customer accounts serving apartment buildings, and an indirect impact on 125 customer accounts including the businesses in the Isla Vista area and other large apartment buildings. Due to the construction, the District must relocate water meters and fire hydrants, and raise existing valve cans to the proposed new grade. The project is necessary to comply with the County of Santa Barbara regarding the road rights-of-way in the Isla Vista area.

Background

The County of Santa Barbara informs the Goleta Water District and other utilities providers whenever a street improvement project is scheduled so that potential utility conflicts can be identified and mitigated. In this instance, the County has a street improvement project planned in the Isla Vista area which includes the installation of a new storm drain, undergrounding existing overhead utilities, and relocating curb, gutter and sidewalks. They will also be installing new curb ramps at corners, new street lights, and tree wells. Some of these improvements affect District water facilities, as well as other underground utilities. The District must comply by relocating or adjusting affected water facilities accordingly, at the District's cost.

Need for Project

Since the County is planning these road improvements to this particular area, the District must comply with County requirements regarding the affected facilities.

Project Description

The overall project will include installing a new storm drain in Embarcadero del Norte and Embarcadero del Mar, undergrounding of existing overhead utilities, and sidewalk improvements on the west side of El Embarcadero. In conjunction with this phase of the project, the District will need to relocate four District water meters. An existing

District cathodic (corrosion) test station will be abandoned by GWD personnel. A replacement test station will be installed as part of a proposed future development in the area. There are 33 areas in this first phase where the proposed storm drain crosses either a District waterline or water service line. These areas will be monitored by the District inspector and by the County to ensure adequate clearance between District facilities and the proposed storm drain.

Phase 2 will include the sidewalk improvements on the east side of El Embarcadero. In conjunction with this phase of the project, the District will need to relocate up to 3 fire hydrants and at least 2 water meters. These meters and approximately 10 valve cans will need to be raised to the proposed finished grade on El Embarcadero and surrounding streets in Isla Vista.

Since the County has not yet completed the detailed design for Phase 2, information regarding the exact number of District meters, fire hydrants, and valves that will be affected is not yet available and has been estimated based on preliminary information.

Project Budget

	COP Funding			Total Budget
	Phase 1	Phase 2	Capital Fund	
Relocate District Facilities	$47,000	$75,000		$122,000
Total Budget:	**$47,000**	**$75,000**		**$122,000**

Project Schedule

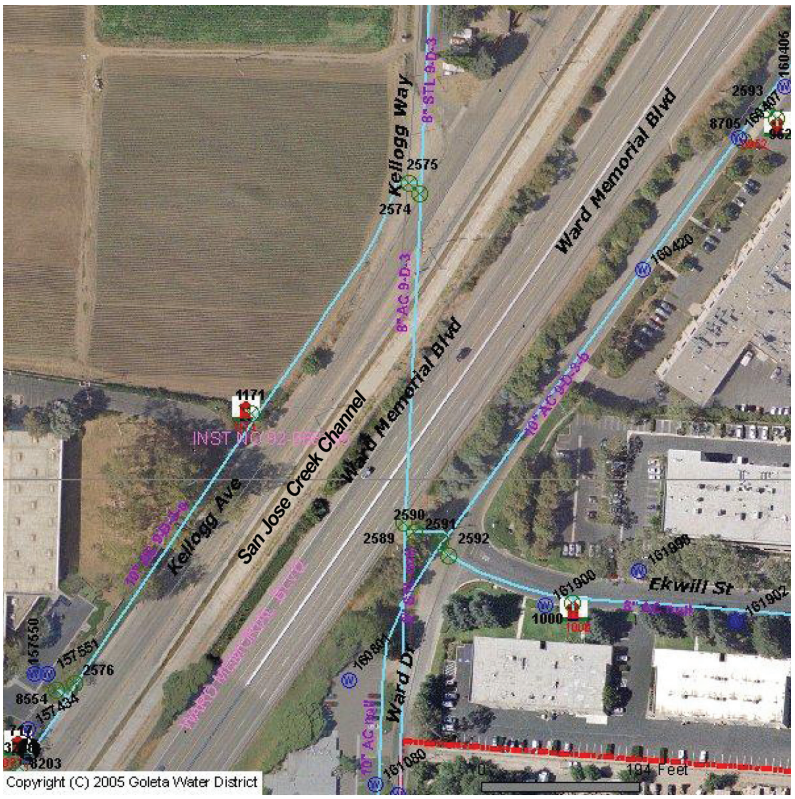
Phase 1: Engineering: Summer 2010, Construction: Fall 2010

Phase 2: Engineering: Winter 2011, Construction: Summer 2012

City of Goleta – San Jose Creek Waterline Relocation for Creek Widening

I.I.P. Group No: G1-8
GWD Project Number: N/A

Project Score: N/A (Regulatory)



Summary

The City of Goleta has initiated a project to widen the San Jose Creek Channel from Hollister Avenue south for approximately 4,000'. The City of Goleta has superior jurisdictional authority in this area of Goleta, therefore the District must accommodate the City by moving or protecting any water facilities impacted by this project. The City is "fast tracking" this project, with an expected start of construction in Spring, 2011. Failure to relocate this line will have an indirect impact on the Rancho Goleta Mobile Home Park, which has approximately 250 units, by eliminating a second supply waterline to the area.

Background

The City of Goleta has hired a contractor to widen the San Jose Creek Channel. The reason for this project is to increase hydraulic capacity of the channel for a 100 year storm event and to improve fish passage. This project includes replacing the existing concrete lined trapezoidal channel with a new channel on the same alignment, but with a slightly wider footprint. The existing sloping channel walls will be replaced with vertical concrete walls to increase the flood capacity of the channel. In addition to the channel improvements, portions of Kellogg Avenue will be realigned.

An analysis will be performed to determine which entity is responsible for the costs associated with the relocation of the facilities. The waterline was originally installed by the US Bureau of Reclamation (which still owns the waterline). In this location, which is a stream channel and not the public right of way, the determination needs to be made who is responsible for the costs associated with the relocation of the waterlines that are required. In the interim and until the determination is made, the costs associated with this known project are included in the five year Infrastructure Improvement Plan.

Need for Project

The District has an 8" waterline that currently runs at an angle beneath a portion of the existing channel. Although the District is awaiting plan and profile information from the contractor, it appears this waterline will be affected and will need to be moved. The channel construction includes new, wider horizontal concrete walls, placing large pilings set 8' apart (to a depth of approximately 40'), and redeveloping the fish channel (approximately 3' deeper on the east side of the channel).

Project Description

Staff is preparing a set of plan and profile drawings for the construction of this replacement section of waterline. The decision is yet to be made whether the District or a contractor hired by the District will perform the waterline replacement.

Project Budget

	COP Funding	Capital Fund	Total Budget
Construction		$300,000	$300,000
Total Budget:		**$300,000**	**$300,000**

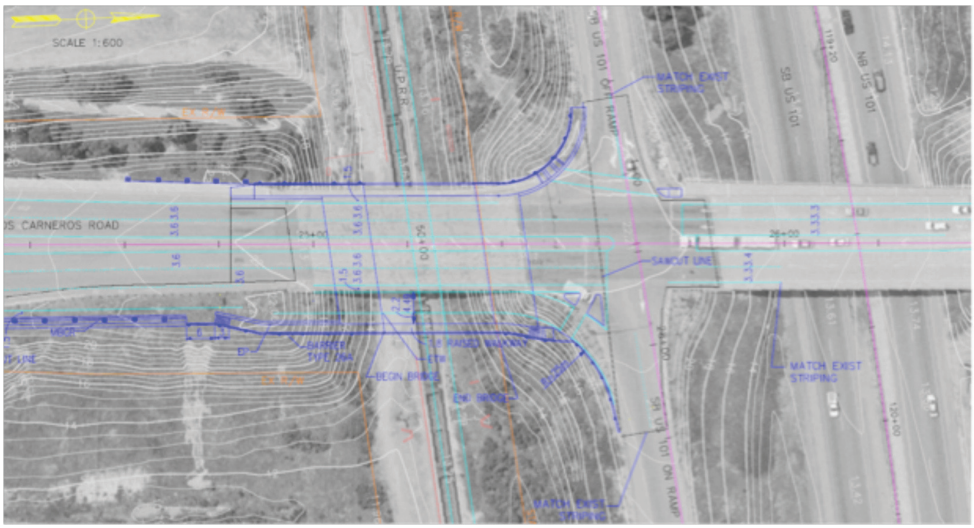
Project Schedule

Engineering: FY 2011-12
Construction: FY 2011-12

City of Goleta – Los Carneros Waterline Relocation for Bridge Replacement

I.I.P. Group No: G1-9
GWD Project Number: N/A

Project Score: N/A (Regulatory)



Summary

200' of 20" Steel Waterline will be relocated to allow for the Los Carneros Overhead Bridge Replacement. The City of Goleta is the lead agency and has regulatory jurisdiction. Due to the traffic impact from increased traffic, the City of Goleta will replace and widen the bridge. Construction will be phased so traffic can still use the road. The phasing will allow the waterline to remain in service during the relocation. This waterline directly impacts the water supply to a large area of customers including all of UCSB, Isla Vista area, and other major commercial customers in the area.

Background

Since the original construction of the bridge, traffic has increased. During the evening commute, the Highway 101 southbound on-ramp will be at capacity. To ease congestion, a dedicated right hand turning lane will be installed. A complication to the project comes from the fact that the bridge is on the Caltrans Highway Bridge Program (HBP) and listed as needing replacement. The aggregate used in the concrete mix is chemically reacting with the cement which will eventually cause the compressive strength to fall below the design strength. Therefore, the bridge will be totally replaced at the time it's widened. The bridge widening inititiated the need for roadway improvements, therefore the District is in discussions with the City of Goleta to recover the costs associated with the waterline relocation. In addition, as part of these discussions, the feasibility of adding a casing pipe for a future recycled water line at the time of the bridge construction will be discussed. The cost to include the casing pipe for the future recycled water line would add $200,000 to the project cost. The existing recycled water system is currently approximately 7,000 feet away from the bridge location.

Need for Project

The 20" Steel waterline must remain in service. It is one of the major waterlines that crosses Highway 101 and loops the distribution system to serve UCSB and many industrial complexes. The existing waterline will remain in service until the new waterline is in service. Caltrans has regulatory authority on bridge crossings and is not responsible for utility relocation costs.

Project Description

A portion of Los Carneros Road needs to remain open for traffic at all times during construction, so the bridge will be built in phases. The first phase will be to replace the south bound Los Carneros traffic lanes. While the bridge for the southbound lanes is being constructed, a 20" parallel waterline line will be constructed within the bridge structure. With the waterline complete, water can be distributed through either of the 20" waterlines. The appropriate tees and valves will be installed to control both waterlines. When the second phase is constructed for new northbound lanes, the existing waterline can be taken off line and distribution of water will permanently flow through the new 20" waterline. With the relocation complete, construction of the 2nd half of the bridge can start.

Project Budget

	COP Funding	Capital Fund	Total Budget
Construction		$1,000,000	$1,000,000
Total Budget:		**$1,000,000**	**$1,000,000**

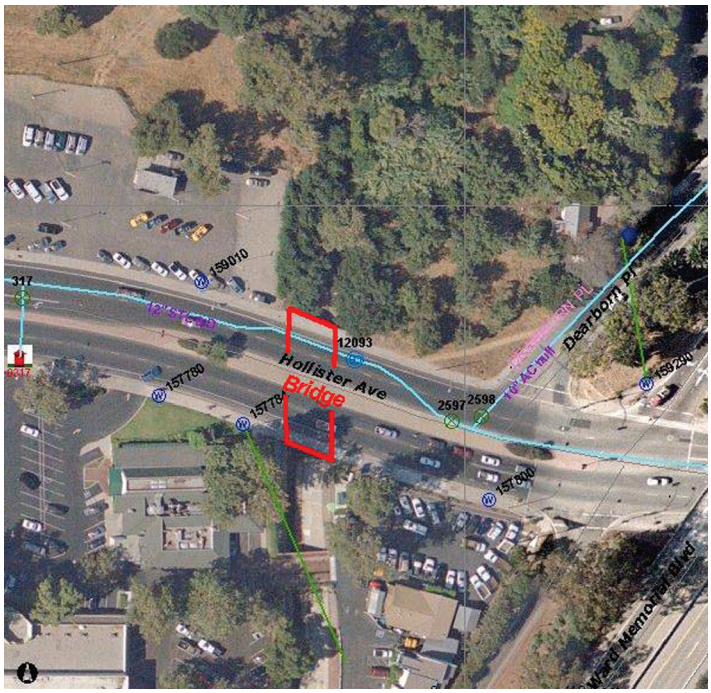
Project Schedule

Engineering: FY 2011-12
Construction: FY 2012-13

City of Goleta – San Jose Creek Waterline Relocation for Hollister Bridge Replacement

I.I.P. Group No: G1-10
GWD Project Number: N/A

Project Score: N/A (Regulatory)



Summary

The City of Goleta has a proposed project to replace the Hollister Avenue bridge shown in the above photo. This section of bridge on Hollister Avenue crosses the San Jose Creek channel, and is located just west of the 217 Freeway and Dearborn Place. The City of Goleta has superior jurisdictional authority in this area of Goleta. The District, at its cost, must accommodate the City by moving any water facilities impacted by this project. This project does not impact any customers directly. It has an indirect impact on approximately 25 commercial customer accounts including a hotel, restaurants and other businesses. There is an upcoming related project that involves widening the San Jose Creek Channel from the south side of this bridge for approximately 4,000' south, discussed in another project worksheet.

Background

The City of Goleta has hired a contractor to replace this bridge. The District has a 12" steel waterline running below the creek bed, under this bridge. As this project is in its very preliminary stages, the District has not been provided any information as to whether the creek bed will be lowered with this project, which would affect the waterline. The District will work with the City of Goleta to reduce costs and seek areas for cost sharing on this project. If the waterline must be relocated due to the construction of the bridge, it will be proposed that the cost of the relocation would be included in the cost of the project and included with the funding request for the bridge construction.

Need for Project

Due to the proposed City of Goleta project to replace this bridge within the next five years and their jurisdictional authority, the District must ensure that its existing waterline is protected in place, or moved if absolutely necessary. If the waterline must be moved, one alternative would be to deepen the waterline under the creek crossing. Another alternative would be to place the waterline inside the proposed bridge.

Project Description

Staff will prepare a set of plan and profile drawings for the construction of this replacement section of waterline. The City of Goleta has no prepared plans for the bridge replacement at this time, and has not provided the District with any information other than the fact that this bridge will be replaced within the next five years. Researching similar projects, the District assumes the installation of a slab type bridge.

The decision is yet to be made whether the District or a contractor hired by the District will perform any waterline replacement if required.

Project Budget

	COP Funding	Capital Fund	Total Budget
Construction		$300,000	$300,000
Total Budget:		**$300,000**	**$300,000**

Project Schedule

Engineering: FY 2013-14

Construction: FY 2013-14

Recycled Waterline Relocation Project at Goleta Beach

I.I.P. Group No: G1-11
GWD Project Number: N/A

Project Score: N/A (Regulatory)

Summary

This project is required because Santa Barbara County has been directed by the Coastal Commission to allow the beach sand at Goleta Beach to accumulate naturally. An overall accumulation of sand is anticipated along with local erosion in the area which will impact the District's existing recycled waterline. This will require the relocation of approximately 800' of 18" waterline which runs through Goleta Beach State Park in order to prevent possible damage resulting from ongoing beach erosion. This waterline conveys approximately 1,000 acre feet per year of recycled water to the 19 large recycled water customers including UCSB, various golf courses and other large landscaped areas. It will be relocated to a proposed Caltrans utility corridor adjacent to State Highway 217. Relocation is scheduled to begin in 2014 and will ensure continued service to the recycled water customers.

Background

Due to natural wave and tidal forces, erosion has been impacting Goleta Beach for a period of several years. The County of Santa Barbara Parks Department, the agency charged with managing Goleta Beach is allowing natural erosion of the beach to continue unabated, based upon direction from the Coastal Commission. As this continues, various improvements such as the Goleta Beach parking lot, facilities and underground utilities will eventually become vulnerable to damage and will need to be relocated.

Leaving the recycled waterline in its current location is not a viable option. The direction of local and state agencies is to allow natural forces to affect the limits of the beach. It is that decision that ultimately results in the District assessing what can be done to protect and maintain the existing recycled waterline. Consequently, the District is obligated to cooperate with the other agencies and utilities in relocating its recycled waterline.

In an effort to remain consistent with California Coastal Commission requirements, the County of Santa Barbara Parks Department and the California Department of Transportation (Caltrans) are recommending the relocation of existing utility lines. This involves relocation of a high pressure gas line, a pressurized sewer line and the District's 18" recycled waterline to a proposed 60 foot-wide utility corridor that would run adjacent to State Highway No. 217.

Need for Project

Given the County's current approach for managing Goleta Beach, erosion will affect certain areas of the parking lot, exposing the existing recycled waterline. Should the waterline become exposed, damage would take place, leading to the failure of the pipe. This would render the District unable to provide recycled water to its recycled water customers. Relocation of the recycled waterline would prevent such an occurrence from taking place. The waterline is a critical part of the District's recycled water system.

Failure to complete this project would result in damage to the waterline and disruption of recycled water service to District customers.

Project Description

The project consists of relocating approximately 800' of an 18" steel waterline which currently runs through Goleta Beach Park. A horizontal offset will provide for the relocation. Currently the new recycled waterline is to be located on the north side of the west end of the parking lot.

The new recycled waterline will be 18" polyvinyl chloride (PVC). It will tie into the existing recycled waterline at the easterly end of the park approximately 700' east of the sewer lift station. It will run northerly to the proposed utility corridor adjacent to State Hwy. No. 217, westerly along the utility corridor to tie into the existing 18" recycled waterline near the sewer lift station.

Project Budget

	COP Funding	Capital Fund	Total Budget
Recycled Waterline Relocation		$630,000	$630,000
Total Budget:		**$630,000**	**$630,000**

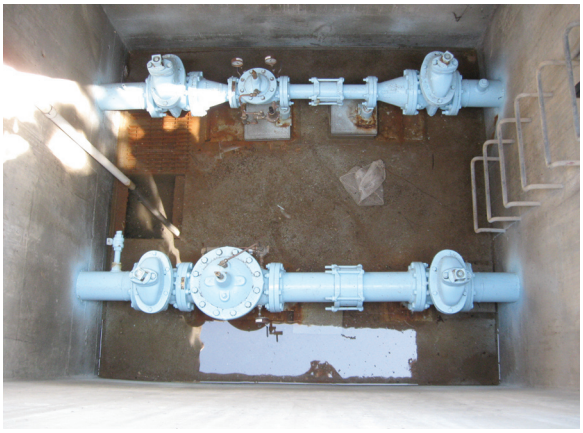
Project Schedule

Engineering: 2014; Construction: 2015

Lateral 14 - Waterline Replacement Project

I.I.P. Group No: G1-12
GWD Project Number: 05-3607 A

Project Score: N/A (Critical)



Summary

This critical project involves the replacement of approximately 270 linear feet of a temporary portion of Lateral 14 with a new underground 8" polyvinyl chloride (PVC) waterline. Lateral 14 is a vital distribution line for the GWD water system. In 2009 an aboveground PVC waterline, was installed on an emergency basis to temporarily bypass the failed portion of Lateral 14. The temporary bypass is exposed to a number of adverse environmental elements, and therefore vulnerable to failure which would result in property damage to approximately 10 homes. It also has an indirect impact on 50 residential customer accounts by elimination of a secondary waterline supply to the area. Completion of the project will provide a permanent solution that will ensure reliable long-term service.

Background

In April 2009, a portion of the existing Lateral 14 steel distribution waterline failed due to corrosion. It began leaking just east of the Lateral 14 vault (west of Via Chaparral Road). Not only did the failure result in substandard water service for a large number of customers, but the potential existed for the leaking water to adversely impact the residents in the immediate vicinity. Due to the size of the leak and the hillside location, prompt emergency repairs were required. A temporary emergency bypass waterline was constructed above ground to prevent further damage to the slopes and adjacent property. This emergency bypass is approximately 100 feet long and made of PVC.

Because of its exposure and vulnerability to failure, the emergency waterline is not adequate to serve in a permanent capacity.

Need for Project

The need for this project is critical due to the fact that PVC pipe is neither designed nor suitable for long term aboveground exposure. The temporary aboveground PVC bypass waterline was installed as an emergency measure only. It was never intended to remain in service for a lengthy period of time, and never intended to take the place of a permanent solution.

Project Description

The Lateral 14 - Waterline Replacement Project provides for the permanent replacement of the temporary above ground waterline which continues to be exposed to corrosive elements. The project will include the underground installation of approximately 270 linear feet of PVC pipe as well as a complete fire hydrant assembly. The proposed waterline will connect to the existing Lateral 14 waterline in Via Chaparral to the east, run westerly under an existing

paved driveway and connect to the existing waterline near the pressure reducing valve (PRV). The trenching and excavation for the construction of the project will also allow for the thorough examination of the waterline near the PRV into which Lateral 14 connects. The District can then accurately assess the full scope of any damage existing near and around the vault due to the serious water leakage which has occurred, and include the installation of new piping within the PRV if deemed necessary. In addition, running the waterline under the existing driveway will provide considerable protection from future damage.

The project's engineering and construction activities are performed by GWD employees.

Project Budget

	COP Funding	Capital Fund	Total Budget
PVC Waterline with Ductile Iron Fittings	$99,000		$99,000
Total Budget:	**$99,000**		**$99,000**

Project Schedule

Engineering: Complete
Construction: FY 2011-12

Valve Replacement Program

I.I.P. Group No: G1-13
GWD Project Number: 10-4009

Project Score: N/A (Critical)

Summary

This critical project involves the ongoing replacement of failed isolation valves throughout the District's distribution system. The valves are "exercised" (operated) by a two-man crew on a periodic basis, and replaced as needed. The District attempts to minimize the number of customers impacted by shut downs. Replacing these failed isolation valves when identified will ensure the system is maintained or repaired with the least impact to customers. Inoperable waterline valves can impact up to thousands of customer accounts depending upon the specific area that needs to be shut down for a repair or upgrade to the distribution system, and the number of other waterline valves in the area that can be utilized. On average, thirty shutdowns are conducted each year for a variety of reasons. These shutdowns rely on the isolation valves to minimize the number of customers impacted. Inoperable isolation valves can greatly increase the number of customers impacted by a shutdown.

Background

There are appoximately 5,052 gate and butterfly valves used in the operation of the District's distribution system.

The valve program consists of two distribution system operators exercising the system's valves using a hydraulic operating unit mounted on the back of a utility truck. Over the last five years (FY 2006-2010), this two man crew operated 3,743 valves, or 750 of the 5,052 valves annually. At this rate, operators will exercise every valve in the system approximately every 6.5 years.

Need for Project

The replacement of these failed valves is "critical" because distribution operators rely on them for operation and maintenance of our facilities and effective response to water related emergencies.

Having reliable isolation valves allows operators to minimize property damage, reduce the amount of customers impacted and protect water resources. In addition to emergency applications, operators also depend on in-line isolation valves while conducting planned shutdowns for construction projects and capital improvements. They are also needed to manipulate flow directions during flushing operations in order to improve water quality.

Project Description

Based on a 5-year trend, an average of 12 valves need to be replaced annually. There are currently 14 valves in the system that are in need of immediate replacement.

During the maintenance operation, operators identify problems that make valves inoperable. Faulty valves are replaced for the following reasons: frozen/stuck, broken stems, sheared operating nuts, poor closing ability, excessive leak-by, hard to operate, cracked bonnets and leaking packing.

Project Budget

	COP Funding	Capital Fund	Total Budget
Year 1 Valve Replacement		$0	$0
Year 2 Valve Replacement including backlog		$297,000	$297,000
Year 3 Valve Replacement		$155,000	$155,000
Year 4 Valve Replacement		$155,000	$155,000
Year 5 Valve Replacement		$155,000	$155,000
Total Budget:		**$762,000**	**$762,000**

Project Schedule

Annual recurring project

Polybutylene Service Line Emergency Replacement Program

I.I.P. Group No: G1-14
GWD Project Number: 10-4010

Project Score: N/A (Critical)

Summary

This critical project involves the emergency replacement of failed polybutylene (PBT) service lines with copper lines throughout the District's system. Approximately 7 emergency PBT failures occur annually on service lines that were installed years ago and are now very susceptible to failures. These must be replaced to prevent service disruption and property damage to the customer that relies on this service line for their water supply.

Background

PBT service lines were installed throughout the District system in the early 1970's. At that time, PBT was considered a "state of the art" material because it was more economical and easier to produce than copper service lines. Over a relatively short amount of time, however, PBT service lines proved unreliable. The use of PBT for service lines was discontinued at the District, and throughout the industry.

As the material ages, the PBT service lines become hard and brittle, thus allowing hairline fractures that evolve into large fractures or even complete separations. This can cause major water loss and property damage. There are more service line leaks during seasonal temperature fluctuations, as temperatures vary from hot to cold, or cold to hot.

Many PBT lines failed over the years and the District has replaced them with copper lines. However, there are an estimated several hundred PBT service lines still in use throughout the District's system.

Need for Project

This project is critical due to the risk of property damage, lost water resources, and potential safety issues to the public and the District's employees.

In 2009, PBT service leaks accounted for 7 of the 40 service leaks repaired by service crews. Through August 2010 alone, 5 PBT service leaks occurred. The District estimated that on average, 7 PBT service line leaks per calendar year will fail and need emergency replacement based on trends in the past two years.

When a PBT service line develops a leak, there is generally more damage to private property, utility easements, and roadways when compared to other types of service lines, due to the tendency of PBT lines to completely fail. PBT failures are generally more urgent and more costly to restore compared to a copper service line leak.

Project Description

Leaking PBT service lines are replaced by excavating down to the water connection and closing the valve to stop the leakage. Upon the excavation being completed, a new copper service line is pulled from the distribution line to the meter box, eliminating the PBT service line.

The average emergency PBT service line replacement, regardless of size, costs approximately $11,000.

Project Budget

	COP Funding	Capital Fund	Total Budget
FY 2012-13 Polybutylene Service Line Replacement		$78,000	$78,000
FY 2013-14 Polybutylene Service Line Replacement		$78,000	$78,000
FY 2014-15 Polybutylene Service Line Replacement		$78,000	$78,000
Total Budget:			**$234,000**

Project Schedule

Annual Recurring Project

Copper Service Line Replacement Program

I.I.P. Group No: G1-15
GWD Project Number: N/A

Project Score: N/A (Critical)

Summary

This is a critical project, which involves the anticipated replacement of copper service lines throughout the District's system. An average of 33 replacements are necessary on an annual basis due to leaks. The failed copper lines must be replaced to prevent service disruption and potential property damage to the customers that rely on these service lines for their water supply.

Background

In calendar year 2009, 33 of the District's 40 service line leaks were on copper services. A service replacement can be anywhere from 10 feet to 60 feet, with an average of about 25 feet.

Although replacement of failed service lines is critical, the 40 failures in calendar year 2009, (33 copper services and 7 polybutylene services) is a very low failure rate (0.2%) of the 16,600 customer accounts in the distribution system. This indicates that service lines are generally in good condition throughout the District.

Need for Project

This project has been defined as "critical" due to service disruptions and potential property damage caused by the failure of copper service lines. The District replaces approximately 33 copper service lines a year based on the two year average of 2009 and 2010. When these copper service lines fail, they often affect not only the customer served by that particular service line, but also the surrounding community, including residential and commercial customers within the immediate area, due to a shutdown or traffic control.

Failure to proceed with this project would cause potential property damage, loss of water resources and customer service outages.

Project Description

The best and most cost effective way to replace a copper service line is to pull a new service line from the main to the meter box, instead of singular low cost repairs. The current District standard is to take a proactive approach by replacing the failed copper service line with a complete new installation of copper from the corporation stop valve at the main to the angle stop valve at the meter. This is done by pulling the new copper service line directly through

the existing failed line, which is the preferred method of replacing service lines. Taking this approach greatly reduces the impacts to our customers within the community. Replacing a failed service line completely with a new line reduces the chances of returning to this same service line for repairs in the foreseeable future. Repairs completed this way are the most cost-effective.

The average cost for a single copper service line replacement, considering all sizes, is estimated at $9,700.

Project Budget

	COP Funding	Capital Fund	Total Budget
FY 2012-13 Copper Service Line Replacement		$319,000	$319,000
FY 2013-14 Copper Service Line Replacement		$319,000	$319,000
FY 2014-15 Copper Service Line Replacement		$319,000	$319,000
Total Budget:			**$957,000**

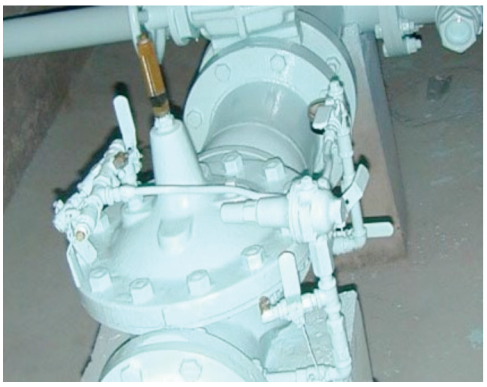
Project Schedule

Annual recurring project

Pressure Reducing Valve & Combination Air Valve Repair / Replacement Program

I.I.P. Group No: G1-16
GWD Project Number: 10-4013

Project Score: N/A (Critical)



Summary

This critical project involves the ongoing replacement of failed block valves and damaged control valves. These valves are critical to the proper operation of the District's entire water distribution system. Proper maintenance, repair, and replacement of these valves ensure the safe and dependable operation of the system. Failure of these control valves which regulate the pressures into the various pressure zones in the distribution system can impact up to thousands of customer accounts depending upon which valve in the system fails.

Background

The District has an ongoing maintenance program to inspect, maintain, and overhaul pressure reducing valves and combination air valves. Broken or faulty valves are replaced when identified.

Broken and Faulty Valves

Valve Type	Quantity
Pressure Reducing Valves (PRV)	62
Altitude Valves (AV) (filling reservoirs)	10
Relief Valves (RV) (protects against over pressurization)	26
Combination Air Valve (CAV) (lets air in and out of water mains)	348
Total	**446**

Need for Project

The replacement of failed block valves and damaged control valves, and the purchase of parts needed for annual valve maintenance by District crews are critical operations in preventing damage to pipelines and diminished service levels. Replacements are necessary for keeping the water distribution system functioning properly.

Pressure reducing valves are critical components for the operation of our distribution system because they regulate the supply of water to over 22 "pressure zones" in the District at all times. These valves automatically reduce pressure into various zones at specific set points before water approaches businesses and homes. If a pressure reducing valve fails, high pressure could cause serious damage to homes or businesses, and pressure surges can cause water main breaks in distribution and transmission pipelines.

Pressure relief valves are similar to pressure reducing valves except relief valves are set to open when the pressure

in a waterline becomes too great. In addition to protecting against the over-pressurization of pipelines, altitude valves are used in filling reservoirs and storage tanks.

The role of combination air valves (CAV) in the distribution system is equally important. When filling a pipeline, the CAV will expel air that gathers at high points in the pipe. It will also open to take in air in the event a pipe is drained or a negative pressure occurs. If a CAV fails, it could cause serious damage resulting in a pipe collapse or blowout.

Project Description

Maintenance of Pressure Reducing / Pressure Relief valves consists of two Distribution System Operators overhauling the pilot controls annually, and a complete rebuild/overhaul of the valve bodies every other year. Maintenance of Combination Air Valves consists of general inspection, exercising the valve to verify proper operation and housekeeping to surrounding valve can area. Failed block valves and damaged control valves are replaced when identified.

Maintenance of control valves involves the replacement of various parts to extend the life of units as long as possible, but general wear will eventually require the replacement of valves.

The first year budget of $40,000 for this project includes:

- **Replacement of 4 damaged control valves:**

  (1) 3" Pressure Regulating Valves
  (1) 6" Pressure Regulating Valves
  (2) 3" Relief Valves

- **Replacement of 14 failed block valves so sections of waterline can be isolated for repair.**

After the backlog of work is completed, the District will establish a program to replace approximately (4) valves a year at an annual cost of $11,000.

Project Budget

	COP Funding	Capital Fund	Total Budget
Year 1 PRV, RV, CAV & AV Replacement		$0	$0
Year 2 PRV, RV, CAV & AV Replacement with Backlog	40,000	0	$40,000
Year 3 PRV, RV, CAV & AV Replacement	11,000	0	$11,000
Year 4 PRV, RV, CAV & AV Replacement	0	$11,000	$11,000
Year 5 PRV, RV, CAV & AV Replacement	0	$11,000	$11,000
Total Budget:	**$51,000**	**$22,000**	**$73,000**

Project Schedule

Annual recurring project

In addition to projects that met regulatory or critical needs, other projects were evaluated and categorized. Projects that received the highest scores were considered important and prioritized accordingly.

Water Supply/Production Reliability Projects

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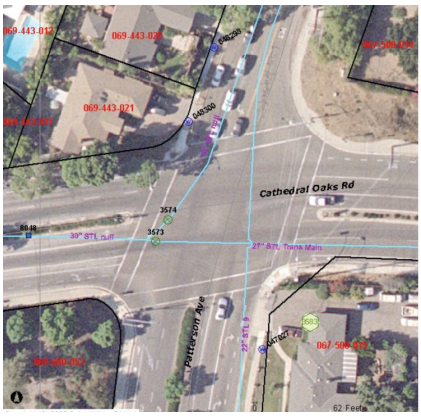
Transmission Main Valve Installation at Patterson

I.I.P. Group No: G2-1
GWD Project Number: N/A

Project Score: 96



Summary

This project involves installing a 30" butterfly valve on the existing 30" Cathedral Oaks transmission main. The valve will be located at the west side of the existing tee at Cathedral Oaks Road and Patterson Avenue. This project is needed because there is currently no way to shut down the transmission main west of Patterson Avenue, in the event of a pipe failure or planned shutdown. The proposed valve will enable District staff to shut down the 30" line if needed, thereby eliminating a possible service disruption to approximately 8,000 customer accounts.

The project scored a 96 in the priority ranking system because of the potential for a service disruption.

Background

At the intersection of Cathedral Oaks Road and Patterson Avenue, there is an existing tee in a vault. From the tee, a 16" steel transmission main heads north up Patterson Avenue, a 27" steel transmission main heads east on Cathedral Oaks Road, and a 30" steel transmission main heads west on Cathedral Oaks Road. Each of these transmission mains already has a shut-off valve, except for the 30" line. This project will install a 30" butterfly valve specifically for the section of 30" transmission main that heads west on Cathedral Oaks Road. This valve will be installed in the ground, outside the limits of the vault.

Need for Project

This project is required to provide District personnel the capability to shut down the 30" transmission main on Cathedral Oaks Road west of Patterson Avenue, without disrupting water service to a large number of District customers. Currently, if the District needs a shutdown to isolate the transmission main west of Patterson Avenue, the 27" and 16" in-line butterfly valves in Cathedral Oaks Road are used.

Adding the 30" valve is part of an overall project to add 4 valves along the transmission main. A new 30" valve installed on the west side of the vault allows for a reduced number of customers to be affected by a shutdown.

Project Description

The project consists of the installation of a new underground 30" butterfly valve on the west side of the existing tee at Cathedral Oaks Road and Patterson Avenue, outside of the existing underground vault.

Construction costs will be kept to a minimum through the use of District personnel for the installation.

Project Budget

	COP Funding	Capital Fund	Total Budget
Install 30" butterfly valve		$108,000	$108,000
Total Budget:		**$108,000**	**$108,000**

Project Schedule

Engineering: 2013, Construction: 2014

Recycled Water GSD Booster Station Pump Rebuild Project

I.I.P. Group No: G2-2
GWD Project Number: N/A

Project Score: 88

Summary

This project involves rebuilding Pump #5 at the Recycled Water Booster Pump Station (BPS) located at the Goleta Sanitary District (GSD). This project is required because all 4 large booster pumps must be in good working order to meet peak recycled water demands. To ensure continued ability to meet the 19 large recycled water customer requirements, the Recycled Water BPS needs to meet peak demand.

The project scored 88 points in the project priority ranking system because of the potential for service disruption to District recycled water customers in the event of pump failure.

Background

Four of the five booster pumps at the station have been rebuilt in recent years. Booster pump #5 is the last of the 5 pumps (1 smaller jockey pump used only during low demand periods and 4 booster pumps) to be rebuilt. This pump has not been overhauled since its installation in the mid 1990's. Due to wear, corrosion and reliability issues, this pump needs to be rebuilt. The estimated cost for rebuilding pump #5 is based on the actual costs for previously rebuilding pumps.

Need for Project

This project is required to make sure all 4 large booster pumps at the pump station are in good working order to meet high recycled water demands in the summer months.

Failure to implement this project would put the Booster Station at risk of failing to meet peak system recycled water demands.

Project Description

The pump is a 125 HP / 1100 gallon per minute (GPM) Fairbanks Morse pump, located at the Goleta Sanitary District. The rebuild of Pump #5 will include repair of the bowl assembly, the column assembly, and rebuilding and machining of the pump discharge head.

Project Budget

	COP Funding	Capital Fund	Total Budget
Construction		$35,000	$35,000
Total Budget:		**$35,000**	**$35,000**

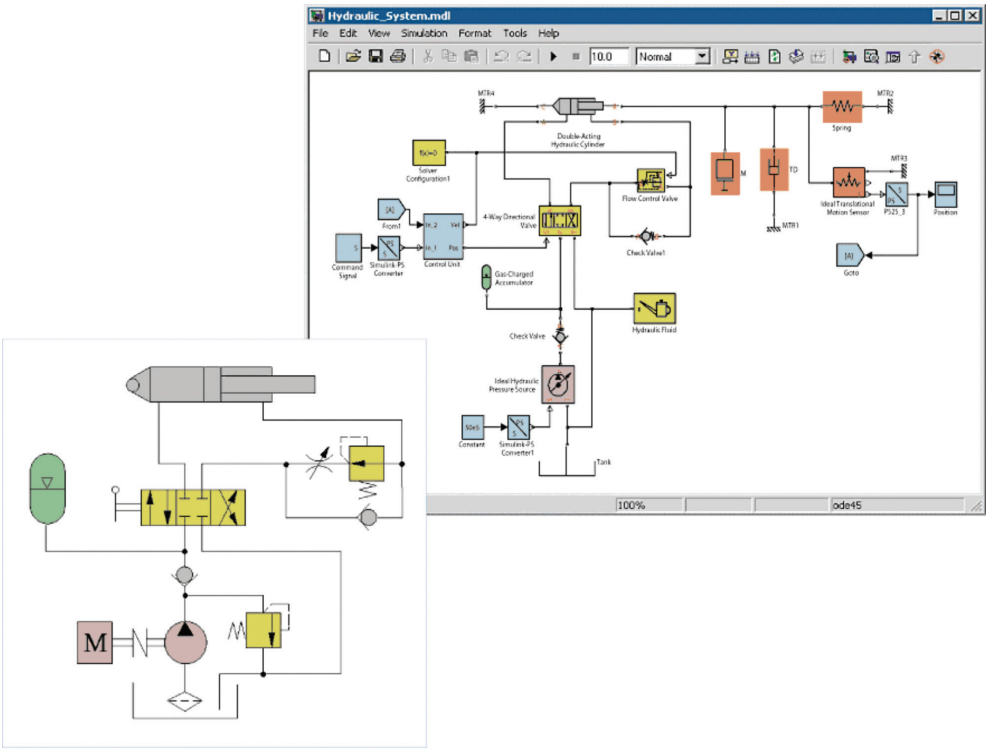
Project Schedule

Rebuild will occur in FY 2011-12

Distribution System Hydraulic Model Update

I.I.P. Group No: G2-3
GWD Project Number: N/A

Project Score: 80



Summary

This project is an update to the District's Distribution System Hydraulic Model (DSHM), an important computer based model that provides the District data and statistical information for managing the operation of water storage and distribution systems. The model has not been updated since 2002.

The DSHM is an important efficiency tool used to evaluate the District's current distribution system and identify and recommend corrections in any areas of deficiency such as pressure, flow demand and capacity levels throughout the distribution system, which has an impact on all 16,000 water customers. In addition, the model assists in the District's need to estimate the future impact of development on its distribution system. The information gained by running the model will aid the District in developing a program of operation management for both its current distribution system, as well as future facilities. Without an updated model, it would be extremely difficult for the District to accomplish these goals.

The project scored 80 points in the project priority scoring system because of its important role in ensuring that future District operations are well planned and efficient.

Background

The DSHM is designed to provide data and values on several levels regarding water storage and distribution systems. The Model can provide analyses in areas, including but not limited to, master planning, fire flow assessment, facility sizing infrastructure rehabilitation, emergency response, water quality evaluation, pump scheduling, leakage control, conservation studies, and system expansion and improvement. With such data, the District can effectively evaluate its current distribution system as well as plan for future development and water usage changes.

Need for Project

Network modeling techniques are essential for any water agency to ensure that sound, cost-effective engineering solutions can be accomplished in the design, planning and operation of water supply and distribution systems. In addition, models are critical to the operation and management of existing facilities.

Since the District developed its current Model, it has expanded and improved its distribution system by means of waterline relocation and upsizing, various facility improvements and newly installed water services and meters. In order to accurately evaluate the current capacity of the District's system, the DSHM needs to be updated. Based on the analysis from the model, the District would be able to make improvements starting with areas with the most need. In addition, the District could accurately assess the potential impact of large developments on both the immediate area and the extended adjacent areas. The Model also enables the District to address critical matters, such as water conservation and more cost-effective methods of providing adequate water service for its customers.

Failure to implement the model update would result in much less efficient distribution system operations and inhibit the ability of the District to accurately assess system deficiencies and plan for future needs.

Project Description

The DSHM is a computer software program designed by a specialized consultant. For this update, the District will first develop a Request for Proposal (RFP) in order to determine which consultants qualify to provide the required software update services. A Consultant Selection Committee will then be formed to evaluate each proposal based on the technical information and qualifications presented. A qualified consultant will then be recommended by the Selection Committee for selection.

Project Budget

	COP Funding	Capital Fund	Total Budget
Consultant - Dist. System Hydraulic Model Update		$50,000	$50,000
Total Budget:		**$50,000**	**$50,000**

Project Schedule

Engineering: FY 2014-15

San Ricardo Well Rehab Project (Prop 50)

I.I.P. Group No: G2-4
GWD Project Number: 08-3857

Project Score: 80

Summary

The San Ricardo Well will be rehabilitated and upgraded to extract, treat and disinfect groundwater from the groundwater basin. This project is required to improve and enhance the District's water supply reliability during periods of drought, peak demand, and emergencies which impacts all of the 16,600 customer accounts of the potable water system.

Part of the funding for this project will come from a Prop 50 grant, which would be lost if the project is not completed by January 2012. The score of 80 in the project priority ranking system reflects the project benefits for a large number of customers, as well as the importance of utilizing the Prop 50 grant funding.

Background

The San Ricardo Well has been out of service since 1992. The well is not operational and the pump and treatment systems are non-functional. The District has rehabilitated and put into service six other water production wells in the last few years. This well rehab project is important in order to provide an additional source of potable water in times of drought, peak demand or emergencies.

A Prop 50 grant in the amount of $400,000 will help fund the next phase of the project.

Need for Project

The rehabilitation of San Ricardo Well is needed to increase the District's ability to extract groundwater from the groundwater basin and improve the District's ability to meet water supply requirements during periods of drought, peak demand, and emergencies.

This project is partially funded through a Prop 50 Grant in the amount of $400,000. If the District does not proceed with the project and complete construction by January 2012, the grant funding will be lost.

Project Description

The deteriorated and non-operational San Ricardo Well will be upgraded to extract groundwater using a proposed deep well turbine pump. It will provide 500 GPM (2.2 acre ft./day or 800 acre ft./year) of treated water. The water will pass through proposed above ground piping through a treatment system to remove naturally occurring iron, manganese and hydrogen sulfide. The water will be disinfected with liquid sodium hypochlorite. The well will be equipped with injection tubing to facilitate groundwater injection. The injection system will be designed with a capacity of up to 250 GPM (50% of well's capacity) which is the standard design capacity for injection purposes.

Needed site, architectural, structural, electrical and instrumentation upgrades will be constructed to support the proposed pump, treatment and injection systems.

The initial phase of this project was completed in late 2009 and included analysis of the well casing and screens, and chemical and mechanical cleaning of the well casing and screens.

A consultant contract is already in place to allow for completion of the necessary engineering work needed to complete the project.

Project Budget

	COP Funding	Capital Fund	Prop 50 Funding	Total Budget
San Ricardo Well Rehab		$1,247,000	$400,000	$1,647,000
Total Budget:		**$1,247,000**	**$400,000**	**$1,647,000**

Potential co-funding sources include State Water Resources Control Board, Proposition 50 funds, and possible Southern California Edison Agricultural Energy Efficiency Program.

Project Schedule

Engineering: FY 2011-12
Construction: FY 2012-13

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Infrastructure Replacement/New/Maintenance Projects

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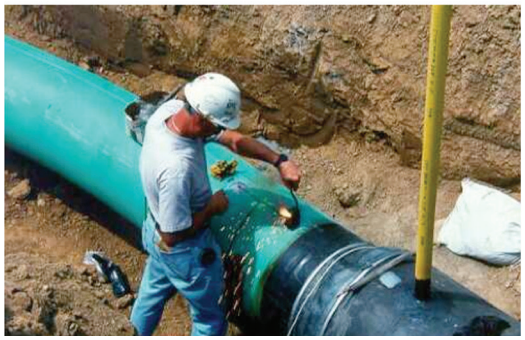
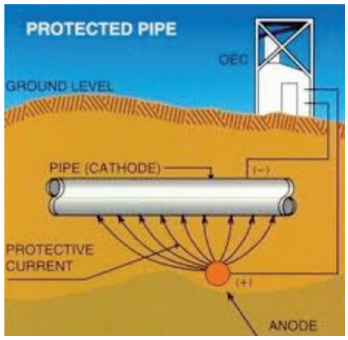
Corrosion Protection Project

I.I.P. Group No: G3-1
GWD Project Number: N/A

Project Score: 96





Summary

This project consists of the construction of upgrades to the District's Cathodic Protection (CP) system, and the monitoring of results. CP is an essential component of the District's steel waterline maintenance program, and can prevent significant damage annually by identifying problems early. Electrochemical corrosion occurs naturally when steel pipe is buried in the ground. It affects the entire length of pipe, resulting in the deterioration of the waterline. CP reverses the electrochemical reaction and preserves the integrity of the pipe. The project will provide for the following:

- Construction of deep well anodes, rectifiers and CP test stations.
- District's CP data within the GIS will be updated.

The score of 96 in the project priority scoring system reflects the cost effectiveness of regular preventative maintenance. The CP system prevents costly corrosion damage to the District's steel pipe distribution infrastructure which comprises approximately 50% of the District's distribution system or 125 miles of steel pipe impacting the service levels to approximately 8,000 customer accounts.

Background

Cathodic protection is the most viable alternative for the prevention of steel pipe corrosion. CP is a technique used to control the corrosion of metal piping by making it the cathode of an electrochemical cell. The simplest method to apply CP is by connecting the metal pipe to be protected with another more easily corroded metal to act as the anode of the electrochemical cell. CP can prevent stress corrosion cracking.

As additional CP components such as deep well anodes, rectifiers, and test stations are added to the present District CP systems, further monitoring and testing will be performed. Based upon the results of those tests, the District can determine what improvements to the CP system need to be made, while also identifying steel waterlines that are in need of replacement or repair.

Need for Project

The District currently maintains and operates a steel waterline distribution system that is approximately 125 miles in length. CP is necessary and essential in preventing the corrosion and consequent failure of steel pipe. If the CP system is not properly monitored, maintained and upgraded, the cost of repairing and replacing the District's steel piping system will increase. This project is essential to maintaining an effective distribution system that provides regular and consistent water service to the District's customers.

Failure to implement this project would put the District's steel distribution waterline infrastructure at risk of costly corrosion damage.

Project Description

The project will provide for further annual field testing to confirm continuity of the steel waterline system, provide for construction of additional deep well anodes, rectifiers and CP test stations, as well as maintenance of the cathodic protection system. In addition the District's CP data within our GIS will be updated.

Project Budget

	COP Funding	Capital Fund	Total Budget
Cathodic Protection Systems Upgrade FY 2010-11		$0	$0
Cathodic Protection Systems Upgrade FY 2011-12		$152,000	$152,000
Cathodic Protection Systems Upgrade FY 2012-13		$125,000	$125,000
Cathodic Protection Systems Upgrade FY 2013-14		$125,000	$125,000
Cathodic Protection Systems Upgrade FY 2014-15		$125,000	$125,000
Total Budget:		**$527,000**	**$527,000**

Project Schedule

Evaluation and Construction: FY 2011-12 through FY 2014-15

Fleet Replacement Program

I.I.P. Group No: G3-2
GWD Project Number: N/A

Project Score: 90

Summary

This project provides for the periodic replacement of District fleet vehicles over an approximate 10-year period, including large service trucks, dump trucks, small service trucks and pool vehicles. As a part of daily field operations to provide efficient water service to District customers, the vehicles are subjected to daily use and must be replaced regularly to keep the fleet serviceable and dependable.

The score of 90 in the project priority ranking system reflects the integral role the District's fleet vehicles play in providing consistent reliable service to the District's 16,600 customer accounts. Replacement of these vehicles does not impact any of the customers directly. However, failure to replace these vehicles does have an adverse impact over time to the service levels provided to all customers.

Background

When vehicles reach 100,000 miles or 10 years of use, they are evaluated on a case-by-case basis to determine whether repair and maintenance work is more costly than replacing the vehicle. Vehicles are used in extreme conditions, including regular stop and go driving and the hauling of substantial weight. These vehicles play a vital role in everyday operations for both distribution and treatment purposes. They are essential to performing a large variety of work from valve operating, meter reading, service line and main repairs/installations, water quality sampling, well operation, pump station and reservoir maintenance.

The City of Santa Barbara has a program that retires work vehicles at 11 years old. Reasons behind this rule include the positive environmental benefits of getting an older model vehicle off the road and replacing it with a more fuel efficient vehicle, and the fact that parts for older vehicles are harder to find.

The County of Santa Barbara evaluates vehicles for replacement at 6 years old or 120,000 miles as part of their fleet replacement program. The County's justification for the higher mileage is that many of the miles driven are freeway miles to the northern part of the County. For example, a round trip from the southern to northern part of the County is approximately 150 miles.

Most of the District's fleet vehicles are in operation on the public streets every day. They play a vital role in the safe, reliable and effective response to the water related issues of District customers, as well as routine maintenance operations and repairs.

Need for Project

Several of the District trucks are approaching 100,000 miles of use. Once 100,000 miles is reached and any major maintenance is required, an evaluation of replacement or continued maintenance is made. The evaluation will review the maintenance history, the overall condition, reliability history, and any other maintenance items that may have been deferred on the vehicle. In addition, a projection of the maintenance costs that will be incurred in the future is also made (i.e. tires, battery life expected, etc). This information is compared to the cost of a replacement vehicle, less the salvage value of the vehicle to determine if it is cost effective to replace that particular vehicle.

Failure to implement this project would increase the cost to the District to provide the existing level of service to its customers by requiring that vehicles continue to be maintained, regardless of the cost effectiveness of the replacement evaluation.

Project Description

Replacing vehicles at approximately100,000 miles or 10 years is appropriate, when cost justified for maintaining adequate fleet service. The alternative to replacing the service vehicles is to continue to repair and maintain the vehicle, which can be costlier than replacement. Not only does repair and maintenance become more expensive, down-time for repairs increases which has a negative effect on productivity.

Vehicles that are to be replaced are offered for sale by means of a professional auctioneer contracted by the District.

Project Budget

	COP Funding	Capital Fund	Total Budget
Replacement of Fleet Vehicles FY 2012-13		$80,500	$80,500
Replacement of Fleet Vehicles FY 2013-14		$80,500	$80,500
Replacement of Fleet Vehicles FY 2014-15		$80,500	$80,500
Total Budget:		**$241,500**	**$241,500**

Project Schedule

Annual recurring project beginning FY 2012-13

Construction Equipment Replacement Program

I.I.P. Group No: G3-3
GWD Project Number: N/A

Project Score: 90

Summary

The project provides for the replacement of District operating equipment such as trailers, backhoes, traffic control equipment, vacuums, generators, pumps and other equipment needed for operations and maintenance purposes. This project is required to maintain District field operations essential to providing efficient water service to District customers. Operations equipment is subject to daily use and over time wears out, which can compromise both usefulness and safety. Consequently, this equipment needs periodic replacement when cost justified.

The score of 90 in the project priority ranking system reflects the integral role the District's operating equipment plays in providing consistent reliable service to the District's 16,600 customer accounts. Replacement of this equipment does not impact any of the customers directly; however, failure to replace the equipment does have an adverse impact over time on the service levels provided to all customers.

Background

This equipment is essential to completing a variety of District work including valve operation, meter box clean outs, service line and main repairs and installations, well operation, pump station and reservoir maintenance, and many other jobs relative to the proper operation of the water system.

Need for Project

The majority of this equipment is used in operations performed in the public streets. Therefore, it is important to have equipment in proper running order to complete jobs in a safe and effective manner. This equipment plays a vital role in the everyday operations and maintenance of the distribution system and treatment plant.

Once a piece of equipment reaches 10 years of age and any major maintenance is required, an evaluation of replacement or continued maintenance is made. The evaluation will review the maintenance history, the overall condition, reliability history, and any other maintenance items that may have been deferred on the piece of equipment. In addition, a projection of the maintenance costs that will be incurred in the future is also made (i.e. transmission suspect, loose bearings, etc). This information is compared to the cost of replacing the equipment to determine if replacement is a cost-effective option.

Failure to implement this project would increase the cost to the District to provide the existing level of service to its customers by requiring equipment to continue to be maintained, regardless of the cost effectiveness of the replacement evaluation.

Project Description

Replacing equipment when it is 10 years old is appropriate, when it is cost justified. Use of older equipment for a period of time is also appropriate, provided the equipment is reliable, safe and the continued cost of maintenance is reasonable. Equipment can be repaired and maintained; however, down time and interruptions in work due to unreliable equipment has a negative effect on productivity and must be considered.

Project Budget

	COP Funding	Capital Fund	Total Budget
Replacement of Equipment FY 2012-13		$57,500	$57,500
Replacement of Equipment FY 2013-14		$57,500	$57,500
Replacement of Equipment FY 2014-15		$57,500	$57,500
Total Budget:		**$172,500**	**$172,500**

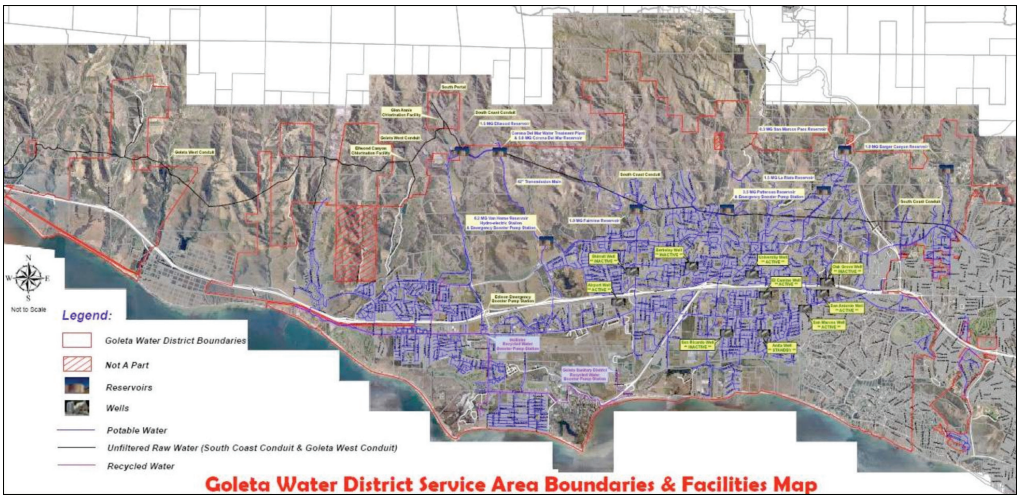
Project Schedule

Annual recurring project beginning FY 2012-13

Update and Upgrade the District's Computer Software and Network Systems

I.I.P. Group No: G3-4
GWD Project Number: N/A

Project Score: 87



Summary

This project addresses the need to update various District software and hardware systems on an annual basis. These updates are required to enable District staff to maintain and operate the District's water system as efficiently and cost effectively as possible. The update includes the following:

- The Geographic Information System (GIS) is an important set of tools that captures, integrates, stores, edits, analyzes, manages, presents, shares, and displays geographic information for the Operations, Engineering and Administration Departments to assist them in making informed decisions. GIS applications are tools that allow users to create interactive queries (user-created searches), analyze spatial information, edit data, maps, and present the results of all these operations.
- Computer Aided Design and Drafting (CADD) is an important efficiency tool utilized by the District's Engineering Department. Its purpose is to create accurate and detailed engineering drawings (plan & profile), details and maps for capital improvements projects.
- The Customer Information System (CIS) is an essential tool utilized by the Administration Department. Its purpose is to collect and store data, and then process it into information used to bill the approximately 16,000 customers on a monthly basis. The system is built as a module integrated into a suite of various applications. These applications are integrated together and are able to access the same data and execute complex business processes to bill all customers, track payments, etc.
- The valve exercise program (InfraMAP) is an important tool to ensure that our water system is in good working condition. It is an effective way to check the status of our entire distribution system while complying with various regulations and mandates.
- Enterprise servers provide essential services across our network. Servers allow sharing of resources and information among interconnected devices. In addition, the district has approximately 40 desktop and laptop computers that are in need of periodic replacement.

Periodic updates of the software and hardware systems are essential, in order to utilize the latest technology and technical support available to have employees operating as efficiently as possible in providing water service to the 16,600 District customer accounts.

The project scored 87 points in the project priority scoring system because of its important role in ensuring that future District operations are well planned, efficient and especially in the case of the billing system accurate.

Background

One important way to enhance the District's productivity and efficiency is to keep up with software and hardware updates, which offer the latest technology and technical support upgrades. A program of regularly installing the latest software and hardware updates will ultimately increase accuracy and efficiency in various District departments.

This project includes periodic purchase of software (client-server operating systems, third party software, etc.) and hardware (servers, laptops, tablet PC, GPS units, etc.). Depending upon the software or hardware purchased, consultant services may not be required. As an example, some software updates do not require consultant services and can be performed by District personnel. Therefore the project does not include the annual costs for software license maintenance, involvement of software developers / consultants, or the District's contracted IT consultant.

Need for Project

These updates are required to enable District staff to maintain and operate the District's water system efficiently and cost effectively. An up-to-date system is essential in enabling District staff to operate at a high rate of productivity and accuracy. In addition, the system will be more responsive, intuitive and user friendly. Maintenance of accurate facility records, billing, and customer information within various computer systems are also of vital importance to the efficient operations of the District's water system and customer satisfaction.

Failure to keep the District's computer systems up to date would jeopardize the District's ability to collect revenue, operate at industry standards, and would have a negative effect on customer service and satisfaction.

Project Description

This project would include updates to the various District software and hardware systems on an annual basis. Examples of this include the Engineering Department's GIS and CADD system, the Administration Department's CIS, the Operations Department's valve exercise program (InfraMAP), and the client-server operating platform (Microsoft Windows Server program, SQL server database program, physical memory storage, server capacity, and various PC's throughout the District).

Project Budget

	COP Funding	Capital Fund	Total Budget
Software & Hardware Updates FY 2011-12		$57,500	$57,500
Software & Hardware Updates FY 2012-13		$57,500	$57,500
Software & Hardware Updates FY 2013-14		$57,500	$57,500
Software & Hardware Updates FY 2014-15		$57,500	$57,500
Total Budget:		**$228,000**	**$228,000**

Project Schedule

Annual recurring project beginning FY 2011-12

Upsizing of Pipelines

I.I.P. Group No: G3-5
GWD Project Number: N/A

Project Score: 85

Summary

This project involves the upsizing of waterlines above the standard 8-inch diameter waterline size when a project is being installed by a third party. Larger waterlines provide greater water flow for both potable water use and fire protection. The District may upsize various waterlines during the fiscal year depending upon the number of projects being installed by a third party. The upsizing improves existing service levels to up to thousands of customers, depending upon the location of the new waterline being installed. The larger waterline is not required to serve the new area that the waterline is being extended for, but provides improved service levels to existing areas of the distribution system.

The score of 85 points reflects the addition of 10 discretionary points due to the critical timing of the project. The opportunity to upsize the pipe is only available at the time that the developer is installing the base size pipe, which takes advantage of the costs that are being absorbed by the developer.

The estimated annual cost of the project is $86,000. This estimate is based upon records of past waterline upsizing projects.

Background

As a condition of approval for a proposed development, the project proponent may be required by the District to install waterlines along the frontage of the project and, if needed, beyond project limits in order to connect to the existing waterline. In order to accommodate water service demands and improve fire protection, the District may also require the project proponent to install pipes larger than the standard minimum 8-inch diameter size currently required by District specifications. The District pays for the material cost difference between the standard pipeline size and the required upsized pipeline size.

Proposed developments are required to provide complete and adequate water and fire service for their projects in compliance with District Standards and Specifications. Consequently, a project proponent may be required to connect to an existing waterline and extend the waterline across the frontage of the development. The District may require the project proponent to install an upsized waterline so that the District can provide increased water flow and pressure to not only proposed developments, but also to existing developments in the adjacent area.

Need for Project

While proposed developments may be adequately served by standard sized waterlines, requiring the upsizing of proposed pipelines allows the District to accomplish several goals such as:

- Provide more efficient water service for customers with increased fire protection and pressure.
- Effectively plan for future development and water demands as the system changes over time.
- Avoid costly replacement of waterlines in the future that are no longer able to meet the water demands of the community.

Project Description

The upsizing of waterlines is an ongoing annual program. As development projects are submitted to the District for approval, the District will evaluate each project for waterline requirements. Should the District require the upsizing of waterlines not required by the proposed project, the project proponent will provide the design and construction of the oversized pipeline. The District is responsible for material cost difference between the standard pipeline size and the required upsized pipeline.

Project Budget

	COP Funding	Capital Fund	Total Budget
Waterline Upsizing FY 2011-12		$86,000	$86,000
Waterline Upsizing FY 2012-13		$86,000	$86,000
Waterline Upsizing FY 2013-14		$86,000	$86,000
Waterline Upsizing FY 2014-15		$86,000	$86,000
Total Budget:		**$344,000**	**$344,000**

Project Schedule

Annual recurring project beginning FY 2011-12

Radio Read Meters in Difficult Access Routes

I.I.P. Group No: G3-6
GWD Project Number: N/A

Project Score: 84

Summary

This project involves the replacement of standard water meters in difficult access areas with radio read meters, which can automatically transmit data to a laptop computer as the meter reader drives by the site. This project is important because this will eliminate risk associated with a meter reader working in difficult areas with heavy traffic, variable terrain or dogs. It also improves the reliability of obtaining actual meter readings for these 1,300 customer accounts without the need to estimate the meter reading due to the hazards identified.

The score of 84 in the project priority ranking system reflects the safety aspect of the project.

Background

The District meter readers on a regular basis have to manually read approximately 3,800 water meters that are difficult to access or in dangerous areas. This project addresses this important safety issue over time. This first phase (5 yrs.) will replace 1,300 meters of the 3,800 total.

The radio read meters are equipped with a battery that has an average life span of 20 years. This is because the battery is normally in "sleep" mode, until activated by the meter reader driving by to collect data. In addition to collecting monthly data for billing purposes, the radio read "smart meters" can provide a detailed history of water usage on any given day, hour or minute, and detect customer leaks. The meters that are replaced will be tested and if they meet the accuracy standards, will be used in other areas of the system since these meters may not be that old.

Need for Project

Some routes have a higher need than others. In particular, staff analysis has determined that the need for radio read meters in routes 01-09 is most pronounced. In addition to this area, additional radio read meters will limit staff exposure to hazardous traffic situations as well as other dangers such as inclement weather, spiders, bees, dogs, snakes, and meters on steep hillsides, behind fences and inside customer properties. With these new water meters, GWD and the customer can be assured that meters will be read with much greater accuracy.

Failure to implement this project could compromise District employee safety and impact meter reading accuracy.

Project Description

This project involves the replacement of standard water meters in difficult access areas with radio read meters, which can automatically transmit data to a laptop computer as the meter reader drives by the site.

The meters would be changed out over a period of time as shown in the budget tables below.

Project Budget

	COP Funding	Capital Fund	Total Budget
Construction costs for 246 meter replacements in routes 1 and 2 (Fiscal Year 2011/2012)		$23,000	$23,000
Construction costs for 209 meter replacements in route 4 (Fiscal Year 2012/2013)		$51,000	$51,000
Construction costs for 129 meter replacements in routes 5 and 6 (Fiscal Year 2013/2014)		$63,000	$63,000
Construction costs for 251 meter replacements in route 7 (Fiscal Year 2014/2015)		$39,000	$39,000
Total Budget:		**$176,000**	**$176,000**

Project Schedule

Meter Replacement FY 2011-12 through FY 2014-15

CDMWTP Modicon Compact PLC Replacement

I.I.P. Group No: G3-7
GWD Project Number: N/A

Project Score: 84

Summary

This project involves replacing the 6 existing Programmable Logic Controllers (PLC) located at each of CDMWTP's filters with modern, state-of-the-art controllers. The project is required to ensure the filter control systems at the CDMWTP remain operational, which would ensure continued reliable and efficient filter operations. CDMWTP has a direct impact on 16,600 potable water customer accounts.

The score of 84 in the project priority ranking system reflects the importance of this project to plant operational efficiency and reliability.

Background

The 6 current PLCs were installed in 2000. The PLCs control the operation of the filters by varying the rate of flow through the filters based on operating conditions. The PLCs also operate the multitude of valves during the backwash operations for backwash consistency. The change in computer and control systems has rendered this equipment obsolete and replacement parts are no longer available.

A modern PLC will ensure that the computer control systems at the CDMWTP filter operations remain operational and efficient, which is essential to reliable filtering operations and delivery of water to District customers.

Need for Project

The current PLCs are now 10 years old and are no longer manufactured or supported by the manufacturer. Updating the software and hardware for the PLCs will provide the filter operation with the most recent and current computer technology available to operate the filters.

Failure to complete this project would allow the risk of PLC failure. This would trigger a manual override incident which diminishes plant efficiency. In addition, failure to replace the PLCs (hardware) in the next few years would also render the software obsolete, increasing the cost due to new software replacement and programming resources required in addition to the hardware.

Project Description

The project consists of replacing the PLCs at the CDMWTP with an updated state-of-the-art control system. The project will include a turnkey operation, programming, and integration.

Project Budget

	COP Funding	Capital Fund	Total Budget
CDMWTP Modicon Compact PLC Replacement		$74,000	$74,000
Total Budget:		**$74,000**	**$74,000**

Project Schedule

Installation: FY 2013–14

CDMWTP Filter Media Replacement (1 Filter)

I.I.P. Group No: G3-8
GWD Project Number: N/A

Project Score: 81

Summary

The project will provide for the replacement of 351 cubic feet of filter sand and 2,457 cubic feet of granular activated carbon (GAC) filtering material in one Corona del Mar Water Treatment Plant filter. Over time, the effectiveness of the GAC and filter sand is diminished and needs replacement. This filter's performance will be evaluated over various water quality conditions and compared to the performance of the other 5 older filter media to determine the enhanced performance gained in removing turbidity as compared to the older filters. CDMWTP has a direct impact on 16,600 potable water customer accounts. The filter operations are an important component of the treatment process that these customers rely upon.

The score of 81 points reflects the addition of 10 discretionary points due to the important information that will be obtained from this project that wil impact future replacements of the filter media.

Background

GAC is used for water treatment, deodorization and separation of components of a flow system. While not effective in the removal of sediment and other solids or metals, activated carbon is extremely effective in controlling the turbidity of water with the absorption of elements such as ozone, chlorine, fluorides, dissolved organic solutes and various chemicals. Filter sand is also used in the processing of water and aides in the removal of certain contaminants.

Need for Project

GAC filter beds require periodic replacement. The individual granules of activated carbon become increasingly rounded off and plugged over time and become less effective at removing turbidity due to backwashing. The 6 filter beds at the treatment plant are currently 10 years old and need to be evaluated for performance and type of media to use versus the benefits derived.

Failure to complete this project may reduce the District's operational efficiency.

Project Description

This project involves the removal of 351 cubic feet of filter sand and 2,457 cubic feet of granular activated carbon (GAC) filtering material from one CDMWTP filter. The material will be removed and properly disposed.

Next, an evaluation will be performed to determine the type of media to use with the current water quality and develop a filter operation's maintenance and performance monitoring plan. Data will be developed over time from the new filter and the 5 older filters to determine the optimum replacement schedule and type of media to use on the remaining 5 filters.

Project Budget

	COP Funding	Capital Fund	Total Budget
CDMWTP Filter Media Replacement (1 Filter)		$152,000	$152,000
Total Budget:		**$152,000**	**$152,000**

Project Schedule

FY 2011-12

CDMWTP Access Road Improvements

I.I.P. Group No. G3-9
GWD Project Number: N/A

Project Score: 81

Summary

This pavement replacement project will ensure that the road to the CDMWTP remains accessible for District personnel and visitors. The road is 1.25 miles long, with an average width of approximately 18', (about 119,000 square feet of pavement), and is damaged due to normal wear, as well as weather, and other factors. The road will be replaced after the completion of improvements to the Backwash Basin and Drying Beds which are proposed projects in this Infrastructure Improvement Program, so that the trucks involved with those projects don't damage the new surface. Keeping this road open and accessible is critical because District staff, chemical delivery trucks, and emergency crews use this road to access the plant. No other access is available. CDMWTP has a direct impact on 16,600 potable water customer accounts.

The score of 81 points in the project priority ranking system reflects the importance of maintaining reliable access to the CDMWTP.

Background

The access road to the treatment plant travels through a very winding, hilly area of the foothills. Due to regular erosion and occasional wildfires, there is nearly always a part of the road that is damaged to some extent. Plant staff and large District trucks use the road daily. It is also used frequently for chemical deliveries. It is very important that emergency crews with large vehicles, such as fire trucks, always have access to the Treatment Plant in case of an earthquake or fire.

The main causes of pavement degradation are water infiltrating pavement cracks and heavy trucks deflecting the pavement. The combination of the two over a period of time can greatly accelerate deterioration. Water gets into the base and sub-grade, causing it to lose its integrity. Then the pavement, having lost its foundation beneath, deflects and cracks under load. It is considered very important to keep water from infiltrating the sub-grade. This is why most municipalities try to keep their roads "sealed" between resurfacing, through regular "crack-sealing" and "fog-seal" programs.

Since the proposed Backwash Basin and Sludge Drying Bed upgrade projects will involve a large number of heavy truck trips up and down the road, this repair project is proposed to take place after those projects are complete. This will avoid damage to the new road surface by the heavy trucks. Although waiting to repair the road will allow some additional degradation of the road (depending on how wet the next few winters are), it should not be substantial.

Need for Project

The main access road up to the treatment plant is damaged due to normal wear and tear, soil erosion, weather, and fire damage. Plant staff, large District trucks, and chemical delivery trucks use the road daily. It is also very important that emergency crews with large vehicles, such as fire trucks, always have access to the Treatment Plant in case of an earthquake or fire.

The current condition of the road indicates that resurfacing is needed within the next 2-3 years to prevent additional pavement damage. However, by utilizing the full recycle/reconstruct method for resurfacing, the resurfacing could be delayed an extra couple of years to accommodate the construction period at the Plant, although interim road conditions would become increasingly worse but accessible.

Failure to maintain the road passed this time period however would result in difficult or impossible vehicular access to the plant for District personnel and chemical deliveries as well as emergency vehicles, especially in severe weather. This would lead to operational problems, due to the requirement to maintain the ability to accept chemical deliveries. Without chemical deliveries, the plant becomes inoperable.

Project Description

This project would replace the damaged access road to the CDMWTP. An assessment by District staff of the main access road indicates that it has significant cracking, but most of the pavement is still in medium to large "blocks". This indicates that the pavement is still holding its integrity, over base and sub-grade that is in fairly good condition. There are some failed areas, currently estimated to be about 1,500-2,000 square feet, that require the base to be excavated. These are areas where the base and/or sub-grade beneath the pavement has failed, and the pavement is exhibiting "alligator cracking" (many cracks resembling alligator skin).

The Recycle/Reconstruct operation involves tearing out the entire old road surface along with the base material, grinding it up, and replacing it to form a solid new base foundation. It is then paved over with 0.2' of asphalt pavement. This is basically a full road reconstruction, and would give 30 years of service life with routine maintenance of sealing cracks and surfaces every 3 years. No dig-outs are necessary of the failed areas and therefore the deterioration of the road over the next few years will not have an adverse effect on the project cost provided the project is completed in the next five years.

Project Budget

	COP Funding	Capital Fund	Total Budget
Recycle/Reconstruct CDMWTP Access Road		$412,000	$412,000
Total Budget:		**$412,000**	**$412,000**

Project Schedule

Engineering and Construction FY 2014-15.

Cathedral Oaks Rd & Hwy 101 Overcrossing Project (Phase 1)

I.I.P. Group No. G3-10
GWD Project Number: 08-3850 (Ph 1)

Project Score: 81

Summary

This project (known as "Phase 1" of the work planned at this location) involves the relocation of approximately 500' of potable waterline in Hollister Avenue as part of the Cathedral Oaks Road/ Highway 101 Overcrossing Project. Additionally, two 12" steel casing pipes will be installed inside the proposed overcrossing. One of these casing pipes will allow for the future installation of an 8" potable waterline that will provide another waterline crossing of Highway 101 to provide additional potable water supply to the Sand Piper golf course and the Bacara Resort. The second casing pipe will provide an 8" recycled waterline to serve customers on the north side of Hwy 101, including Caltrans, that will use the recycled water to irrigate the newly installed freeway landscaping at this location. The recycled water line can also be further extended to provide recycled water service to the established neighborhoods in this location.

These casing pipes can only be installed when a bridge is being initially constructed. Therefore, this is a timely opportunity to install these lines. In the future, Caltrans would not allow waterlines to be installed on the bridge and a freeway crossing at this location would involve directional boring under the freeway, which is much higher in cost.

The score of 81 points reflects the addition of 20 discretionary points due to the timing of the bridge construction. The opportunity to install the casing pipe in the bridge that will allow for installing water lines in the future is only available during the initial construction of the new bridge. Once the bridge is constructed, water lines cannot be added.

Background

The City of Goleta, in conjunction with Caltrans, is constructing a new crossing over Highway 101 by extending Cathedral Oaks Road from Calle Real over the freeway to Hollister Avenue. Hollister Avenue on the south side of Highway 101 is being realigned as part of this project. The District must install a new 10" PVC potable waterline in the section of realigned roadway, in order to keep the waterline accessible for maintenance and repairs.

Need for Project

The Hollister Avenue roadway alignment is changing. This project is needed so the District waterlines are relocated along with the realignment. Significant grade changes are involved in the realignment of Hollister Avenue. As a result of the realignment and grade changes, approximately 500' of the District's existing potable waterline needs to be relocated.

Failure to complete the waterline relocation and installation of the casing pipe would not take advantage of the opportunity to install these facilities at a lower cost during this construction project.

Project Description

This project includes relocation of approximately 500' of potable distribution waterline in Hollister Avenue as a result of the City of Goleta/Caltrans Cathedral Oaks Road & Highway 101 Overcrossing Project. The District's project will also include installation of 12" steel casing pipes in the proposed Highway 101 overcrossing and UPRR overhead bridges for the future installation of an 8" potable and 8" recycled waterlines.

Project Budget

	COP Funding	Capital Fund	Total Budget
Waterline and Casing	$245,000		$245,000
Total Budget:	**$245,000**		**$245,000**

Project Schedule

Engineering: 2009
Construction: FY 2010-11

Equipment for Fire Flow Testing and Flushing

I.I.P. Group No: G3-11
GWD Project Number: N/A

Project Score: 80

Summary

The District's current fire hydrant flow test equipment and diffuser (shown in the above photo) are old, outdated and very bulky. There is no easy way to calibrate this equipment to ensure accuracy. The newer flow test equipment available today is more accurate, compact, light weight, and easier to use. This equipment provides valuable information on the performance of the Distribution System when conducting flow tests and flushing programs.

The score of 80 points reflects the addition of 24 discretionary points due to the critical timing of the project and the important information that will be obtained during this year's system flushing program which is scheduled to be completed in the spring of 2011. The system flushing program is conducted every three years and therefore this equipment will obtain valuable information that is used for future project decisions and evaluations.

Background

The District performs fire hydrant flow tests after new hydrants are installed and periodically when requested by a customer, contractor or fire department. The data collected from these tests include the flow rate from the hydrant in gallons per minute and static pressures from various locations. These tests provide critical flow data for the Fire Department and also give hydraulic feedback to the Distribution System Operators and District Engineers regarding changes in the distribution system. The equipment is also used during the system flushing program which is conducted every three years throughout the entire system.

Need for Project

The District's current fire hydrant flow test equipment is approximately 10 years old and the flow test accuracy is in question. With advances in technology, there are now more accurate, lighter weight and less bulky flow test kits available. It is important that the District's flow testing equipment is accurate to provide the correct data to the Fire Department and other involved parties and for the proper evaluation of the performance of the distribution system.

Fire hydrant flushing is performed on a regular basis for filling the water lines during scheduled and non-scheduled maintenance work, for improving water quality, and during the system flushing program.

These devices are also equipped with flow gauges to help track water to waste while flushing, and eliminate the need for estimating water loss.

Project Description

This project involves the purchase of new flow test meters and diffusers for fire hydrant flow testing and flushing purposes.

Project Budget

	COP Funding	Capital Fund	Total Budget
Equipment for Fire Flow Testing and Flushing	$10,000		$10,000
Total Budget:	**$10,000**		**$10,000**

Project Schedule

FY 2010-11

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Financial Benefit Projects

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Meter Replacement Program

I.I.P. Group No: G4-1
GWD Project Number: N/A

Project Score: 84

Summary

This meter replacement program involves removing older water meters on a regular basis, and replacing them with new, more efficient and accurate meters. This program is required to assist the meter reading crews in obtaining accurate meter readings. This will ensure that District customers are paying the correct cost for water used, and eliminate potential revenue loss due to water which is not registered on meters due to age. Water Meters over time have a tendency to slow down or not register at low flows. At 30 years, meters are susceptible to this inaccuracy. Over the next 5 years, approximately 2,650 customers' water meters will be replaced providing improved accuracy of water usage to these customers.

The score of 84 points in the project priority ranking system reflects the importance of accurate metering to District operations and revenue.

Background

As water meters age, accuracy can deteriorate. Meter manufacturer's warranties on meter accuracy usually expire between 15 and 20 years. The Goleta Water District has approximately 16,600 water meters in service at any given time. Additionally, depending on usage and due to the amount of water that has passed through the meter, some meters wear out faster than others.

Need for Project

Meters are mechanical devices that wear as they register consumption. Water meters are most accurate when first installed, and accuracy decreases as they wear due to usage and age. This reduction of accuracy can have a negative impact on GWD's revenue and increases the non-revenue water usage in the system.

Project Description

Over 30 years, this program will replace all of the 16,600 water meters, less the meters that are replaced under the Radio Read Meters in Difficult Access Routes project. This equates to the replacement of an average of 530 meters annually. The program targets aging meters, diminished HCF totals on worn out meters, as well as any meters that have stopped working completely. These meters will be changed out by District employees as part of their regular schedule of duties to keep replacement costs to a minimum.

Project Budget

	COP Funding	Capital Fund	Total Budget
Annual meter replacements beginning FY 2011-12		$81,000	$81,000
FY 2012-13		$81,000	$81,000
FY 2013-14		$81,000	$81,000
FY 2014-15		$81,000	$81,000
Total Budget:		**$324,000**	**$324,000**

Project Schedule

Annual recurring cost

Van Horne Turbine Generator Replacement & Hydro-Electric Study

I.I.P. Group No: G4-2
GWD Project Number: N/A

Project Score: 90

Summary

This project will replace the existing turbine generator at the Van Horne Generating Facility, which is not in operating condition. In addition, a comprehensive study will be performed to investigate feasibility and possible locations for the introduction of future additional hydro-electric generators throughout the District's distribution system. This project is required to replace a revenue producing facility that is inoperable at the Van Horne Reservoir Generating Facility, and to pursue other potential locations for future turbine generator installations. The electricity generated from this equipment provides a benefit to all District customers in the form of additional revenue that does not have to be collected from water rates, and assists in the overall goals of the State of California with reducing carbon emissions.

The score of 90 points reflects the addition of 10 discretionary points due to the important information that will be obtained from the analysis and installation of the generators and the further studies that will be conducted on the distribution system to determine potential locations for additional installations.

Background

The existing turbine generator at the Van Horne Generating Facility has been out of service since January, 2009. However, between the years 2005 and 2008, while it was still in operation, this generator produced on the average, 521,465 kWh per year and at the same time generated, on the average, $40,026 of revenue per year. Based on this information, a new turbine generator would pay for itself in approximately 3 years. After that payback time, the turbine generator would provide a slightly higher revenue for the District in today's dollars.

The previous hydro-electric studies overseen by the District were the Hydro-Electric Feasibility Study (November 1981) and the Tecolote Tunnel Hydro-Electric Feasibility Study (April 1983). These studies are outdated due to the economic changes in the price of electricity and technology advances.

Need for the Van Horne Turbine Generator Replacement

This is a revenue producing facility which is currently sitting idle, providing no benefit to the District. The facility is a vital part of the District's infrastructure. Electrical power is produced by the hydro-turbine and fed into the Southern California Edison power grid, providing revenue to the District from the sale of electricity generated.

Need for the Hydro-Electric Study

Advancements in hydro-electric generators, smaller size and greater efficiency, along with the higher cost of electricity have opened up new possibilities to make use of the existing elevation changes within the District's transmission and distribution pipelines to generate power. In addition to replacing the generator, the District will also assess additional cost effective locations to install hydro-electric generators for future installations. This will provide environmentally friendly "green" electrical generation to the local power grid, and generate additional income for the District.

Project Description

The first part of this project will replace the defective hydro-turbine generator with a new 250 KW Cornell hydro-turbine generator. The defective turbine generator will then be sent in to be rebuilt to original specifications to use for a future new installation.

The second part of this project will investigate cost effectiveness and potential locations within the District for future installations of hydro-turbine generators.

Project Budget

	COP Funding	Capital Fund	Total Budget
Construction		$144,000	$144,000
Total Budget:		**$144,000**	**$144,000**

Project Schedule

Engineering: FY 2011-12
Construction: FY 2011-12

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APPENDIX SUMMARY

The Appendix projects are important projects which help meet the mission of the Goleta Water District to provide an adequate supply of quality water to present and future customers within the District. Currently, these projects are not required by regulation, or to meet a critical condition in the infrastructure. They have been evaluated utilizing the criteria that have been developed in the 5-Year Infrastructure Improvement Plan and did not score high enough at the present time to be included in the five year funding request. The projects and their respective justifications and particular scoring results will be reviewed and re-evaluated annually. This review and re-evaluation will take into account evolving conditions, such as regulatory issues, aging infrastructure and priorities associated with changing resources that are available to meet the District's mission. In addition, the project costs will also be updated annually (current cost is estimated in 2010 dollars).

There are 86 separate projects included in the Appendix with a total value of approximately $108 million. Each Appendix project is described briefly in a limited summary format. The annual review of these projects will utilize the criteria noted above. Project descriptions will contain more detailed analysis as they progress through the prioritization process. The projects address water supply reliability, replacement of aging and deteriorating infrastructure and adding redundancy in the water delivery system, to insure that the mission of providing an adequate supply of water is maintained at all times during various emergency situations.

One example of some of the important projects included in the Appendix that address water supply reliability issues is the City of Santa Barbara Interconnect Project. This project allows two adjacent and major water agencies of the South Coast to provide each other with large volumes of water in times of emergency or major maintenance interruptions. Another specific example of the projects included in the Appendix involves constructing additional wells to supply water in times of emergency and during drought conditions, which would utilize stored water that the District has injected into the Goleta Groundwater Basin. The Appendix projects also address the issues of adding transmission mains to move water through the system, and adding storage facilities in the system. This is particularly important on the west side of the water system, where current storage is minimal for the number of customers and their associated water demands, especially during the summer months.

Other Appendix projects address the installation of new infrastructure or the replacement of existing infrastructure, such as facility replacements of various components at the water treatment plant (i.e. filter media replacement, access road bridge improvements to mediate flood conditions, and filter trough replacements). This group of Appendix projects also includes adding additional redundant transmission mains, replacing infrastructure that is known to be deteriorating over time, improvements to the well treatment facilities' processes, and a proposed project that would provide a fixed based radio read metering system. This radio read system will enable customers to have access to real time data on their water use, which will help with water conservation and cost savings.

These are a few examples of the Appendix projects. These are beneficial projects that need to be completed eventually, or in some cases, evaluated in more detail as resources become available. Each year, these projects will be re-evaluated and scored to determine if the priorities have changed based on updated information. At the present time however, it has been determined that, while these projects may appear to be critical, it is not essential to pursue them during the next 5 years to meet the mission of the District. There are risks associated with not including some of the Appendix items, but in staff's opinion, the risks are minimal at the present time.

Appendix Projects Cost Estimates

Table 8: Water Suppy/Production

Ind.	Project Name/Description	Water System	Estimated Project Cost
G2-5	Recycled Water 1 MG Reservoir Project	Recycled	2,500,000
G2-6	Transmission Main 36" Parallel Pipeline Project 8,800'	Potable	13,000,000
G2-7	GWD-City of SB Interconnect Project	Potable	1,246,000
G2-8	Cathedral Oaks 20" Bypass Waterline 8,500'	Potable	5,515,000
G2-9	3 MG Ellwood Reservoir Replacement Project	Potable	5,000,000
G2-10	2 MG Chaparral Reservoir, BPS & Waterline Project	Potable	8,344,000
G2-11	Recycled Water Hollister Booster Station Pump Rebuild Project	Recycled	20,000
G2-12	Transmission Main - 3 New Valves	Potable	434,000
G2-13	Edison Booster Pumping Station Upgrades	Potable	200,000
G2-14	Anita Wellhead Treatment Project	Potable	599,000
G2-15	Emergency Water Supply Program (2 New Wells)	Potable	4,920,000
G2-16	Anita Well Emergency Power Generator Installation	Potable	200,000
G2-17	Airport Well Emergency Power Generator Installation	Potable	200,000
G2-18	El Camino Well Emergency Power Generator Installation	Potable	200,000
G2-19	San Antonio Well Emergency Power Generator Installation	Potable	200,000
G2-20	San Marcos Well Emergency Power Generator Installation	Potable	200,000
G2-21	University Well Emergency Power Generator Installation	Potable	200,000
G2-22	Recycled Water System Corrosion Study	Recycled	39,000
G2-23	Recycled Water System Connection to Potable System	Recycled	60,000
G2-24	GWC Ellwood Cl2 HPC Generator Replacement	GWC	70,000
G2-25	Booster Pumping Station Maintenance Program	Potable	15,000
G2-26	GWC Potable Connection Project	GWC	23,380,000
G2-27	GWC Repair Project	GWC	797,000
G2-28	Fire Hoses for Temporary Service	Potable	5,000
G2-29	New Monitoring Wells (3)	Potable	450,000

Appendix Projects Cost Estimates (continued)

Table 9: Infrastructure Replacement/New/Maintenance

Ind.	Project Name/Description	Water System	Estimated Project Cost
G3-12	Recycled Water Hollister Booster Station Relocation Project	Recycled	2,515,000
G3-13	Long-term Waterline Replacement Program	Potable	500,000
G3-14	Fire Hydrant Replacement Program	Potable	195,000
G3-15	Service Line Replacement Program	Potable	400,000
G3-16	CDMWTP Filter Media Replacement (5 Filters)	Potable	753,000
G3-17	CDMWTP Filter Trough Improvement Project	Potable	350,000
G3-18	CDMWTP Reseal Building due in 2014	Potable	7,000
G3-19	2020 Water System Infrastructure Independent Audit	Potable	149,000
G3-20	Airport Well Hypochlorite Containment Basin Coating	Potable	10,000
G3-21	CDMWTP Floc/Sed/Filter Enclosure Project	Potable	5,259,000
G3-22	Pavement Maintenance Project (Except CDMWTP)	Blend	50,000
G3-23	Wells Backwash Tank Replacement Project - EC, SA & SM	Potable	250,000
G3-24	Vault Maintenance & Painting Project	Potable	41,000
G3-25	Replacement of Known Problem Service Lines	Potable	50,000
G3-26	Cathedral Oaks-Hwy 101 Overcrossing Project (Phase 2a)	Potable	744,000
G3-27	Van Horne Reservoir Slope Repair Project	Potable	372,000
G3-28	CDMWTP TU4/Chemical Bldg Road Improvements	Potable	15,000
G3-29	Recycled Waterline Preventative Maintenance Program	Recycled	20,000
G3-30	CDMWTP Recoat Wash Water Tanks	Potable	250,000
G3-31	Reservoir Inlet-Outlet Improvements	Potable	152,000
G3-32	Point-to-Point Radio Link Project	Blend	53,000
G3-33	CDMWTP Creek Crossing Improvement Project	Potable	829,000
G3-34	Ocean Rd-UCSB 12"Waterline Project 3,000'	Potable	1,689,000
G3-35	CDMWTP Clarifier Improvements (plate settlers/launders/CEC)	Potable	5,789,000
G3-36	Airport Well Backwash Tank Interior Coating	Potable	15,000
G3-37	San Antonio Booster Station Relocation Project	Potable	1,603,000
G3-38	CDMWTP Filter Buildings Modifications	Potable	85,000
G3-39	Fire Hydrant Installation Project	Potable	51,000
G3-40	Recycled Water Replace Relief Valve GSD Booster Station	Recycled	6,000

Appendix Projects Cost Estimates (continued)

Table 9 (continued): Infrastructure Replacement/New/Maintenance

Ind.	Project Name/Description	Water System	Estimated Project Cost
G3-41	Recycle Water PR Vault Relocation at Glen Annie Golf Course	Recycled	150,000
G3-42	Kellogg 20" Waterline Extension/Upsize 2,000'	Potable	1,684,000
G3-43	Covington 10" Waterline Upsize (Valdez - Fairview) 2,800'	Potable	1,682,000
G3-44	Los Carneros 20" Waterline Extension 1,400'	Potable	1,384,000
G3-45	Cathedral Oaks 20" Waterline Upsize (Paseo del Pinon-Northgate) 1,900'	Potable	1,654,000
G3-46	Ekwill 12" Waterline Extension 1,500'	Potable	1,036,000
G3-47	Waterline Replacement Project	Potable	223,000
G3-48	Cathedral Oaks-Hwy 101 Overcrossing Project (Phase 2b)	Potable	768,000
G3-49	El Camino Well Hypochlorite Pumps Replacement	Potable	15,000
G3-50	University Well Hypochlorite Pumps Replacement	Potable	15,000
G3-51	San Marcos Well Hypochlorite Pumps Replacement	Potable	15,000
G3-52	Operations Department Lockers, Meeting Room,	Blend	500,000
G3-53	Old Town Goleta - Waterline Replacement Project	Potable	119,000
G3-54	Operations Dept Office for Meter Crew Chief	Blend	35,000
G3-55	Dry-Barrel Fire Hydrants Replacement (40)	Potable	350,000
G3-56	Relocate Turnpike & La Gama Vault	Potable	150,000
G3-57	Creek Crossing Inspection & Repair Program	Potable	15,000
G3-58	CDMWTP Bulk Chemical Tank Safety Platform	Potable	40,000
G3-59	CDMWTP Shop Building Remodel	Potable	350,000
G3-60	8" Waterline Loop at La Vista-Alta Mira Booster Stations 850'	Potable	313,000
G3-61	GWC Chlorination Modicon Compact PLC Replacement	GWC	15,000
G3-62	CDMWTP FM-1 Entry Modifications	Potable	8,000

Table 10: Financial Benefit

Ind.	Project Name/Description	Water System	Estimated Project Cost
G4-3	Document Management System	Blend	450,000
G4-4	District-Wide Fixed Base Meter Reading System	Blend	4,384,000
G4-5	CDMWTP Lab Equipment for Nitrates Analaysis	Potable	90,000
G4-6	Well Centralization Study of Well Water Treatment	Potable	119,000
G4-7	Recycled Waterline in Fairview Rd - Hollister Ave	Recycled	3,564,000
G4-8	CDMWTP Softening Study to Improve Water Quality	Potable	100,000
G4-9	Well Sites - "0" Liquid Discharge Study	Potable	100,000
G4-10	Recycled Waterline Extensions for New Customers	Recycled	50,000
G4-11	CDMWTP Atomic Adsorption Unit Metals Testing	Potable	150,000
G4-12	CDMWTP Spectrophotometer TTHM, HAA5, VOC, SOC	Potable	100,000
		TOTAL	**$108,055,000**

Appendix Projects Scoring

Table 11: Water Supply/Production Reliability

		Reliability of Service		O&M Impact		Employee Health & Safety Upgrade		Size of Population Benefitted		Depreciable Service Life of Facility		Resource Conservation		Co-Funding Potential			
		WF = 9		WF = 6.5		WF = 9		WF = 9		WF = 3.5		WF = 6.5		WF = 6.5			
Ref.	PROJECT NAME/DESCRIPTION	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Discr.	Total Score
G2-5	Recycled Water 1 MG Reservoir Project	1	9	3	20	-	-	3	27	-	-	2	13	1	7	-	**75**
G2-6	Transmission Main 36" Parallel Pipeline Project 8,800'	3	27	-	-	-	-	3	27	-	-	1	7	2	13	-	**74**
G2-7	GWD-City of SB Interconnect Project	3	27	-	-	-	-	3	27	-	-	-	-	3	20	-	**74**
G2-8	Cathedral Oaks 20" Bypass Waterline 8,500'	3	27	-	-	-	-	3	27	-	-	1	7	1	7	-	**67**
G2-9	3 MG Ellwood Reservoir Replacement Project	3	27	-	-	-	-	3	27	-	-	-	-	2	13	-	**67**
G2-10	2 MG Chaparral Reservoir, BPS & Waterline Project	3	27	-	-	-	-	3	27	-	-	-	-	2	13	-	**67**
G2-11	Recycled Water Hollister Booster Station Pump Rebuild Project	1	9	3	20	1	9	1	9	-	-	3	20	-	-	-	**66**
G2-12	Transmission Main - 3 New Valves	2	18	1	7	1	9	2	18	-	-	2	13	-	-	-	**65**
G2-13	Edison Booster Pumping Station Upgrades	2	18	-	-	3	27	2	18	-	-	-	-	-	-	-	**63**
G2-14	Anita Wellhead Treatment Project	3	27	-	-	-	-	3	27	-	-	1	7	-	-	-	**61**
G2-15	Emergency Water Supply Program (2 New Wells)	3	27	-	-	-	-	3	27	-	-	1	7	-	-	-	**61**
G2-16	Anita Well Emergency Power Generator Installation	3	27	-	-	-	-	3	27	-	-	-	-	-	-	-	**54**
G2-17	Airport Well Emergency Power Generator Installation	3	27	-	-	-	-	3	27	-	-	-	-	-	-	-	**54**
G2-18	El Camino Well Emergency Power Generator Installation	3	27	-	-	-	-	3	27	-	-	-	-	-	-	-	**54**
G2-19	San Antonio Well Emergency Power Generator Installation	3	27	-	-	-	-	3	27	-	-	-	-	-	-	-	**54**
G2-20	San Marcos Well Emergency Power Generator Installation	3	27	-	-	-	-	3	27	-	-	-	-	-	-	-	**54**
G2-21	University Well Emergency Power Generator Installation	3	27	-	-	-	-	3	27	-	-	-	-	-	-	-	**54**
G2-22	Recycled Water System Corrosion Study	1	9	3	20	-	-	1	9	-	-	2	13	-	-	-	**51**
G2-23	Recycled Water System Connection to Potable System	1	9	3	20	-	-	1	9	-	-	2	13	-	-	-	**51**
G2-24	GWC Ellwood Cl2 HPC Generator Replacement	1	9	3	20	1	9	1	9	1	4	-	-	-	-	-	**50**
G2-25	Booster Pumping Station Maintenance Program	1	9	1	7	-	-	1	9	-	-	2	13	-	-	-	**38**
G2-26	GWC Potable Connection Project	1	9	-	-	-	-	1	9	-	-	-	-	3	20	-	**38**
G2-27	GWC Repair Project	1	9	1	7	-	-	1	9	-	-	1	7	-	-	-	**31**
G2-28	Fire Hoses for Temporary Service	2	18	-	-	-	-	1	9	-	-	-	-	-	-	-	**27**
G2-29	New Monitoring Wells (3)	-	-	-	-	-	-	3	27	-	-	-	-	-	-	-	**27**

Appendix Projects Scoring (continued)

Table 12: Infrastructure and Equipment – Replacement, New & Maintenance

		Reliability of Service		O&M Impact		Employee Health & Safety Upgrade		Size of Population Benefitted		Depreciable Service Life of Facility		Resource Conservation		Co-Funding Potential			
		WF = 9		WF = 6.5		WF = 9		WF = 9		WF = 3.5		WF = 6.5		WF = 6.5			
Ref.	PROJECT NAME/DESCRIPTION	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Discr.	Total Score
G3-12	Recycled Water Hollister Booster Station Relocation Project	1	9	2	13	3	27	1	9	-	-	2	13	1	7	-	**78**
G3-13	Long-term Waterline Replacement Program	2	18	1	7	1	9	1	9	3	11	2	13	1	7	-	**73**
G3-14	Fire Hydrant Replacement Program	2	18	1	7	1	9	1	9	3	11	2	13	1	7	-	**73**
G3-15	Service Line Replacement Program	2	18	1	7	1	9	1	9	3	11	2	13	1	7	-	**73**
G3-16	CDMWTP Filter Media Replacement (5 Filters)	3	27	-	-	-	-	3	27	1	4	2	13	-	-	-	**71**
G3-17	CDMWTP Filter Trough Improvement Project	3	27	1	7	-	-	3	27	3	11	-	-	-	-	-	**71**
G3-18	CDMWTP Reseal Building due in 2014	1	9	3	20	3	27	1	9	-	-	1	7	-	-	-	**71**
G3-19	2020 Water System Infrastructure Independent Audit	3	27	-	-	1	9	3	27	2	7	-	-	-	-	-	**70**
G3-20	Airport Well Hypochlorite Containment Basin Coating	2	18	-	-	3	27	2	18	-	-	1	7	-	-	-	**70**
G3-21	CDMWTP Floc/Sed/Filter Enclosure Project	3	27	1	7	1	9	3	27	-	-	-	-	-	-	-	**70**
G3-22	Pavement Maintenance Project (Except CDMWTP)	2	18	2	13	1	9	2	18	3	11	-	-	-	-	-	**69**
G3-23	Wells Backwash Tank Replacement Project - EC, SA & SM	1	9	3	20	-	-	1	9	3	11	3	20	-	-	-	**68**
G3-24	Vault Maintenance & Painting Project	2	18	1	7	2	18	2	18	1	4	-	-	-	-	-	**64**
G3-25	Replacement of Known Problem Service Lines	1	9	2	13	1	9	2	18	-	-	2	13	-	-	-	**62**
G3-26	Cathedral Oaks-Hwy 101 Overcrossing Project (Phase 2a)	2	18	-	-	-	-	2	18	-	-	2	13	2	13	-	**62**
G3-27	Van Horne Reservoir Slope Repair Project	3	27	1	7	-	-	3	27	-	-	-	-	-	-	-	**61**
G3-28	CDMWTP TU4/Chemical Bldg Road Improvements	3	27	1	7	-	-	3	27	-	-	-	-	-	-	-	**61**
G3-29	Recycled Waterline Preventative Maintenance Program	1	9	3	20	1	9	1	9	-	-	2	13	-	-	-	**60**
G3-30	CDMWTP Recoat Wash Water Tanks	3	27	-	-	-	-	3	27	1	4	-	-	-	-	-	**58**
G3-31	Reservoir Inlet-Outlet Improvements	2	18	1	7	-	-	2	18	-	-	1	7	1	7	-	**56**
G3-32	Point-to-Point Radio Link Project	3	27	-	-	-	-	3	27	-	-	-	-	-	-	-	**54**
G3-33	CDMWTP Creek Crossing Improvement Project	3	27	-	-	-	-	3	27	-	-	-	-	-	-	-	**54**
G3-34	Ocean Rd-UCSB 12"Waterline Project 3,000'	3	27	-	-	-	-	3	27	-	-	-	-	-	-	-	**54**
G3-35	CDMWTP Clarifier Improvements (plate settlers/launders/CEC)	3	27	-	-	-	-	3	27	-	-	-	-	-	-	-	**54**
G3-36	Airport Well Backwash Tank Interior Coating	1	9	1	7	-	-	3	27	3	11	-	-	-	-	-	**53**

Appendix Projects Scoring (continued)

Table 12 (continued): Infrastructure and Equipment – Replacement, New & Maintenance

		Reliability of Service		O&M Impact		Employee Health & Safety Upgrade		Size of Population Benefitted		Depreciable Service Life of Facility		Resource Conservation		Co-Funding Potential			
		WF = 9		WF = 6.5		WF = 9		WF = 9		WF = 3.5		WF = 6.5		WF = 6.5			
Ref.	PROJECT NAME/DESCRIPTION	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Discr.	Total Score
G3-37	San Antonio Booster Station Relocation Project	2	18	-	-	-	-	2	18	-	-	2	13	-	-	-	**49**
G3-38	CDMWTP Filter Buildings Modifications	1	9	-	-	2	18	-	-	3	11	1	7	-	-	-	**44**
G3-39	Fire Hydrant Installation Project	2	18	-	-	-	-	2	18	-	-	1	7	-	-	-	**43**
G3-40	Recycled Water Replace Relief Valve GSD Booster Station	1	9	2	13	1	9	1	9	-	-	-	-	-	-	-	**40**
G3-41	Recycle Water PR Vault Relocation at Glen Annie Golf Course	1	9	-	-	2	18	1	9	-	-	-	-	-	-	-	**36**
G3-42	Kellogg 20" Waterline Extension/Upsize 2,000'	2	18	-	-	-	-	2	18	-	-	-	-	-	-	-	**36**
G3-43	Covington 10" Waterline Upsize (Valdez - Fairview) 2,800'	2	18	-	-	-	-	2	18	-	-	-	-	-	-	-	**36**
G3-44	Los Carneros 20" Waterline Extension 1,400'	2	18	-	-	-	-	2	18	-	-	-	-	-	-	-	**36**
G3-45	Cathedral Oaks 20" Waterline Upsize (Paseo del Pinon-Northgate) 1,900'	2	18	-	-	-	-	2	18	-	-	-	-	-	-	-	**36**
G3-46	Ekwill 12" Waterline Extension 1,500'	2	18	-	-	-	-	2	18	-	-	-	-	-	-	-	**36**
G3-47	Waterline Replacement Project	2	18	-	-	-	-	2	18	-	-	-	-	-	-	-	**36**
G3-48	Cathedral Oaks-Hwy 101 Overcrossing Project (Phase 2b)	-	-	-	-	-	-	1	9	-	-	2	13	2	13	-	**35**
G3-49	El Camino Well Hypochlorite Pumps Replacement	1	9	1	7	1	9	1	9	-	-	-	-	-	-	-	**34**
G3-50	University Well Hypochlorite Pumps Replacement	1	9	1	7	1	9	1	9	-	-	-	-	-	-	-	**34**
G3-51	San Marcos Well Hypochlorite Pumps Replacement	1	9	1	7	1	9	1	9	-	-	-	-	-	-	-	**34**
G3-52	Operations Department Lockers, Meeting Room,	-	-	-	-	3	27	-	-	-	-	1	7	-	-	-	**34**
G3-53	Old Town Goleta - Waterline Replacement Project	1	9	-	-	-	-	1	9	-	-	2	13	-	-	-	**31**
G3-54	Operations Dept Office for Meter Crew Chief	-	-	-	-	2	18	-	-	-	-	2	13	-	-	-	**31**
G3-55	Dry-Barrel Fire Hydrants Replacement (40)	1	9	-	-	1	9	1	9	1	4	-	-	-	-	-	**31**
G3-56	Relocate Turnpike & La Gama Vault	1	9	-	-	1	9	1	9	1	4	-	-	-	-	-	**31**
G3-57	Creek Crossing Inspection & Repair Program	1	9	1	7	-	-	1	9	-	-	1	7	-	-	-	**31**
G3-58	CDMWTP Bulk Chemical Tank Safety Platform	-	-	-	-	3	27	-	-	-	-	-	-	-	-	-	**27**
G3-59	CDMWTP Shop Building Remodel	-	-	-	-	3	27	-	-	-	-	-	-	-	-	-	**27**
G3-60	8" Waterline Loop at La Vista-Alta Mira Booster Stations 850'	1	9	-	-	-	-	1	9	-	-	1	7	-	-	-	**25**
G3-61	GWC Chlorination Modicon Compact PLC Replacement	1	9	-	-	-	-	1	9	1	4	-	-	-	-	-	**22**
G3-62	CDMWTP FM-1 Entry Modifications	-	-	1	7	1	9	-	-	-	-	-	-	-	-	-	**16**

Appendix Projects Scoring (continued)

Table 13: Financial Benefit

		Reliability of Service		O&M Impact		Employee Health & Safety Upgrade		Size of Population Benefitted		Depreciable Service Life of Facility		Resource Conservation		Co-Funding Potential			
		WF = 9		WF = 6.5		WF = 9		WF = 9		WF = 3.5		WF = 6.5		WF = 6.5			
Ref.	PROJECT NAME/DESCRIPTION	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Discr.	Total Score
G4-3	Document Management System	-	-	-	-	-	-	3	27	2	7	2	13	-	-	25	**72**
G4-4	District-Wide Fixed Base Meter Reading System	-	-	3	20	1	9	3	27	-	-	2	13	-	-	-	**69**
G4-5	CDMWTP Lab Equipment for Nitrates Analaysis	3	27	1	7	-	-	3	27	-	-	-	-	-	-	-	**61**
G4-6	Well Centralization Study of Well Water Treatment	-	-	3	20	-	-	3	27	-	-	1	7	-	-	-	**53**
G4-7	Recycled Waterline in Fairview Rd - Hollister Ave	1	9	-	-	-	-	1	9	-	-	2	13	1	7	-	**38**
G4-8	CDMWTP Softening Study to Improve Water Quality	-	-	-	-	-	-	3	27	-	-	1	7	-	-	-	**34**
G4-9	Well Sites - "0" Liquid Discharge Study	-	-	3	20	-	-	-	-	-	-	2	13	-	-	-	**33**
G4-10	Recycled Waterline Extensions for New Customers	-	-	-	-	-	-	1	9	-	-	2	13	1	7	-	**29**
G4-11	CDMWTP Atomic Adsorption Unit Metals Testing	-	-	3	20	-	-	-	-	-	-	-	-	-	-	-	**20**
G4-12	CDMWTP Spectrophotometer TTHM, HAA5, VOC, SOC	-	-	3	20	-	-	-	-	-	-	-	-	-	-	-	**20**

Water Supply/Production Reliability Projects

Recycled Water 1 MG Reservoir Project

I.I.P. Group No: G2-5

GWD Project Number: N/A

Project Score: 75

Summary

This project will provide for the construction of a 1 Million Gallon (MG) recycled water reservoir in order to reduce pumping costs associated with the distribution of recycled water. It will also provide a storage facility for the recycled water.

Currently, recycled water is provided by the Reclamation Plant located at the Goleta Sanitary District's Wastewater Treatment Plant. It is distributed through the booster pump station located at the Plant as well as the GWD Hollister booster pump station. Relying on sequential pump stations to distribute the recycled water is inefficient and causes service interruptions when a malfunction occurs with one of the pump stations or with pumps in one of the stations. Building a reservoir would assist in the distribution of recycled water and provide the system with continuous operations during power outages, preventative maintenance and emergency failures of these station's pumps.

A 1 MG underground or partially covered recycled water reservoir will be constructed for additional recycled water storage and distribution. The potential location of the proposed reservoir site is within the Ellwood 440 Zone. The proposed tie-in to the existing recycled water distribution system would be located at Cathedral Oaks Road or potentially at the Glen Annie Golf Course.

The estimated cost of the project is $2,500,000.

Transmission Main 36" Parallel Pipeline Project

I.I.P. Group No: G2-6

GWD Project Number: N/A

Project Number: 74

Summary

This project will install a second 36" transmission main from the Corona del Mar Water Treatment Plant (CDMWTP) to Cathedral Oaks Road and is needed to provide an emergency backup transmission line.

This would be a back up supply mainly for emergency purposes if a failure occurred on the existing transmission main. The 42" Transmission Main runs from CDMWTP southerly to Cathedral Oaks Road and then easterly along Cathedral Oaks Road. The transmission main feeds a number of water laterals which feed several District reservoirs. These reservoirs provide water service to several thousand District Customers. A second transmission main could be utilized in an emergency situation, or while the existing main is down for maintenance and inspection. A vaulted 36" butterfly valve would also be installed as part of this project.

In addition, the proposed project, *Cathedral Oaks 20" Bypass Waterline 8,500'* which creates a loop system between the Glen Annie Lateral and the 42-inch transmission main in Cathedral Oaks Road enhances this project with further distribution of water to customers on the west side of the system in the event of a pipeline failure.

The estimated cost of the project is $13,000,000.

GWD–City of SB Interconnect Project

I.I.P. Group No: G2-7

GWD Project Number: 05-3574

Project Score: 74

Summary

The Interconnect Project involves construction of a new connection (interconnect) between the water distribution systems of the Goleta Water District (GWD) and the City of Santa Barbara. The project is needed so neighboring agencies can provide mutual assistance to one another in the event of an emergency such as a transmission line failure, earthquake, wildfire, or for a planned system shut down for repairs or maintenance.

Currently, the Goleta Water District and the City of Santa Barbara are limited in their ability to supply or transfer water from one system to another in the event of an emergency or major water treatment plant problem.
Should water facilities of the District or the City of Santa Barbara fail, water service for customers from either the District or the City would be compromised without the interconnection.

This project entails the construction of the interconnection and a pump station so City of Santa Barbara water can be pumped into the main transmission main of GWD, thereby enabling this water to be provided to all customers of GWD and not just the customers in close proximity of the existing small interconnections that currently exist between the two water systems.

The estimated cost of the project is $1,246,000.

Cathedral Oaks 20" Transmission Waterline 8,500'

I.I.P. Group No: G2-8

GWD Project Number: N/A

Project Score: 67

Summary

This project maintains adequate potable water and fire service to approximately 4,000 District customers in the event of a failure of an upper portion of either the Glen Annie Lateral or the 42-inch Transmission Main that runs along Cathedral Oaks Road. These areas have experienced major wildfires in the past few years, so fire protection is very important in this region. Should either line fail, alternative water service would need to be provided in an effort to maintain an acceptable level of service to the District's customers. The project consists of installing approximately 8,500 feet of 20-inch waterline in Cathedral Oaks Road between Glen Annie Road and Camino Laguna Vista. At Glen Annie Road, the proposed waterline will connect to the District's Glen Annie Lateral. At Camino Laguna Vista, the proposed waterline will connect to the District's 42-inch Transmission Main. The construction of the proposed waterline would loop the two transmission mains. The project also includes construction of a pressure reducing station along the proposed waterline.

The Glen Annie Lateral is a 22-inch water lateral that runs southerly from the Elwood Reservoir along Glen Annie Road. This lateral currently serves the District's reduced 440 pressure zone and the communities that lie west of Glen Annie Road and north of Hollister Avenue. The 42" Transmission Main runs from the Corona del Mar Water Treatment Plant (CDMWTP) easterly along Cathedral Oaks Road and is the main transmission main for approximately 75% of the District's customers.

Should an upper portion of the Glen Annie Lateral fail, customers served by the lateral would need to receive water service from the 230 pressure zone to the south where two booster pumps at the Edison Booster Station would be employed to convey the water. However, even with both pumps in operation, sufficient water service could not be provided during the summer higher peak periods. This type of failure occurred in 1997, resulting in major expense to the District and diminished service levels.

The estimated cost of the project is $5,515,000.

3 MG Ellwood Reservoir Replacement Project

I.I.P. Group No: G2-9

GWD Project Number: N/A

Project Score: 67

Summary

This project is for the proposed construction of a new 3 million gallon (MG) reservoir to be located at the existing Ellwood reservoir site. The new 3 MG reservoir is needed to provide District customers in the 440 pressure zone with additional water storage. Each pressure zone of the water system should have adequate storage capacity to supply water during a failure of a transmission waterline or some other unexpected system situation.

The capacity of the existing Ellwood reservoir is 1.5 MG which is below optimal levels to meet peak hourly flows and fire flows, especially during summer months. Should an emergency arise, such as a wild fire or a transmission line failure, storage capacity of the existing reservoir could be insufficient to meet the flow demand and supply for District customers of the outer 440 pressure zone, which includes approximately 4,000 customers. More importantly, the outer 440 zone is not looped hydraulically, so the only back-up supply system for the area is the emergency pumps at the Edison Pump Station, which cannot meet the water related demands of the District customers located in this area during the summer peak periods.

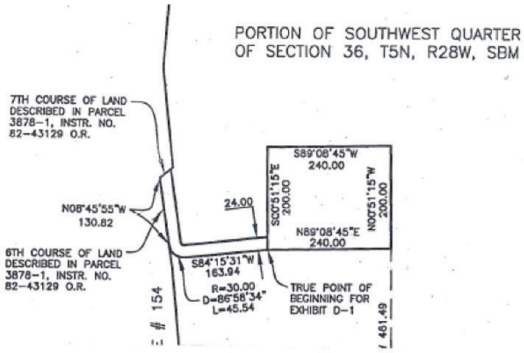
The proposed *Cathedral Oaks 20" Bypass Waterline 8,500'* project would create a loop system between the Glen Annie Lateral and the 42-inch transmission main in Cathedral Oaks and would provide alternative water service from the 42" Transmission Main in Cathedral Oaks Road to the East. This would also assist in addressing the situation of providing alternative water supply sources to this pressure zone during varying operating conditions.

The estimated cost of the project is $5,000,000.

2 MG Chaparral Reservoir, BPS & Waterline Project

I.I.P. Group No: G2-10
GWD Project Number: N/A

Project Score: 67



Summary

This project will provide a new 2 million gallon (MG) reservoir for supplemental storage and a booster pump station (BPS) in order to improve the reliability of water service to the Corona Pressure Zone. This reservoir will provide storage for pressurized fire water flow to the fire prone San Marcos Pressure Zone. To fill the reservoir and distribute additional water to the San Marcos Zone, approximately 1 ¾ miles of waterline will need to be constructed along with the BPS and is included in this project's scope.

The transmission main pressure is at a Hydraulic Grade of 440 feet. It supplies water to most of the lower pressure zones throughout the District service area running west to east. If there is break in the transmission main, that section of the transmission main needs to be shut down by inline isolation valves. Depending on where the break is, water is routed around it by using the Van Horne and Patterson BPS's to re-establish the flow of water downstream of the break. The District is limited by the pump capacity at the Garret Van Horne and Patterson reservoirs. The pump capacity of Garret Van Horne BPS is 900 gallons per minute (gpm). The capacity of the Patterson BPS is 500 gpm. To keep up with the demand over a prolonged period of time, the City of Santa Barbara interconnect and District wells would need to be utilized. An additional 2 MG of supplemental storage at an elevation at or above the Corona del Mar Reservoir on the east side of the District boundary would provide 2 MG of reservoir water at a higher flow rate because it would be gravity fed.

In order to furnish additional water to the San Marcos pressure zone, the waterline that connects Chaparral Reservoir to the San Marcos Zone needs to be pressurized. A second waterline with a BPS is needed to supply additional water to that zone with a hydraulic grade line of 166 feet or higher.

The proposed site of the reservoir is just north of the Preserve at San Marcos development on the Stevenson Ranch.

The estimated cost of the project is $8,344,000.

Recycled Water Hollister Booster Station Pump Rebuild Project

I.I.P. Group No: G2-11

GWD Project Number: N/A

Project Score: 66

Summary

This project will provide for the rebuilding of Recycled Water Hollister Booster Station Pump #1, (P8201) which is needed to prevent the failure of this pump which supplies recycled water.

Pump #1 is currently going through mechanical seals prematurely because it is overdue for a complete rebuild. Due to wear, corrosion and reliability issues, Operations staff had pump #2 (P8202) rebuilt in December of 2009.

An approved contractor will remove, inspect and rebuild pump P8201. Similar to pump #2, the work needed on pump #1 will include but will not be limited to, balancing the rotating assembly, replacement of all bearings and gaskets and resurfacing of the pump shaft sleeves, cases and all contact surfaces to ensure proper function of future mechanical seals.

The estimated cost of the project is $20,000.

Transmission Main New Valves (3)

I.I.P. Group No: G2-12
GWD Project Number: N/A

Project Score: 65

Summary

The project adds two (2) new valves along the transmission main in Cathedral Oaks Road and replaces the existing Bishop Ranch valve. Water valves are essential for controlling water flow though the District's piping system. In the case of pipeline failure or waterline improvement construction, valves allow the District to isolate specific segments or runs of pipe by closing the valves along those segments undergoing construction or repair work, thereby minimizing service interruptions to customers. Currently, there are not enough inline valves along the transmission main in Cathedral Oaks Road between Fairview Avenue and Lorraine Avenue. In the case of a transmission main failure or waterline construction anywhere along that portion of the transmission main, a large number of customers would be isolated without water service and fire protection for the duration of the repair work or construction. An alternative water supply source would have to be provided. Additional inline valves will considerably limit the areas of customer isolation and the need for alternative water supply.

The Project will add valves along the Cathedral Oaks Road transmission main from approximately Patterson Avenue and east in various locations: 1) just west of San Antonio Creek Road, 2) just west of Lorraine Avenue 3) the existing Bishop Ranch valve.

These additional installations will provide continued reliable service in the event of a waterline failure or construction along the respective line segments.

Because Cathedral Oaks Road is a State Highway (State Hwy. 192), the District will need to obtain the appropriate encroachment permits for construction within the right-of-way from the State of California.

The estimated cost of the project is $434,000.

Edison Booster Pumping Station Upgrades

I.I.P. Group No: G2-13
GWD Project Number: N/A

Project Score: 63


Summary

This project will upgrade the existing Edison Booster 750 gallon per minute (gpm) pumps to deliver sufficient backup supply water to the Reduced Ellwood (440) Pressure Zone from the 230 pressure zone when there is an interruption of regular supply service to this area. The pump capacity of each of the two existing pumps is not enough to meet the Reduced Ellwood Zone's average summer daily demand, should the pumps need to serve as an alternative water supply source.

Currently, the Reduced Elwood Zone is served primarily by the Glen Annie Lateral. If the lateral were to be put out of service either due to failure or repair, alternative water service would be provided by means of the water facilities serving the 230 pressure zone. Two Edison booster pumps generate water service for the 230 pressure zone. The pump capacity of each of the two existing Edison booster pumps is 750 gpm for a combined total of 1500 gpm. 1500 gpm is not enough capacity to meet the Reduced Ellwood Zone's peak winter time demands or summer daily demand. Therefore, the Edison Booster Pump Station (BPS) will not be able to provide the required water service during an interruption of the regular supply facilities. Additionally, if the pressure drops low enough (>5psi) during this period of regular supply service being interrupted, portions of the waterlines would need bacteriological testing and flushing.

Project I.I.P. Group No. G2-11, Cathedral Oaks 20" Bypass Waterline 8,500' would create a loop system between the Glen Annie Lateral and the 42-inch transmission main in Cathedral Oaks and would provide alternative water service from the 42" Transmission Main in Cathedral Oaks Road to the East. Should the Glen Annie Lateral fail, the proposed 20-inch bypass in Cathedral Oaks could provide the necessary water service to the Reduced 440 pressure zone and this upgrade would not be needed.

The estimated cost of the project is $200,000.

Anita Wellhead Treatment Project

GWD Project Number: Group No: G2-14

Project Score: 61

Summary

This project will provide a needed treatment system for the Anita Well. The well is presently limited to running 5 consecutive days per year as a standby water source only. This project is needed to improve the District's ability to meet water supply requirements and improve water system reliability especially during drought conditions.

Anita well has detectable levels of iron, manganese and total trihalomethanes above California Department of Public Health (CDPH) standards. Due to the levels of contaminants found in the Anita Well, the quality of water is substandard and could pose certain health risks to District customers. The proposed treatment and filtration system will allow the well to run in compliance with CDPH regulations and to be operated long term as an active water source. At full operation, the Anita Well can produce 400 gallons per minute.

This project will include providing final design and construction plans, and installation of the approved treatment facilities for the Anita Well.

The estimated cost of the project is $599,000.

Emergency Water Supply Program (2 New Wells)

I.I.P. Group No: G2-15

GWD Project Number: N/A

Project Score: 61

Summary

This project will provide 2 additional water wells to enhance the District's pumping capacity to extract water from the Goleta Groundwater Basin during potential emergencies and periods of drought. The District as of May 2010, has 44,000 Acre Feet of water stored within the Central Sub-Basin of the Goleta Groundwater Basin. The pumping capacity of the District's existing wells as of May 2010 is 300 Acre Feet per month and therefore would not provide sufficient quantities of water during times of drought to utilize this stored water when other sources of water are not available.

The project includes land acquisition for locating the proposed wells. It will also require obtaining the necessary permits, preliminary engineering, final design, and installation of the two new wells. Construction will include drilling the proposed wells, and installing the wellhead improvements. Wellhead improvements will include new well buildings, pumps, motors, piping, treatment equipment, tanks, electrical equipment, and control panels.

The estimated cost of the project is $4,920,000.

Anita Well Emergency Power Generator Installation

I.I.P. Group No: G2-16
GWD Project Number: N/A

Project Score: 54

Summary

This project provides for the installation of an onsite diesel generator which is needed to provide emergency power to the Anita Well when commercial power is lost. Currently, the Anita Well is a standby well.

If needed, the Anita Well would provide water service for a large number of District customers. Electricity that enables the well to operate is provided commercially. If that power is lost for any reason, the well could not function. Water service, including fire protection could be lost.

This infrastructure improvement project will insure that Anita Well will be able to provide water in an emergency situation when there is no utility power. By providing an onsite generator, the reliability of this facility during fire, storm or other SCE event would be greatly improved.

Currently, there is no viable alternative that could provide for the production of electricity in the event of an emergency.

The estimated cost of the project is $200,000.

Airport Well Emergency Power Generator Installation

I.I.P. Group No: G2-17
GWD Project Number: N/A

Project Score: 54

Summary

This project provides for the installation of an onsite diesel generator which is needed to provide emergency power to the Airport Well when commercial power is lost. The Airport Well is an active well.

If needed, the Airport Well would provide essential water service for a large number of District customers. Electricity that enables the well to operate is provided commercially. If that power is lost for any reason, the well could not function. Water service including fire protection could be lost.

This infrastructure improvement project will insure that Airport Well will be able to provide water in an emergency situation when there is no utility power. By providing an onsite generator, the reliability of this facility during fire, storm or other SCE event would be greatly improved.

Currently, there is no viable alternative that could provide for the production of electricity in the event of an emergency.

The estimated cost of the project is $200,000.

El Camino Well Emergency Power Generator Installation

I.I.P. Group No: G2-18

GWD Project Number: N/A

Project Score: 54

Summary

This project provides for the installation of an onsite diesel generator which is needed to provide emergency power to the El Camino Well when commercial power is lost. The El Camino Well is an active well.

If needed, the El Camino Well would provide essential water service for a large number of District customers. Electricity that enables the well to operate is provided commercially. If that power is lost for any reason, the well could not function. Water service, including fire protection could be lost.

This infrastructure improvement project will insure that El Camino Well will be able to provide water in an emergency situation when there is no utility power. By providing an onsite generator, the reliability of this facility during fire, storm or other SCE event would be greatly improved.

Currently, there is no viable alternative that could provide for the production of electricity in the event of an emergency.

The estimated cost of the project is $ 200,000.

San Antonio Well Emergency Power Generator Installation

I.I.P. Group No: G2-19

GWD Project Number: N/A

Project Score: 54

Summary

This project provides for the installation of an onsite diesel generator which is needed to provide emergency power to the San Antonio Well when commercial power is lost. The San Antonio Well is an active well.

If needed, the San Antonio Well would provide essential water service for a large number of District customers. Electricity that enables the well to operate is provided commercially. If that power is lost for any reason, the well could not function. Water service, including fire protection could be lost.

This infrastructure improvement project will insure that San Antonio Well will be able to provide water in an emergency situation when there is no utility power. By providing an onsite generator, the reliability of this facility during fire, storm or other SCE event would be greatly improved.

Currently, there is no viable alternative that could provide for the production of electricity in the event of an emergency.

The estimated cost of the project is $200,000.

San Marcos Well Emergency Power Generator Installation

I.I.P. Group No: G2-20

GWD Project Number: N/A

Project Score: 54

Summary

This project provides for the installation of an onsite diesel generator which is needed to provide emergency power to the San Marcos Well when commercial power is lost. The San Marcos Well is an active well.

If needed, the San Marcos Well would provide essential water service for a large number of District customers. Electricity that enables the well to operate is provided commercially. If that power is lost for any reason, the well could not function. Water service, including fire protection could be lost.

This infrastructure improvement project will insure that San Marcos Well will be able to provide water in an emergency situation when there is no utility power. By providing an onsite generator, the reliability of this facility during fire, storm or other SCE event would be greatly improved.

Currently, there is no viable alternative that could provide for the production of electricity in the event of an emergency.

The estimated cost of the project is $200,000.

University Emergency Power Generator Installation

I.I.P. Group No: G2-21
GWD Project Number: N/A

Project Score: 54

Summary

This project provides for the installation of an onsite diesel generator which is needed to provide emergency power to the University Well when commercial power is lost. The University Well is an active well.

If needed, the University Well would provide essential water service for a large number of District customers. Electricity that enables the well to operate is provided commercially. If that power is lost for any reason, the well could not function. Water service, including fire protection could be lost.

This infrastructure improvement project will insure that University Well will be able to provide water in an emergency situation when there is no utility power. By providing an onsite generator, the reliability of this facility during fire, storm or other SCE event would be greatly improved.

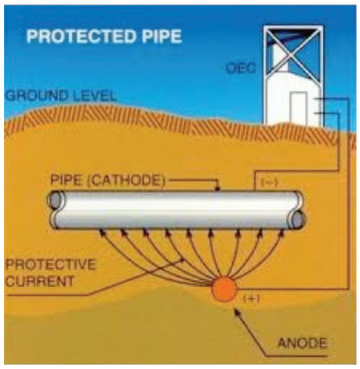
Currently, there is no viable alternative that could provide for the production of electricity in the event of an emergency.

The estimated cost of the project is $200,000.

Recycled Water System Corrosion Study

I.I.P. Group No: G2-22
GWD Project Number: N/A

Project Score: 51



Summary

This project provides for field tests to confirm current flow continuity in relation to the District's recycled waterlines and install necessary upgrades as needed. This is needed to evaluate the condition of the recycled waterlines and establish an organized program to upgrade the cathodic protection (CP) system. Cathodic protection facilities are necessary for protecting steel waterlines from corrosion.

Cathodic protection is the most viable means of preventing steel pipe corrosion. CP is a technique used to control the corrosion of metal piping by making the pipe the cathode of an electrochemical cell. The simplest method to apply CP is by connecting the metal pipe to be protected with another more easily corroded metal to act as the anode of the electrochemical cell. Corrosion of steel waterlines ultimately leads to failure of the pipe and the necessity to replace the waterlines. Currently, replacement of waterlines in existing streets and landscaped areas costs approximately $300 per foot of installation. The recycled water system consists of approximately 51,000 feet of steel waterlines. Test results from this study would enable the District to determine the location of new anode beds and rectifiers.

The estimated cost of the project is $39,000.

Recycled Water System Connection to Potable System

I.I.P. Group No: G2-23
GWD Project Number: N/A

Project Score: 51

Summary

This project will provide a back-up connection to the recycled water system from the potable distribution system. This is needed in the event that the booster pump station at Goleta Sanitary District (GSD) fails, or the reclamation plant is out of service for major maintenance. This proposed connection also pressurizes the recycled water system using the potable water system, which is needed in the event that the GSD pump station is inoperable. Currently, potable water can be supplied to the recycled water system through a connection at the GSD reservoir, but this water must be pumped by the GSD pump station to reach the recycled water customers.

Recycled water is produced at the GSD Reclamation Plant. It is distributed through recycled waterlines by means of a booster pump station. Should the Plant or the Pump Station be out of service, a backup system would be needed to continue recycled water service and to provide the pressure needed by District customers. Installing a connection to the District's potable water system and utilizing the pressure of the potable water system would provide that backup system.

The estimated cost of the project is $60,000.

GWC Ellwood Chlorine/Hypochlorite Generator Replacement

I.I.P. Group No: G2-24
GWD Project Number: N/A

Project Score: 50

Summary

This project will replace the existing hypochlorite generator for the Goleta West Conduit with an improved modern unit. The project's proposed generator will incorporate advancements in on-site hypochlorite generation and safety. This is needed to maintain adequate chlorine feed rates.

Chlorine and/or Sodium Hypochlorite (also known as Bleach) are widely used to kill bacteria in water. On-Site Sodium Hypochlorite Generator Systems are critical to the processing of chlorine in the water treatment process.

The existing unit was installed in 2000. This unit is producing hypochlorite with less concentration strength and therefore additional dosage rates are needed to maintain the same level of chlorine. The existing unit requires increased cleaning and maintenance to stay operational and parts are becoming difficult to locate due to the existing unit no longer being manufactured.

The estimated cost of the project is $70,000.

Booster Pumping Station Maintenance Program

I.I.P. Group No: G2-25
GWD Project Number: N/A

Project Score: 38

Summary

This project includes regular maintenance of and the replacement of seals for booster pumping stations. It is needed to maintain effective uninterrupted service.

Booster pumping stations are critical for maintaining adequate water pressure and flow in certain pressure zone areas. Booster pumping stations can also assist in providing alternative water resources to areas where water service has been temporarily suspended due to waterline failure or construction for repairs or improvements.

Operation of the District pump stations requires a comprehensive maintenance program and occasional repairs to maintain reliability. A majority of the cost to this budget item is for the replacement of mechanical seals in the existing pumps at various stations.

Should a booster pumping station fail, water service to District customers is lost, requiring alternative water supply sources or temporary connections through hoses, which in some cases cannot supply the amount of water that the customers require. More specifically, when mechanical seals within the pump fail, service by the pump station is lost until that seal is replaced. In order to provide uninterupted service to District customers, it is recommended to maintain a supply of at least one back up seal specific to each pump in the system.

The estimated annual operating cost of the project is $15,000.

GWC Potable Connection Project

I.I.P. Group No: G2-26
GWD Project Number: N/A

Project Score: 38

Summary

This project would evaluate the alternatives for delivering potable water to customers served by the Goleta West Conduit (GWC) water system through a waterline, separate well system, or other alternative rather than delivered bottled water which is currently provided by the District. As a result of the study and consequent construction of water facilities, the project would supply these customers with a source of potable water.

The District currently provides unfiltered/chlorinated water to customers served by the Goleta West Conduit system's pipeline. The District has been allowed by California Department of Public Health (CDPH) to provide bottled water to these customers as an alternative source of potable water until such time that potable water can be provided directly by the water system to the customers.

One method of delivering potable water to GWC customers is through a dedicated potable waterline, operated and maintained by the District. Such a supply's water is processed through the Corona del Mar Water Treatment Plant which provides the potable supply of water to the separate pipeline.

This study would also consider the costs of design and construction of the potable water system for Goleta West Conduit customers.

Other water system alternatives would include but not be limited to the following:

- Individual point of use treatment systems to each customer at the entry point of the water from the GWC waterline to the customer
- A small water treatment plant at the connection point of the GWC to COMB's South Coast Conduit
- Potable water would be supplied by means of newly constructed wells which would pump and treat the groundwater through treatment systems before being delivered to GWC customers

The estimated cost of the project is $23,380,000.

Goleta West Conduit Repair Project

I.I.P. Group No: G2-27
GWD Project Number: N/A

Project Score: 31

Summary

This project would repair and/or relocate the waterline at creek crossings and other locations where it has been exposed due to erosion in the area of the Goleta West Conduit (GWC). This is needed to provide reliable water service to GWC customers served by the system.

The GWC extends from Glen Annie Canyon west to El Capitan Ranch, approximately 9.5 miles. The GWC provides unfiltered water to the District's customers west of Glen Annie Road. This project consists of repairing and/or relocating the pipe at creek crossings and other locations where the waterline has been exposed due to erosion.

The GWC serves approximately 25 customer accounts and an area of approximately 5,000 acres. Proactive repair of the waterlines will prevent waterline breaks, thus preventing service outages, conserving water, and providing uninterrupted service levels.

The estimated cost of the project is $797,000.

Fire Hoses for Temporary Connections

I.I.P. Group No: G2-28

GWD Project Number: N/A

Project Score: 27

Summary

This project will provide for the purchase of twelve 50' long 2-1/2" fire hoses for temporary service and emergency connection purposes. A well maintained supply of fire hoses is needed to provide effective temporary water service in the event of an emergency water supply outage.

Over the years, GWD's inventory of fire hoses has been reduced. Due to the age of the equipment combined with general wear and tear, currently there are thirty 50' rolls of hose in inventory at the Patterson Reservoir. This limits the reach to approximately 1,500' when temporary water service is necessary. In the event of an outage when one 2-1/2" connection becomes inadequate, Distribution System Operators will run hoses in tandem from both hydrant outlets, decreasing the capability to 750 feet. The purchase of the fire hoses will increase the single line capability to 2,100' and the double line capability to 1,050'.

The District's ability to provide adequate emergency water service is an important aspect of emergency response preparedness. By increasing the inventory of fire hoses, operators will increase the distance that they can provide emergency water supply to customers.

The estimated cost of the project is $5,000.

New Monitoring Wells (3)

I.I.P. Group No: G2-29
GWD Project Number: N/A

Project Score: 27

Summary

This project would provide the District with three new monitoring well sites within the Goleta Central Sub Basin for the purpose of obtaining more comprehensive water level information. This project will allow the District to more accurately determine water levels within the Goleta Central Sub Basin.

Monitoring wells are the District's best gauge of how much water is available at any given time throughout the year within the Central Sub Basin. These wells will provide important data that will be used to best manage the District's groundwater resources. In addition, adding three wells will improve accuracy in determining water availability.

The project involves drilling three new monitoring wells in yet to be determined locations in the Central Sub Basin, which is currently monitored twice a year, or as needed, to obtain up to date water level data in the local aquifer. The monitoring wells will be 3 to 4 inches in diameter and will be drilled to depths ranging from 400 to 800 feet.

The estimated cost of the project is $450,000.

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Infrastructure Replacement/New/Maintenance Projects

Recycled Water Hollister Booster Station Relocation Project

I.I.P. Group No: G3-12
GWD Project Number: NA

Project Score: 78

REPLACEMENT OF DAMAGED PUMP MOTOR

Summary

The existing Recycled Water Hollister Booster Pumping Station is in an underground vault. On the occasion of flooding in this area, or with an equipment failure in the vault, the vault can fill with water, which will damage the motors and electrical equipment. This project is needed to eliminate the potential for flooding and safety problems associated with the existing below ground booster pumping station.

This underground Recycled Water Booster Pumping Station is approximately 15 years old and has some poor design features. For example, there are too many 90 degree bends utilized which is inefficient and causes friction losses. A new, above ground Booster Pumping Station could be designed to be more efficient. Additionally, an above ground pumping station would be safer, and more easily accessible.

This project involves land or easement acquisition, and complete relocation of the booster station above ground. Modification and extension of the recycled waterlines in the vicinity of the booster station will also be required. The booster station will be redesigned for greater efficiency and to minimize operations and maintenance costs. All existing deteriorated pumping equipment, such as pumps, motors, and electrical equipment will be replaced.

The estimated cost of the project is $2,515,000.

Long-Term Waterline Replacement Program

I.I.P. Group No: G3-13
GWD Project Number: N/A

Project Score: 73

Summary

This project involves a proactive program to replace all District waterlines over the term of the project. Existing waterlines are constructed of various materials such as asbestos concrete, galvanized steel, PVC and ductile iron. Due to wear, corrosion and other factors, waterlines fail after a period of time. It is impossible to determine or predict when a waterline will fail.

In addition, many existing waterlines are substandard in diameter and therefore provide inadequate water pressure and flows to District customers. These need to be replaced with appropriate diameter waterlines.

This program is needed to keep a regular schedule of waterline and appurtenance replacement in place to stay ahead of any potential problems.

This ongoing program of replacing aging and substandard sized waterlines will improve water system reliability and ensure continued water service to our customers, saving operations and maintenance costs. There are approximately 250 miles of buried waterline within the Goleta Water District. The program proposes to replace on average, approximately 2,700 lineal feet of water main per year at the approximate cost of $300 per lineal foot of pipe.

The estimated annual cost of the project is $500,000.

Fire Hydrant Replacement Program

I.I.P. Group No: G3-14
GWD Project Number: N/A

Project Score: 73

Summary

This program involves replacing 15 fire hydrants per year due to inoperability, corrosion, hit and run drivers, and general conditions based on location. The District's water system currently has 1,360 fire hydrants. Over the last few years, an average of 7 hydrants have been replaced annually.

Fire hydrants are mechanical devices with parts that eventually wear out or break down. This project ensures that all District hydrants are replaced when found inoperable through the inspection program or when reported by an outside agency operating the hydrant.

This project will enhance fire protection to the community.

The estimated annual cost of the project is $195,000.

Service Line Replacement Program

I.I.P. Group No: G3-15
GWD Project Number: N/A

Project Score: 73

Summary

This is a proactive program to replace the District's water service lines throughout the system. This project is necessary to improve water service and reliability to all District customers. There are currently more than 16,600 water meters in the Goleta Water District. Water service lines run from the waterline in the street to the customer meter, vary in length, and generally range from 3/4" to 2" in diameter. (Water service lines from the water meter to homes or businesses are owned and maintained by customers). Based on water system history, failure of service lines is more problematic than failure of the main water lines in the street. Therefore, this is an average of 83 service line replacements per year.

The estimated cost of the project is $400,000.

CDMWTP Filter Media Replacement (5 Filters)

I.I.P. Group No: G3-16
GWD Project Number: N/A

Project Score: 71

Summary

This project will involve replacement of the granular activated carbon filter beds at the Corona del Mar Water Treatment Plant. There are a total of 6 filters at the CDMWTP. One filter is being replaced as a separate project to identify and monitor new filter performance against the existing filter performance, prior to all filters being replaced. Carbon filter treatment is an important aspect of overall water treatment, as it removes turbidity from the water.

Turbidity is a cloudiness or haziness in water caused by individual particles, also known as suspended solids. Carbon filters are an important process in water treatment because they help remove turbidity and make the water clear. Turbidity in drinking water is a regulated parameter and therefore certain clarity levels of the water must be met. To obtain this clarity in the water, proper operating filters are required.

Granular activated carbon filter beds require periodic replacement. The individual granules of activated carbon become rounded and become less effective at removing turbidity. The filter beds at the treatment plant are currently 10 years old and have not yet been replaced.

Filter media replacement is periodically necessary to maintain efficient carbon filtering. This project would contract with a qualified contractor to remove 1,755 cubic feet of filter sand and 12,285 cubic feet of granular activated carbon (GAC) filtering material per filter. Removed material will be disposed of in an appropriate offsite location and the filter will be replenished with the same quantities of new media.

The estimated cost of the project is $753,000.

CDMWTP Filter Trough Improvement Project

I.I.P. Group No: G3-17
GWD Project Number: N/A

Project Score: 71

Summary

As part of the potable water treatment process at the CDMWTP, water enters each of the six (6) filters through four (4) fiberglass troughs (24 total). The four troughs in each filter disperse water evenly over the top of the filter media when in the filtration mode, and remove water evenly from the filter when it is in backwash mode. This project will replace the old fiberglass filter troughs with new stainless steel troughs, which are more durable and will provide extended service life.

The filter troughs at the Corona del Mar Water Treatment Plant are the original units installed during plant construction in 1974. Due to constant exposure to sunlight over the 36 years the plant has been in operation, they are now deteriorating and have been chipping during the cleaning process.

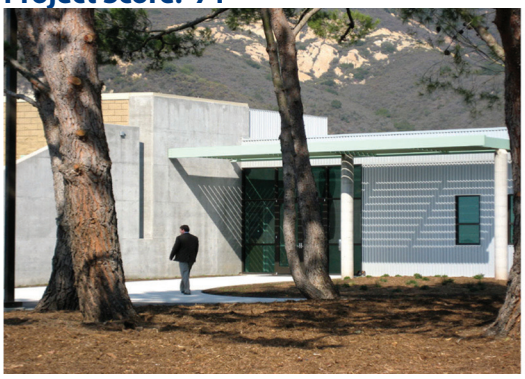
In filtration mode, water comes from the clarifier, and runs through these troughs into the filters. In backwash mode, water runs through these same troughs and is then piped into the backwash water recovery basin. They are in near constant use, and the chipping problem will continue and worsen until they are replaced with stainless steel troughs.

The estimated cost of the project is $350,000.

CDMWTP Reseal Building due in 2014

I.I.P. Group No: G3-18
GWD Project Number: N/A

Project Score: 71



Summary

This project will re-seal the exterior of the main Building at the Corona del Mar Water Treatment Plant to protect against water damage.

A water sealant was applied to the building in 2009, soon after construction was completed. As the above photo shows, when tested without any sealant, there is evidence of some interior wall damage due to water leaking into the building. This sealant is important in ensuring that further water damage does not occur.

The building has been tested for leaks without the sealant and found to be extremely susceptible to water damage. The sealant that was applied in 2009 stopped the leaks from occurring but needs to be reapplied by 2014.

The estimated cost of the project is $7,000.

2020 Water System Infrastructure Independent Audit

I.I.P. Group No: G3-19
GWD Project Number: N/A

Project Score: 70

GOLETA WATER DISTRICT
PROJECT PRIORITY
EVALUATION MATRIX 2010

Score: Each evaluation criteria is scored on a scale of 0 to 3.
Weighting Factor (WF): Each score is multiplied by a weighting factor that is based on the importance of that particular criteria.
Weighted Score: The weighted score is the individual score multiplied by the weighting factor.
Total Score: The Total Score is the sum of the weighted scores. The maximum Total Score is 150. The higher the score, the higher the priority for implementation.

Costs are based on July 2010 estimates.

PROJECT NAME/DESCRIPTION	STEP 1			STEP 2 - EVALUATION CRITERIA																STEP 3 - COST			Project Duration (months)
	Critical Need or Regulatory Requirement	Project Schedule Conforms with COP Schedule	Project Cost Comparable with COP Amount	Total Score	Reliability of Service		O&M Impact		Employee Health & Safety Upgrade		Population Benefitted		Depreciable Age of Facility		Resource Conservation		Co-Funding Potential		Estimated Project Cost ($)	Estimated Annual Cost of Recurring Project ($)	Selected Projects Cost & Total ($)	
					WF = 3		WF = 6.5		WF = 3		WF = 3		WF = 3.5		WF = 6.5		WF = 6.5					
					Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score	Score	Wt. Score				
GROUP 1																						
Cathedral Oaks-Hwy 101 Overcrossing Project (Phase 2)	Y	Y	Y																$ 860,000		$ 860,000	9
Recycled Water BPS Electrical Upgrades (at GSD)	Y	Y	Y																$ 325,000		$ 325,000	24
SB County El Embarcadero Improvements Project	Y	Y	Y																$ 40,000		$ 40,000	6
Lateral 14 - Waterline Replacement Project	Y	Y	Y																$ 110,000		$ 110,000	3
Old Town Goleta - Waterline Replacement Project	Y	Y	Y																$ 75,000		$ 75,000	3
Annual Raising of Valves	Y	Y	Y																	$ 50,000	$ 150,000	12
CDMWTP BW Basin & Sludge Bed Improvement Project	Y	Y	Y																$ 1,400,000		$ 1,400,000	24
																					$ 2,960,000	
GROUP 2																						
GVH Turbine Generator Replacement	N	Y	Y	0		0		0		0		0		0		0		0	$ 60,000			9
Transmission Main Valve Installation Project	N	Y	Y	0		0		0		0		0		0		0		0	$ 500,000			18
CDMWTP Filter Gallery Corrosion Inspection & Repair	N	Y	Y	0		0		0		0		0		0		0		0	$ 20,000			6
GWC Chlorination Modicon Compact PLC Replacement	N	Y	Y	0		0		0		0		0		0		0		0	$ 10,000			3
CDMWTP Sludge Disposal	N	Y	Y	0		0		0		0		0		0		0		0	$ 50,000			9
Abandon LUFT Monitoring Wells	N	Y	Y	0		0		0		0		0		0		0		0	$ 30,000			6
Edison BPS Upgrades	N	Y	Y	0		0		0		0		0		0		0		0	$ 200,000			18
GWD-City of SB Interconnect Project	N	Y	Y	0		0		0		0		0		0		0		0	$ 1,250,000			15
Portable Test Meter	N	Y	Y	0		0		0		0		0		0		0		0	$ 5,000			3
Equipment for Fire Flow Testing and Flushing	N	Y	Y	0		0		0		0		0		0		0		0	$ 10,000			3
Fire Hoses for Temporary Service	N	Y	Y	0		0		0		0		0		0		0		0	$ 5,000			3
Rebuild Pump-1 at Hollister Recycled Water BPS	N	Y	Y	0		0		0		0		0		0		0		0	$ 15,000			6
Rebuild Pump-6 at GSD Rcecyled Water BPS	N	Y	Y	0		0		0		0		0		0		0		0	$ 25,000			6
Replace Relief Valve GSD Recycled Water BPS	N	Y	Y	0		0		0		0		0		0		0		0	$ 4,000			3
Group 2 - Annual Programs																						
Annual Corrosion Protection Project	N	Y	Y	0		0		0		0		0		0		0		0		$ 150,000		15
CDMWTP Bi-Annual Filter Media Replacement	N	Y	Y	0		0		0		0		0		0		0		0		$ 300,000		6
30-Yr Meter Replacement Program	N	Y	Y	0		0		0		0		0		0		0		0		$ 50,000		12
Annual PR Valve & CAV Replacement Program	N	Y	Y	0		0		0		0		0		0		0		0		$ 20,000		12
Annual BPS Maintenance Program	N	Y	Y	0		0		0		0		0		0		0		0		$ 10,000		12
Group 2 - Studies & Reports																						
Distribution System Hydraulic Model Update	N	Y	Y	0		0		0		0		0		0		0		0	$ 50,000			9
Recycled Water System Corrosion Study	N	Y	Y	0		0		0		0		0		0		0		0	$ 40,000			12
																					$ -	
GROUP 3																						
San Ricardo Well Rehab Project	N	Y	Y	0		0		0		0		0		0		0		0	$ 900,000			18
CDMWTP Filter Trough Improvement Project	N	Y	Y	0		0		0		0		0		0		0		0	$ 300,000			12
Anita Wellhead Treatment Project	N	Y	Y	0		0		0		0		0		0		0		0	$ 810,000			18
CDMWTP Access Road Improvements	N	Y	Y	0		0		0		0		0		0		0		0	$ 300,000			9
Point-to-Point Radio Link Project	N	Y	Y	0		0		0		0		0		0		0		0	$ 40,000			18
Backwash Tank Replacement Project - EC, SA & SM	N	Y	Y	0		0		0		0		0		0		0		0	$ 225,000			18
GWC Repair Project (creek crossings, etc)	N	Y	Y	0		0		0		0		0		0		0		0	$ 400,000			18
Kellogg 20" Waterline Extension/Upsize 2,000'	N	Y	Y	0		0		0		0		0		0		0		0	$ 1,400,000			18
Covington 10" Waterline Upsize (Valdez - Fairview) 2,800'	N	Y	Y	0		0		0		0		0		0		0		0	$ 1,000,000			15
Los Carneros 20" Waterline Extension 1,400'	N	Y	Y	0		0		0		0		0		0		0		0	$ 1,000,000			15
Reservoir Maintenance Project	N	Y	Y	0		0		0		0		0		0		0		0	$ 300,000			15
Relocate RW PR Vault at Glen Annie Golf Course	N	Y	Y	0		0		0		0		0		0		0		0	$ 150,000			15
Polybutylene Service Replacement Project	N	Y	Y	0		0		0		0		0		0		0		0	$ 200,000			12
CO 20" Waterline Upsize (Paseo del Pinon - Northgate) 1,900	N	Y	Y	0		0		0		0		0		0		0		0	$ 1,350,000			15
Lateral 11 Repair Project	N	Y	Y	0		0		0		0		0		0		0		0	$ 50,000			9
Ekwill 12" Waterline Extension 1,500'	N	Y	Y	0		0		0		0		0		0		0		0	$ 610,000			15
CDMWTP BW Basin Access Ramp Insp & Repair	N	Y	Y	0		0		0		0		0		0		0		0	$ 20,000			6
CDMWTP Filter Buildings Modifications	N	Y	Y	0		0		0		0		0		0		0		0	$ 70,000			12
CDMWTP Modicon Compact PLC Replacement	N	Y	Y	0		0		0		0		0		0		0		0	$ 30,000			6
CDMWTP FM-1 Entry Modifications	N	Y	Y	0		0		0		0		0		0		0		0	$ 5,000			3
El Camino Well Hypochlorite Pumps Replacements	N	Y	Y	0		0		0		0		0		0		0		0	$ 15,000			6

Summary

The Infrastructure Improvement Plan, compiled every year, helps prioritize future District projects based upon importance to District customers and budgetary constraints. Periodically, outside Consulting Engineering analysis is utilized to review, validate, and bring other ideas into the planning process for evaluation. The list of projects comprising the District's infrastructure improvement needs is extensive. Therefore, a Project Evaluation Matrix spreadsheet was developed as a tool to assist District staff in evaluating and prioritizing possible infrastructure improvement projects. This tool will assists in the prioritization of the projects.

The overall goal of the Infrastructure Improvement Plan Update is to prioritize and schedule projects over the next five years. District Operations, Engineering and Water Supply and Conservation Departments worked together and compiled a comprehensive list of proposed projects, and listed these projects within the Evaluation Matrix. The Evaluation Matrix identifies top priority projects by scoring the projects, based on criteria used to compare projects.

When considering the water related demands of its customers, the District strives to provide and maintain the most efficient and advanced water facilities system possible. However, the District must perform its responsibilities within approved budgetary guidelines. It is important for the District to accurately understand which projects are essential to the welfare of its customers. The continued updating of the Infrastructure Improvement Plan is done as a strategic planning measure to plan for, budget, and schedule needed improvements to District facilities. This enables the District to effectively measure the needs of its customers and provide an efficient water facilities system to satisfy immediate as well as future needs.

The estimated cost of the project is $149,000.

Airport Well Hypochlorite Containment Basin Coating

I.I.P. Group No: G3-20
GWD Project Number: N/A

Project Score: 70

Summary

This project involves installing a sodium hypochlorite resistant protective coating around the inside of the containment basin of the Airport Well. This project is necessary because sodium hypochlorite is corrosive and would damage and possibly leak through the containment tank if a protective coating is not in place.

Sodium hypochlorite is used as a disinfectant in water treatment at District well sites. The sodium hypochlorite tank sits in a large containment basin that is sized to contain any spills or leaks, should the tank have a failure.

The District will hire a contractor to prep and install new sodium hypochlorite resistant coating to the inside of the containment basin at Airport Well.

This preventative maintenance project is needed to protect the integrity of the containment basin. The existing coating is worn and cracked. It does not protect the structural foundation of the basin against leaks or spills of the primary disinfectant: sodium hypochlorite.

The estimated cost of the project is $10,000.

CDMWTP Floc/Sed/Filter Enclosure Project

I.I.P. Group No: G3-21
GWD Project Number: N/A

Project Score: 70

Summary

This project will involve designing and constructing an enclosure, which will cover and protect the Corona del Mar Water Treatment Plant Flocculation/Sedimentation Basins. This project is important because the enclosure will protect the 4 basins from weather, floating debris, bird nesting and pests, while vastly reducing growth of algae.

The Coagulation/Flocculation/Sedimentation and Filtration processes are key components of the water treatment plant. Coagulation is the first process, which involves injecting chemicals at a very high mixing energy to destabilize the charge of colloids and suspended solids. The next step is Flocculation, which gently mixes the coagulated water to accelerate the rate of particle collision and form into larger/heavier particles referred to as "floc". This water proceeds into a Sedimentation basin, where the water velocity is slowed down, allowing the "floc" to fall to the bottom of the basin. The Sedimentation process will typically remove the majority of solids that can settle to the bottom by gravitational force. The water then continues on to the Filtration process, which removes any remaining colloidal matter after leaving the sedimentation basins.

Covering these basins and filters will reduce or eliminate algal growth, and optimize sedimentation basin performance by eliminating thermal stratification and reducing turbidity. The enclosure will also eliminate bird nesting, provide for all weather operation and maintenance, and provide a potential support structure for a substantial amount of photovoltaic panels to produce electricity.

This project is needed to improve performance, eliminate pests, and provide all weather servicing to a majority of the plant's major treatment processes. The project will consist of the design and construction of an enclosure to cover the CDMWTP Flocculation/Sedimentation Basins (4), Filter Control rooms (2) and Filters (6).

The estimated cost of the project is $5,259,000.

Pavement Maintenance Project (Except CDMWTP)

I.I.P. Group No: G3-22

GWD Project Number: N/A

Project Score: 69



Summary

This project is a maintenance program to pave and keep all Goleta Water District access roads accessible. (This particular projects excludes the Corona del Mar access road handled under a separate project)

The District has many sites with access roads and parking areas of different sizes. Some of these sites are in the hills and are prone to erosion damage and flooding, which causes them to deteriorate faster than normal.

It is important to have around the clock access to District facilities (Reservoirs, Well sites, pump stations, RP Vaults, Operations yard, etc.). Maintaining these roads and facilities is less expensive than letting them deteriorate and then having to completely replace surfaces. Many of the access roads to District facilities are cracking and are in need of re-surfacing in order to maintain their integrity. Maintaining these roads helps to keep them intact in flood prone areas and prevents the development of potholes.

This project involves the paving or slurry seal of roads used to access District facilities, which will minimize and eliminate road damage. This will allow for proper and safe access to our facilities in order to perform inspections and routine maintenance.

The estimated cost of the project is $50,000.

Wells Backwash Tank Replacement Project – El Camino, San Antonio & San Marcos Wells

I.I.P. Group No: G3-23

GWD Project Number: N/A

Project Score: 68

El Camino Well

San Antonio Well

San Marcos Well

Summary

This project involves replacement of the existing backwash tanks at 3 District well sites, shown in photos above. This project is necessary because the existing tanks are very old and undersized for current conditions.

The existing backwash tanks are approximately 50 years old and no longer meet current specifications. Replacing these tanks with new, larger backwash tanks will provide more efficiency due to the additional capacity of the new tanks.

The backwash tanks at these three well sites are undersized to the filter manufacturer's specifications. Specifications require backwash tanks to be able to hold three times the backwash volume. The present tanks, which were reused form a previous GWD facility and are now an estimated 50 years old, can only accommodate one backwash, and the tank interiors are starting to deteriorate. Operationally, the new tanks would provide for more efficient operations with shorter start up time and longer run times. This will reduce water discharges to the sewer system. Completion of this project will help in the reliability of these facilities, and help meet projected water demands.

The estimated cost of the project is $250,000.

Vault Maintenance & Painting Project

I.I.P. Group No: G3-24

GWD Project Number: N/A

Project Score: 64

Summary

This project involves a regular program of painting the valves and piping inside District vaults, which is important in extending the life of District facilities. If not taken care of, equipment inside these vaults will quickly begin to rust and corrode.

There are approximately 35 underground equipment vaults owned and maintained by the District. Underground vaults have the potential for flooding in winter storm events. Between flooding, occasional leaks and condensation that can occur in these vaults, a professional paint job assists keeping District equipment in good working order.

Much of the piping inside District vaults is corroding and in need of resurfacing. Painting the equipment inside the vaults reduces corrective maintenance costs, stops corrosion and prolongs the life of District assets.

This project comprises prep and painting (with epoxy) of all valves and piping inside various PR vaults throughout the Distribution System.

The estimated cost of the project is $41,000.

Replacement of Known Problem Service Lines

I.I.P. Group No: G3-25

GWD Project Number: NA

Project Score: 62

Summary

This is a proactive approach to replace problem water service lines before they break, which will help eliminate property damage and unmetered water loss.

There are currently more than 16,600 water meters in the Goleta Water District. All of these meters have water service lines of varying lengths running from the waterline in the street to the water meter. Some of these service lines are made of polybutylene, which is now known to be an undesirable material, due to pipe bursting. There are also some existing water service lines made of galvanized pipe and PVC, which are also undesirable materials for service lines. This program involves replacing these water service lines with copper pipe, which is much more dependable and easier to work with.

This project is important because it will improve the reliability of water service to all District customers and ensure that all undesirable and unreliable service pipe materials have been replaced prior to the actual failure of the pipe occurring.

Water service lines that are known to be of an undesirable material will be removed and replaced. The goal of this project is to replace approximately 25 problem service lines per year. This is a preventive maintenance program that will eliminate much of the leakage and property damage, as well as unmetered water loss, caused by defective water service lines.

The estimated annual cost of the project is $50,000.

Cathedral Oaks Rd & Hwy 101 Overcrossing Project (Phase 2A)

I.I.P. Group No: G3-26
GWD Project Number: 08-3850 (Ph 2A)

Project Score: 62

Summary

Phase 2A of this project proposes to keep the District's recycled waterline in the roadway of the newly realigned section of Hollister Avenue. Also important is looping the potable waterline system in this area. This phase of the Cathedral Oaks Road/ Highway 101 Overcrossing Project involves realignment of a portion of Hollister Avenue.

Phase 2A of this project will include:

- 12" PVC recycled waterline (approximately 500') in Hollister Avenue, replacing an older 12" section of waterline that no longer aligns with the new roadway. The old section of 12" recycled waterline will be abandoned in place. This will ensure waterline accessibility in any future maintenance or repair project.
- 80' of 10" steel potable waterline and approximately 500' of 8" HDPE waterline across the Highway 101 overcrossing. The 8" HDPE waterline will be inserted into the 12" steel casing pipes installed in the bridge overcrossing as part of Phase 1.
- 880' of 10" potable PVC waterline on Calle Real. This will connect on the west at the intersection of the Hwy 101 overcrossing and Calle Real, and travel east to the intersection of Calle Real and Winchester Place where it will connect to the existing 10" PVC potable waterline. This will effectively loop the potable water system in this area.

The estimated cost of the project is $744,000

Van Horne Reservoir Slope Repair Project

I.I.P. Group No: G3-27

GWD Project Number: N/A

Project Score: 61

Summary

This project will repair the manufactured westerly slope at the base of the Van Horne Reservoir. The westerly slope has begun to slip, causing the access road surrounding the reservoir to crack and separate. This project prevents further deterioration of the slope and access road to the Van Horne Reservoir.

The District's 6.4 million gallon Van Horne Reservoir was constructed in 2002. Over time, a portion of the manufactured slope around the Van Horne Reservoir has experienced sliding. This condition will continue to worsen until the westerly slope beneath the reservoir is reconstructed at the proper slope ratio and grade.

The project consists of the reconstruction of a portion of the manufactured fill slope on the westerly side of the Van Horne Reservoir. In addition, approximately 400 linear feet of reservoir access road (including 6" curb and gutter) will be removed and replaced.

The estimated cost of the project is $372,000.

CDMWTP TU4-Chemical Building Road Improvements

I.I.P. Group No: G3-28
GWD Project Number: N/A

Project Score: 61

Summary

This project involves improvements to roads and walkways around the Corona del Mar Water Treatment Plant. This project proposes to maintain a safe working environment for District personnel working at the treatment plant, and for visitors to the plant.

The roads and walkways surrounding and through the treatment plant are used on a regular basis by employees, chemical delivery trucks, contractors, and visitors. This project will ensure that all roads and walkways in the area of the treatment plant will be kept up to District standards and in good useable condition.

Treatment plant staff, large trucks and visitors use these roads and walkways within the plant. Improvements would reduce the risk of injury to employees and visitors and maintain the access roads and walkways within the Plant site to acceptable conditions.

The estimated cost of the project is $15,000.

Recycled Waterline Preventative Maintenance Program

I.I.P. Group No: G3-29
GWD Project Number: N/A

Project Score: 60

Summary

This project is a proactive program to repair or replace sections of the District's recycled waterline system before corrosion caused leaks or breaks in the recycled waterlines occur. This project proposes to address potential problem areas before they occur, which will save the District the money that would be involved in repairing a recycled waterline pipe failure under emergency response conditions and eliminate unplanned interruptions in service.

Installation of steel waterlines in aggressive soil, as well as water conditions and the corrosive nature of the recycled water are reasons for the leaks that have been experienced. These leaks are expensive to repair, have to be reported to the Regional Water Quality Control Board (RWQCB), and the leakage of the water contained as efficiently as possible. The leaks cause service disruptions to the irrigation programs of parks, golf courses, shopping centers, and UCSB's irrigation areas. In addition, there a few restroom facilities that use recycled water. These facilities' services can be interrupted in the event of any problems.

By repairing the known bad areas before they leak, this will save time and money spent due to a controlled environment of repair versus response to emergencies. Emergency repairs can take days to complete depending on the type, size, and depth of pipe, traffic and environmental constraints associated with the emergency repair.

The estimated annual cost of the project is $20,000.

CDMWTP Recoat Wash Water Tanks

I.I.P. Group No: G3-30
GWD Project Number: N/A

Project Score: 58

Summary

This project involves inspection, repair, and painting of two steel wash water tanks at the Corona del Mar Water Treatment Plant. This project is important because this type of maintenance is needed to protect the integrity of the steel wash water tanks and the process water they store.

There are 2 wash water tanks at the treatment plant. The larger 600,000 gallon tank was built during the original plant construction in 1974. The smaller 200,000 gallon tank was built in 2002. These tanks are drained, cleaned, and inspected at a minimum of every 3 years, and a maximum of every 5 years.

These tanks hold the wash water for CDMWTP filters. The wash water is an integral component of the water treatment process, ensuring clean water for backwashing each filter. Neglecting these tanks could result in Plant process interruption.

The project includes inspection, repair and painting of the interiors of CDMWTP's Wash Water Tanks 1 and 2 with National Sanitary Foundation (NSF) 61 approved epoxy recoat. Additionally, a new heavy duty coating will be applied to exteriors of the tanks. This project will be contracted with Engineering and Inspection support.

The estimated cost of the project is $250,000.

Reservoir Inlet - Outlet Improvements

I.I.P. Group No: G3-31
GWD Project Number: 09-3939

Project Score: 56

Summary

The Barger, Fairview, La Riata and San Marcos Reservoirs all have much the same design for their inlet and outlet piping. The current piping does not allow for proper water circulation within the reservoirs. This project will allow for the retrofit of these reservoirs with improvements in the inlet/ outlet piping, eliminating the potential issues associated with the lack of circulation of water within the storage tanks.

The District has a total of 8 reservoirs. Each of the 4 reservoirs featured in this project are a very important part of the water distribution system. As such, this project will ensure improved circulation and improved water quality in these 4 storage tanks. The remaining 4 storage tanks have designs that allow for circulation of the water within the tanks.

Currently, these 4 reservoirs are constructed with common inlet/outlet piping which allows for little water circulation within the reservoirs. The longer water remains in the storage tanks without circulation, the more likely it will react with residual chlorine in the water which results in the formation of disinfection by-products. In order to avoid that and maintain a high quality water supply, it is important that water within these reservoirs is well circulated. The new inlet/outlet facilities would improve water circulation and minimize the formation of disinfection by-products.

The project consists of retrofitting the existing reservoir inlet/outlet piping and installing new inlet/outlet piping and valves to improve and promote better water circulation in the Barger, La Riata and San Marcos Reservoirs. A submersible circulating pump will be installed in the Fairview Reservoir.

The estimated cost of the project is $152,000.

Point-to-Point Radio Link Project

I.I.P. Group No: G3-32
GWD Project Number: N/A

Project Score: 54

Summary

This project would conduct field testing to confirm proper location and size of antennas at the CDMWTP and the Hollister Avenue headquarters location, while providing for the installation of equipment to establish a point-to point radio link between these locations. This project would replace the T-1 line that is currently in use that supplies this communication link between the two facilities.

This infrastructure improvement project would provide an alternative or replacement communication link between the remote Corona del Mar Water Treatment Plant, located at 1510 Glen Annie Road and the headquarters facility at 4699 Hollister Ave. The T1 com link presently in use has proven unreliable as it experiences approximately 5 service interruptions per year. The new radio link will replace the T1 link after preliminary evaluations provide the necessary data to insure reliable communications and improve upon the T-1 service performance.

The estimated cost of the project is $53,000.

CDMWTP Creek Crossing Improvement Project

I.I.P. Group No: G3-33
GWD Project Number: N/A

Project Score: 54

Summary

This project will modify and raise the McCoy Creek crossing on the access road to the Corona del Mar Water Treatment Plant. This keeps the access road to the treatment plant open at all times for emergency responders and plant personnel.

During winter storm events in the past, this creek crossing on the access road to the treatment plant has flooded, cutting off access for plant personnel until the water recedes. The photos above are an example of how much water can flow through this area during heavy rain periods.

The access road is a short, low fair- weather creek crossing which can become flooded during heavy winter storm events. Treatment plant staff cannot access the treatment plant when the road is flooded.

This project is proposed to keep the access road to the Corona del Mar Water Treatment Plant open during winter storm events, when flooding is a real possibility in the area. The project would modify the existing McCoy Creek crossing to raise the level of the access road at the bottom gate and improve drainage and access to the plant during heavy rains.

The estimated cost of the project is $829,000.

Ocean Road – UCSB 12" Waterline Project 3,000'

I.I.P. Group No: G3-34
GWD Project Number: N/A

Project Score: 54

Summary

This project proposes to loop the Isla Vista water system, which will improve overall water quality, pressure, and water system reliability in the area. There are many undersized waterlines and dead end waterlines in this part of Isla Vista. The dead end waterlines create stagnant water, which is detrimental to water quality. A new 12" waterline on Ocean Road will allow for some of these dead end runs to be connected to a new, larger diameter waterline. This keeps water flowing, improving water quality. Isla Vista has grown much more populated than planned for when these original waterlines were installed, and a new 12" waterline running from El Colegio Road to Del Playa Drive will be a big step in improving water quality, pressure, and water system reliability.

Many of the waterlines in Isla Vista were designed to serve a smaller population. Now these waterlines are too small. The District has had a continuing program of systematically upsizing old, undersized waterlines in Isla Vista over the last several years. However, there are still many waterlines in the area that are either dead end runs or just too small for current conditions.

It is proposed that a new 12" waterline be installed in Isla Vista on Ocean Road, from El Colegio Road to Del Playa Drive. In order to connect dead end waterlines on several streets to the proposed 12" waterline, the waterline needs to be a straight run from El Colegio Road south to Del Playa Drive. However, Ocean Road is not a straight run from El Colegio Road to Del Playa Drive, so an easement will be required for approximately 1,300'. The proposed 12" PVC distribution waterline will connect to the existing 12" Steel distribution waterline on El Colegio Road and travel south to Trigo Road, a distance of approximately 2,200'. The waterline will then downsize to 8" PVC from Trigo Road south to Del Playa Drive and connect to the 8" PVC distribution waterline in Del Playa Drive, a distance of approximately 800'. The total length of the proposed waterline is approximately 3,000'. Future projects will connect the existing dead end waterline runs on perpendicular streets to the new 12" waterline in Ocean Road, further looping the water system.

The estimated cost of the project is $1,689,000.

CDMWTP Clarifier Improvements (plate settlers, launders and CEC)

I.I.P. Group No: G3-35

GWD Project Number: N/A

Project Score: 54

Summary

This project involves installing plate settlers and piping modifications to the Clarifier at the Corona del Mar Water Treatment Plant (CDMWTP). These new installations will assist in removing turbidity from the water during the treatment process.

Installing plate settlers and modifying how clarified water enters the Clarifier Effluent Channel (CEC) will optimize plant performance by reducing turbidity leaving the sedimentation basins and reducing floc shear forces on water entering the CEC. This will also increase the effectiveness of the plant filtration process, providing longer filter runs at higher flow rates, along with better turbidity reduction from the sedimentation process during high raw water turbidity events, also extending filter runs.

This project involves the design and construction of modifications to the CDMWTP Sedimentation Basins (4) and CEC by installing plate settlers and piping modifications.

The estimated cost of the project is $5,789,000.

Airport Well Backwash Tank Interior Coating

I.I.P. Group No: G3-36

GWD Project Number: N/A

Project Score: 53

Summary

The interior of the Backwash Tank at the Airport Well has not been re-coated since 1984. The industry standard for re-coating is typically every 15 years, making this procedure overdue by 11 years. This project is important because the cracking and flaking inside the tank could affect water treatment and shorten the life of the backwash tank.

With this project, the District will hire a Coatings Contractor to prepare, clean and coat the interior of Airport Well Backwash Tank.

The estimated cost of the project is $15,000.

San Antonio Booster Station Relocation Project

I.I.P. Group No: G3-37
GWD Project Number: NA

Project Score: 49

Summary

This project involves relocating the San Antonio Booster Station from San Antonio Creek Road to the La Riata Reservoir off of La Riata Road. This project is important because currently the waterline in San Antonio Road that runs through the booster station is 8", which is undersized for supplying water to the San Marcos Reservoir.

The San Antonio Booster Station is currently located on San Antonio Creek Road, and is fed by a long section of undersized 8" waterline. The existing pumps discharge to an 8" waterline which furnishes water to the San Marcos Reservoir and the San Marcos pressure zone. This long undersized section of suction piping restricts the flow capacity of the existing booster station.

The San Antonio Booster Station needs to be relocated next to the La Riata Reservoir and larger diameter waterlines in order to furnish a greater amount of water to the San Marcos Reservoir and to improve fire flow capacity to the San Marcos pressure zone. The proposed new location for the booster station is off of La Riata Lane, near the existing La Riata Reservoir. New 12" diameter piping will be constructed and the new booster station will be fed by a short section of 12" waterline from the La Riata Reservoir. This will significantly improve the booster station's ability to fill the San Marcos Reservoir and deliver greater fire flow capacity to the San Marcos pressure zone.

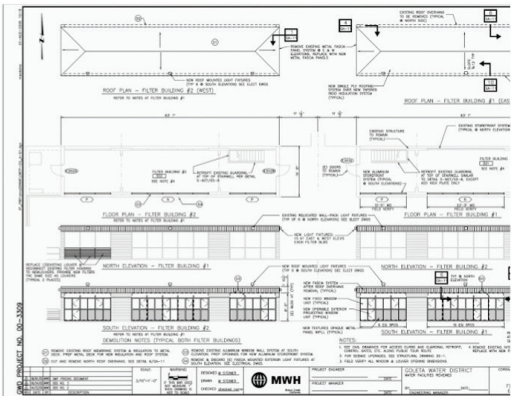
The estimated cost of the project is $1,603,000.

CDMWTP Filter Buildings Modifications

I.I.P. Group No: G3-38

GWD Project Number: N/A

Project Score: 44



Summary

This project will involve upgrades to Filter Buildings 1 and 2 at the Corona del Mar Water Treatment Plant. These buildings are 36 years old and in need of seismic upgrades and an interior remodel.

The Filter Buildings were built in 1974 when the Treatment Plant was constructed. Filter Building No. 1 contains electrical equipment that requires temperature control. Insulating the roof will help to achieve this. The bulk of the existing windows in these buildings are not operable. New operable windows will help with ventilation.

Previously defined work from the CDMWTP, Phase 2 Upgrades and Modifications, Sub-Contract Work Package: S-09A identified this as a needed project. Engineered drawings and specifications were completed at that time. The project however was cancelled due to budgetary restraints.

The estimated cost of the project is $85,000.

Fire Hydrant Installation Project

I.I.P. Group No: G3-39
GWD Project Number: N/A

Project Score: 43

Summary

This project involves a program of installing fire hydrants in areas of the Goleta Water District most lacking in fire protection.

A study was completed in 2009 with the purpose of determining areas of the District that are lacking in fire protection. The Fire Department requirements regarding placement of fire hydrants for new construction is 500 feet apart in single family residential areas and 300 feet apart in multi-family residential or industrial/ commercial areas.

Given the pattern of development over the last 65 years, there are many areas where there are now large gaps between fire hydrants. Recent wildfires have emphasized the need for additional fire hydrants. This project will allow the District to place fire hydrants where needed, starting with the areas considered to be most substandard.

This project is required to install much needed fire hydrants at various locations throughout the District where spacing between fire hydrants is lacking. The project will install 6 fire hydrants per year, with the first priority going to areas most needing extra fire protection. The installations include connections to existing District waterlines.

The estimated annual cost of the project is $51,000.

Recycled Water Replace Relief Valve GSD Booster Station

I.I.P. Group No: G3-40
GWD Project Number: N/A

Project Score: 40

Summary

This project involves replacing the existing 12" relief valve at the Goleta Sanitary District Booster Station.

This relief valve has had internal components replaced, but is approaching being beyond repair. This project will replace the valve, which will remedy the situation.

The existing 12" valve has excessive internal pitting due to cavitation and corrosive water conditions. The Distribution System Operators have been able to replace various components on the disc assembly, but internal damage to the body can only be remedied by replacing the valve itself.

The estimated cost of the project is $6,000.

Recycle Water PR Vault Relocation at Glen Annie Golf Course

I.I.P. Group No: G3-41

GWD Project Number: N/A

Project Score: 36

Summary

This project involves relocating the existing pressure reducing vault from the Glen Annie Golf Course to a more accessible location.

This PR vault is located on a public golf course. It is difficult to access the vault with a work vehicle nearby for tools. This project will alleviate this problem.

This valve is on private property and District operators need to coordinate with Golf course staff to travel to the site via the golf course. This makes accessing the vault difficult during emergencies and limits our ability to transport tools and equipment.

The estimated cost of the project is $150,000.

Kellogg 20-inch Waterline Extension/Upsize 2,000'

I.I.P. Group No: G3-42

GWD Project Number: N/A

Project Score: 36

Summary

This project proposes to provide a more reliable and improved potable water and fire protection system for the Old Town Goleta area.

Currently, the entire Old Town Goleta area is served by a 6-inch waterline in Fairview Avenue that connects to a 10" waterline in Hollister Avenue. From this, the Old Town area is typically served by a number of 6" waterlines, which are substandard in size. In addition, due to the commercial and apartment developments in the area, there is a high water demand in the Old Town Goleta area.

The installation of the 20" waterline will extend a major transmission waterline to service the area and would establish a looped system, thereby providing more reliable and improved potable water service and fire protection. A looped water system also provides customers with improved options for maintaining water service during water facilities construction or repairs. In addition, the 20" waterline extension would accommodate future waterline size upgrading in the area.

This project will extend the 20" waterline in Kellogg Avenue to the existing 12" waterline in Hollister Avenue. The project consists of approximately 2,000' of 20" waterline extending from an existing 20" waterline in Kellogg Avenue (south of U.S. Highway 101) southerly to an existing 12" waterline at the intersection of Kellogg Avenue and Hollister Avenue.

The estimated cost of the project is $1,684,000.

Covington 10" Waterline Upsize (Valdez - Fairview) 2,800'

I.I.P. Group No: G3-43

GWD Project Number: N/A

Project Score: 36

Summary

The existing waterline on Covington Way and Berkeley Road between Fairview Avenue and Valdez Avenue was installed in 1961, and varies between 6" and 8" in diameter. On Covington Way just west of Valdez Avenue, the existing waterline is 10". There have been many years of home construction in the area since 1961, requiring larger demands on the water system. District Operations personnel have concluded that a 10" waterline be installed, replacing the 6" and 8" sections.

This project is required because the existing 6" and 8" waterlines on Covington Way between Fairview Avenue and Valdez Avenue are insufficient for current conditions. GWD Standards and Specifications cite an 8" minimum waterline installation. However, upsizing to a 10" waterline will be consistent with the existing 10" waterline on Covington Way west of Valdez Avenue. Upsizing will decrease frictional loss, while increasing fire safety. This will also increase water pressure to homes in the area and improve fire protection capabilities.

The length of the proposed waterline is approximately 2,800'. Existing water meters and fire hydrants on Covington Way and Berkeley Road will need to be disconnected at the existing 6" and 8" waterlines to be abandoned and reconnected to the new 10" PVC waterline. Additionally, waterlines on seven cross streets will need to be reconnected to the new 10" PVC waterline. 3 new fire hydrants will be added to this stretch of road to ensure adequate fire protection.

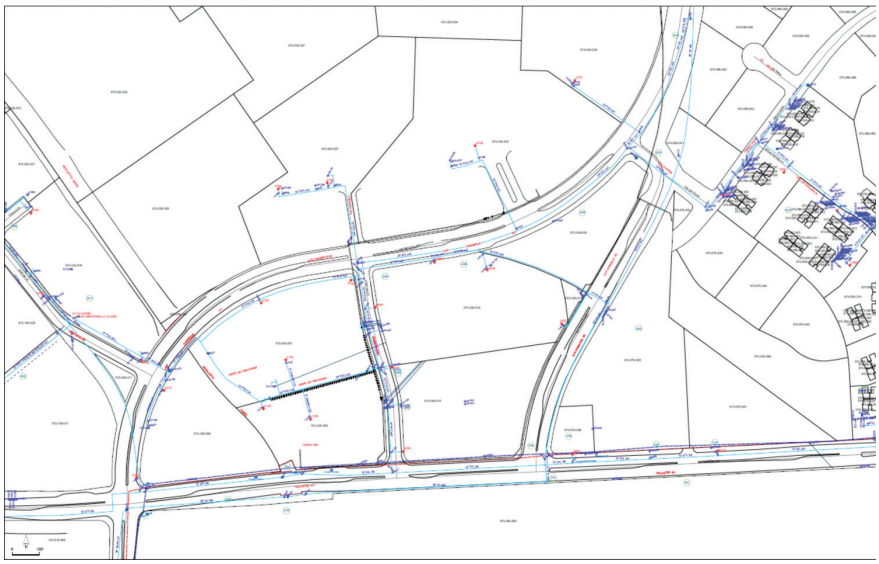
The estimated cost of the project is $1,682,000.

Los Carneros 20" Waterline Extension 1,400'

I.I.P. Group No: G3-44

GWD Project Number: N/A

Project Score: 36



Summary

This project evaluates the proposed extension of the existing Los Carneros waterline. This proposed extension includes approximately 1,400' of 20" PVC waterline on Los Carneros Road. With growth in this area in recent years, the "Village at Los Carneros" development proposed for this area, and the main on Los Caneros being the major pipeline that supplies UCSB, this waterline extension can assist the overall transmission of water for the entire area.

A sufficient amount of water for this entire area needs to be supplied from the north over Highway 101 and from the west along Hollister Avenue. Planning for interruptions in service due to waterline breaks and the pending project of the replacement of the Los Carneros Bridge which this line is on needs to be evaluated in detail for the possible extensions and the sizing of those extensions in this area.

The waterline extension project is proposed to improve water transmission in this high demand area by completing the planned extension of the 20" transmission waterline in Los Carneros Road. This will connect to the existing 20" waterline in Los Carneros south of Hollister Avenue, connect to the 12" waterline in Hollister Avenue, and address the Los Carneros Bridge replacement project.

A sufficient amount of water for the entire area needs to be supplied from the north over Hwy 101 and from the west along Hollister Avenue, which this project's evaluation and proposed facilities will address. This will ensure the entire area is not impacted by waterline breaks, temporary relocation of facilities, and increased demands by customers. Upsizing this section of waterline will create a continuous 20" waterline from north of Hwy 101 to the UCSB Campus.

The estimated cost of the project is $1,384,000.

Cathedral Oaks 20" Waterline Upsize (Paseo del Pinon - Northgate)

I.I.P. Group No: G3-45
GWD Project Number: N/A

Project Score: 36

Summary

This project proposes to increase the size of the waterline in this section of Cathedral Oaks Road because the existing waterline is only 12" in diameter, which is now undersized for existing conditions. On the east side of this project at Northgate Drive, the waterline in Cathedral Oaks Road is 20". On the west side of this project at Paseo del Pinon, the waterline in Cathedral Oaks Road is 16". This project will install a new section of 20" PVC waterline between Northgate Drive and Paseo del Pinon.

This section of 12" waterline on Cathedral Oaks Road between Northgate Drive and Paseo del Pinon was originally installed in 1969. District Operations personnel have determined that this section of waterline needs to be upsized. Installing a 20" PVC waterline will have a positive effect in increased water pressure to homes in the area. Water flow to existing fire hydrants in this area will also be boosted, ensuring sufficient protection in the event of a wildfire.

A 20" PVC transmission waterline will be installed on Cathedral Oaks Road between Paseo del Pinon and Northgate Drive, replacing the older 12" AC waterline. The distance is approximately 1,900'. The new 20" waterline will connect to an existing 16" PVC waterline at Paseo del Pinon (the west end of construction), and an existing 20" PVC waterline at Northgate Drive (the east end of construction). Existing fire hydrants and water meters on Cathedral Oaks Road and a 10" AC waterline on Brandon Drive will need to be disconnected at the existing 12" AC waterline to be abandoned and reconnected to the new 20" PVC waterline.

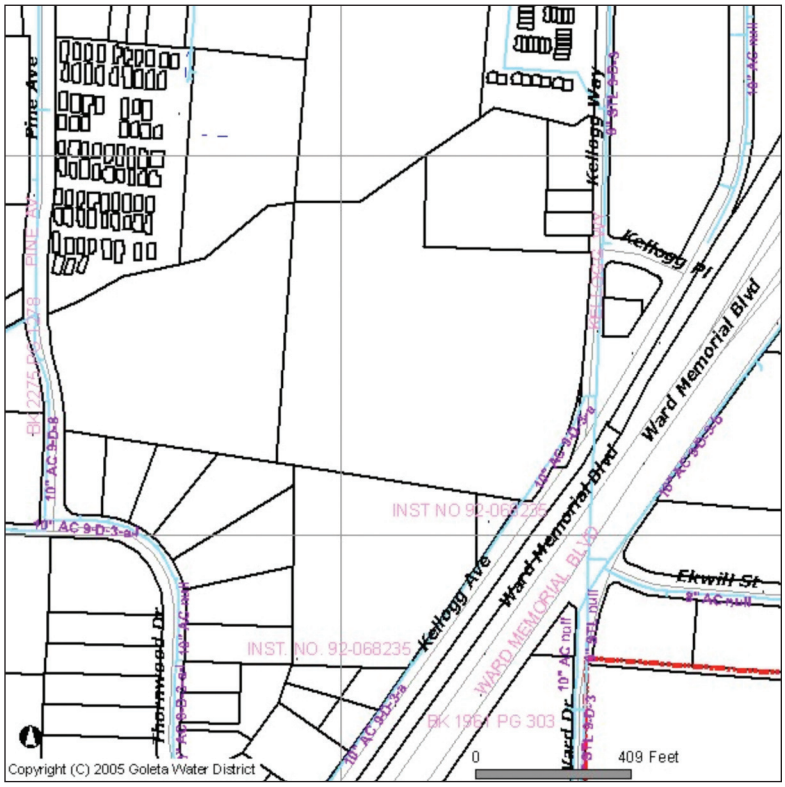
The estimated cost of the project is $1,654,000.

Ekwill 12" Waterline Extension 1,500'

I.I.P. Group No: G3-46

GWD Project Number: N/A

Project Score: 36



Summary

The City of Goleta plans to construct a new road south of Hollister Avenue to reduce the traffic volume on Hollister. Ekwill will be the new road, which will be aligned between the existing streets, Kellogg Way to the east and the Pine Avenue to the west. The distance between the existing streets is approximately 1500'. Existing waterlines run along both Kellogg Way and Pine Avenue. To connect to the existing waterlines a cut-in connection will be made to install a line valve. The installation of the new 12" waterline can then be isolated from the existing waterline and conveniently brought on-line after construction of the new road is complete.

This project is needed to loop the waterline south of Old Town Goleta to increase the reliability of the water supply to the area. The public right-of-way of the new road presents an opportunity to install a new waterline. The installation of the waterline is less expensive when performed concurrently with the road construction.

The estimated cost of the project is $1,036,000

Waterline Replacement Project

I.I.P. Group No: G3-47
GWD Project Number: NA

Project Score: 36

Summary

This project will replace waterlines that are deteriorating or undersized. This is required because such lines may fail or are undersized for an area that has developed more densely than originally anticipated.

Many of the District's distribution waterlines are old and deteriorating, or they are undersized for an area that has developed far more than originally anticipated. One or two sites per year will be chosen for the waterline replacement depending on the critical need, as well as the size and scale of each particular project. A new properly sized waterline will be installed, and the old waterline will be abandoned in place. New water services, fire hydrants and other appurtenances will be installed. Waterlines in need of replacement are listed, evaluated and prioritized using an evaluation matrix.

This project is needed to maintain effective water distribution facilities and provide adequate water service to District customers. Without periodic waterline replacements, waterline failures will increase, which would cause service interruptions to District customers and possible localized property damage due to flooding. Deficiencies in fire protection are also addressed with this project by including additional fire hydrants with the waterline replacements.

The estimated annual cost of the project is $223,000.

Cathedral Oaks - Hwy 101 Overcrossing Project (Phase 2B)

I.I.P. Project No: G3-48
GWD Project Number: 08-3850 (Ph 2B)

Project Score: 35

Summary

Phase 2B of this project proposes to extend the District's recycled water system to the north side of Hwy 101 for landscape irrigation at the Winchester Commons development. This project involves installing an 8" waterline inside the newly built Cathedral Oaks/ Highway 101 overcrossing, achieving the goal of getting recycled water across the highway. Once across the highway, the new 10" recycled waterline will continue north, north east on Cathedral Oaks Road to Winchester Circle, where the waterline will stub out for future use.

The City of Goleta, in conjunction with Caltrans, recently constructed a new overcrossing over Highway 101 by extending Cathedral Oaks Road from Calle Real over the highway to Hollister Avenue. District personnel from the Engineering and Operations departments concluded that during construction of the overcrossing would be the only opportunity to extend potable and recycled waterlines through the overcrossing to the north side of Highway 101.

Phase 2B of the project includes the installation of approximately 500' of 8" HDPE and approximately 120' of 10" steel recycled waterline on Cathedral Oaks Road. The waterline will start on Hollister Avenue, connecting to the existing 12" recycled waterline installed as part of Phase 2A of this project. There will be short stretches of 10" steel waterline on each side of the overcrossing, changing to the 8" HDPE waterline to travel through the overcrossing. The 8" HDPE will be inserted into a 12" steel casing pipe through the overcrossing, installed as part of Phase 1. The recycled waterline will then upsize back to 10" PVC, crossing Calle Real and continuing north, north east for approximately 1,550' on Cathedral Oaks Road to the intersection of Cathedral Oaks and Winchester Circle. A tee will be installed at that intersection, and approximately 100' of 6" PVC recycled waterline will be installed heading south to stub out in Winchester Circle for future recycled water service to Winchester Commons.

The estimated cost of the project is $768,000.

El Camino Well Hypochlorite Pumps Replacement

I.I.P. Group No: G3-49

GWD Project Number: N/A

Project Score: 34



Summary

This project will replace the original hypochlorite pumps with better performance pumps requiring less maintenance. The current chemical delivery pumps have reached the end of their life-cycle and need to be replaced.

Replacing the original pumps with higher performance pumps will satisfy future demands on ground water production. It will also reduce the amount of maintenance, thereby ensuring greater reliability in the delivery of quality water to GWD customers. The project will be performed by District staff.

The estimated cost of the project is $15,000.

University Well Hypochlorite Pumps Replacement

I.I.P. Group No: G3-50

GWD Project Number: N/A

Project Score: 34

Summary

This project will replace the original hypochlorite pumps with better performance pumps requiring less maintenance. The current chemical delivery pumps have reached the end of their life-cycle and need to be replaced.

Replacing the original pumps with higher performance pumps will satisfy future demands on ground water production. It will also reduce the amount of maintenance, thereby ensuring greater reliability in the delivery of quality water to GWD customers. The project will be performed by District staff.

The estimated cost of the project is $15,000.

San Marcos Well Hypochlorite Pumps Replacement

I.I.P. Group No: G3-51
GWD Project Number: N/A

Project Score: 34



Summary

This project will replace the original hypochlorite pumps with better performance pumps requiring less maintenance. The current chemical delivery pumps have reached the end of their life-cycle and need to be replaced.

Replacing the original pumps with higher performance pumps will satisfy future demands on ground water production. It will also reduce the amount of maintenance, thereby ensuring greater reliability in the delivery of quality water to GWD customers. The project will be performed by District staff.

The estimated cost of the project is $15,000.

Operations Department Lockers, Meeting Room

I.I.P. Group No: G3-52
GWD Project Number: N/A

Project Score: 34

Summary

This project will provide for the construction of an Operations Department locker room and meeting room. This is needed to provide adequate room for field staff work related needs as well as a location for staff meetings. Currently, these facilities do not exist for the Operations Department. An approved contractor will be selected by the District to design and construct the shower/locker rooms and meeting room.

The estimated cost of the project is $500,000.

Old Town Goleta - Waterline Replacement Project

I.I.P. Group No: G3-53
GWD Project Number: 05-3607 B

Project Score: 31

Summary

This project proposes to replace three old and deteriorated sections of 2" steel distribution waterline in this area, which are now undersized for the current conditions. These waterlines run through parking lots and driveways where walls and other structures have been built on top of them over the years. This project will allow for the abandonment of these undersized waterlines, and for the relocation of the water meters attached to these lines. New service waterlines to the relocated meters will be installed and connected to the larger existing waterlines in Hollister Avenue, Fairview Avenue, and side street streets in the area.

The three 2" steel waterlines that this project involves were installed in 1952 with no concept of how much this area would ultimately grow. The District's Standards and Specifications require a minimum of 8" for waterline installations. The existing waterlines have had leaks in recent years, and the longer these waterlines stay in operation, the more leaks are to be expected.

This project will abandon three sections of 2" steel waterline in the Old Town area of Goleta. A total of 14 water meters which are currently connected to the 2" waterlines will be relocated out to the sidewalk area where they will be more accessible for maintenance and meter reading. New service waterlines for the meters will be installed and connected to the larger existing waterlines on Hollister Avenue, Fairview Avenue Orange Avenue, or Magnolia Avenue. The three existing 2" waterlines are currently located in easements on private property. After these waterlines are out of service and abandoned in place, the District will be able to abandon the three easements.

The estimated cost of the project is $119,000.

Operations Department Office for Meter Crew Chief

I.I.P. Group No: G3-54
GWD Project Number: N/A

Project Score: 31

Summary

This project proposes the construction of an office for the District's Meter Crew Chief. This is needed to accommodate the office related needs associated with such a supervisory position. The meter crew chief needs an office that is conducive to a proper work environment and is comfortable, safe and healthy. This space will also provide a location for the Crew Chief to meet with his staff in private.

Currently the Meter Crew Chief's work space is in a large open warehouse. The warehouse has limited heating and no air conditioning. In addition, there is no appropriate location for staff meetings.

An approved contractor will be selected by the District to design and construct an enclosed office space for the Meter Crew Chief.

The estimated cost of the project is $35,000.

Dry-Barrel Fire Hydrants Replacement (40)

I.I.P. Group No: G3-55
GWD Project Number: N/A

Project Score: 31

Summary

This project proposes the removal and replacement of the dry barrel fire hydrants throughout the District's distribution system. It is needed to provide consistent fire facilities for use by fire crews.

Currently, there are a number of dry barrel fire hydrants throughout the District. There is no advantage to retaining the dry barrel fire hydrant. Generally, the main reason for maintaining a dry barrel fire hydrant system is to protect the hydrant in colder climates, an application that does not fit the Goleta and Santa Barbara areas.

The need to remove and replace the dry barrel fire hydrants throughout the District's distribution system is based upon the following reasons.

- Fire crews would prefer to see consistency throughout the water system.
- The concept and design purpose of a dry barrel fire hydrant isn't applicable to the weather in Santa Barbara.
- The engine range of hookups varies depending on whether they are connecting to a wet or dry barrel (both outlets are hot from one stem).
- Dry barrel hydrants only contain two 2/1/2" outlets and no 4" connection.
- In an emergency, bigger is better. Wet barrels contain 4" outlets which provide greater flow capabilities.
- Firemen need to shut down all flow to a dry barrel to augment or correct any connections made to outlets after flow has begun.
- Wet barrels allow you to continue fighting a fire with one outlet while making changes to the other.

District forces will be able to remove the dry barrel hydrants and replace them with wet barrel hydrants.

The estimated cost of the project is $350,000.

Relocate Turnpike & La Gama Vault

I.I.P. Group No: G3-56
GWD Project Number: N/A

Project Score: 31

Summary

This project will provide for the relocation of the pressure reducing (PR) vault at Turnpike Road and La Gama Way. Currently this PR vault is located in the middle of Turnpike Road. In order to access the vault, District operators are exposed to considerable vehicular traffic. Given its current location, this PR vault needs to be moved to a safer and more practical location for maintenance purposes.

An approved contractor would be selected by the District to relocate the pressure reducing vault and facilities.

The estimated cost of the project is $150,000.

Creek Crossing Inspection and Repair Program

I.I.P. Group No: G3-57
GWD Project Number: N/A

Project Score: 31

Summary

This project will continue the District's maintenance program to inspect, identify and repair exposed distribution piping at creek crossings. This is necessary to maintain adequate water flow to District customers.

Currently there are approximately 100 known locations where District water mains span either over or under creek crossings. These crossings require periodic inspection to determine recent erosion and the need to either repair or relocate the pipe if extensive erosion has occurred. This will help prevent waterline failure or emergency events in the future. Out of the 100 crossings, staff has identified 10 sites that require improvement.

The estimated annual cost of the project is $15,000.

CDMWTP Bulk Chemical Tank Safety Platform

I.I.P. Group No: G3-58

GWD Project Number: N/A

Project Score: 27

Summary

Currently, plant personnel need to install extensive temporary equipment to meet Occupational Safety and Health Administration (OSHA) regulations for fall protection while inspecting the chemical tank interior or performing routine maintenance. This project will provide for the design and construction of permanent work platform(s) that provide fall protection and allow treatment plant staff to work efficiently above and around the access hatches and tank instrumentation. The permanent platforms will better meet OSHA regulations in this regard.

An approved contractor will be selected by the District to design, construct and install work platform(s).

The estimated cost of the project is $40,000.

Project Name: CDMWTP Shop Buildings Remodel

I.I.P. Group No: G3-59
GWD Project Number: N/A

Project Score: 27

Summary

This project proposes to remodel the Shop/Maintenance and Control Systems Technicians (CST)/Operator On-call quarters buildings. This project makes the best use of an existing building.

Building upgrades had previously been defined by the CDMWTP, Phase 2 Upgrades and Modifications, Sub-Contract Work Package: S-09A. Engineered drawings and specifications had been completed. The project however was cancelled due to budgetary constraints at that time.

When upgrades are made to the building, seismic improvements will be addressed as well, providing a safer, more maintainable and presentable environment for visitors and GWD staff.

The project will complete the work recommended from the original project. The work will include the following:

- Asbestos Abatement
- Strip and replace the roofing
- Glazing
- Seismic upgrades
- Interior remodel

The estimated cost of the project is $350,000.

8" Waterline Loop at La Vista-Alta Mira Booster Stations 850'

I.I.P. Group No: G3-60

GWD Project Number: NA

Project Score: 25

Summary

The project provides for the installation of approximately 850' of 8" PVC waterline at the north ends of La Vista Road and Alta Mira Drive to connect and loop the existing waterlines in these roads. This project provides fire protection and a looped water system for the area.

The existing waterlines in La Vista Road and Alta Mira Drive come to dead ends several hundred feet short of creating a looped water system. There are no fire hydrants beyond where the waterlines currently end. These dead end waterlines are fed by the La Vista and Alta Mira Booster Stations.

The project also involves the installation of a new fire hydrant at the high point of the proposed loop waterline. In addition, it will connect the piping for the two booster stations thus improving water service reliability and allow for adjustments to be made to the two booster stations to reduce operations and maintenance costs.

The estimated cost of the project is $313,000

GWC Chlorination Modicon Compact PLC Replacement

I.I.P. Group No: G3-61
GWD Project Number: N/A

Project Score: 22

Existing PLC

Newest version

Summary

This project proposes to replace two (2) unsupported "Modicon Compact" line Programmable Logic Controllers (PLC) and Input/Output (IO) cards at the Glen Annie Turn Out and the Ellwood Chlorination Station with the current crossover model "Modicon M340".

The original PLC and IO units were installed in 2000. Replacement parts for the "Compact" line are becoming more difficult to obtain due to the age of this electronic equipment.

Efficiently monitoring and controlling the chlorination process is critical to proper water treatment. The changeover to the M340 allows for all field wiring to remain unchanged, therefore providing a lower cost to upgrade. This project will increase reliability and serviceability to these two facilities providing product to customers in the Goleta West Conduit served area.

The estimated cost of the project is $15,000.

CDMWTP Flash Mix 1 Entry Modifications

I.I.P. Group No: G3-62
GWD Project Number: N/A

Project Score: 16

Summary

This project proposes to design and construct an ergonomically friendly and secure enclosure over the stairway leading to Flash Mix Vault 1. This project will eliminate the lifting hazard posed to operators, secure the treatment process within the vault and protect the facility against weather and bird nesting.

The existing access opening for Flash Mix Vault 1 has a large and heavy aluminum door, which must be manually lifted to open. Operators are required to enter the vault once per shift to inspect this critical part of the treatment process. Due to the potential lifting injury to staff, it is currently left in the open position. This does not properly secure the vault, and allows rain water and birds to nest in the stairway. This project will eliminate the lifting hazard, secure the treatment process, and protect against weather and bird nesting.

An approved contractor will be selected by the District to design and manufacture the vault door.

The estimated cost of the project is $8,000.

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Financial Benefit Projects

Electronic Document Management System

I.I.P. Group No: G4-3
GWD Project Number: N/A

Project Score: 72

Summary

The District currently has Worksite MP document management software integrated with the Geographic Information System (GIS). Any documents or photos associated with District facilities are stored in the Worksite MP for easy access.

This project is intended to be a proactive program to enhance the District's ability to comprehensively organize all of its files. Over the years, thousands of important documents have been developed and currently are managed across departments and buildings. When performing necessary analysis and research, the lack of a consolidated and comprehensive document management system challenges the District's ability to retrieve supporting documents and identify the relevant information that should be incorporated into decision-making. Today's inefficient manual documentation practices result in documents being moved, mislocated, or redundant copies being made by departments.

As currently conceived, the project would be divided into 3 phases. Phase 1 would assess the District's current ability and needs, afterwards developing alternative approaches to this project. Phase 2 would take the District's archived documents, which include management documents, operational documents, easement documents, contracts, maps and similar information, and reproduce them in electronic form for improved retrieval capability. The goals of this phase would be to capture electronic images of existing paper documents by utilizing scanners or multifunctional printers or by utilizing optical character recognition software in order to convert digital images into machine readable text.

Phase 3 would incorporate newly developed documents into an electronic document management system. For all phases, the goals are to create a user friendly system that will have the capability for:

- Indexing and tracking electronic documents.
- Storing electronic documents.
- Retrieving electronic documents from storage utilizing multiple key words or phrases.
- Document security.
- Workflow utilization so that the document can be accessed where and when necessary.
- Reproduction of documents.

The estimated cost of the project is $450,000.

District-Wide Fixed Base Meter Reading System

I.I.P. Group No: G4-4

GWD Project Number: N/A

Project Score: 69

Summary

This Automated Meter Reading (AMR) project proposes to provide an improved meter reading service to the 16,600 meters located in the District. It provides accurate data in a number of areas that is readily accessible by both the customer and the District.

The District-wide fixed base meter reading system consists of transmitters (meters) and receivers (reading software). These systems can be either hard wired with information sent through cable or telephone lines, or wireless with repeater towers or antennas. This together with the reading software will allow the District to view water usage down to the minute, which will help customer service and billing with customer usage complaints and conservation activities. This software is also able to detect customer leaks using the theory that no customer uses water continuously 24 hours a day, therefore if a meter runs continuously for 24 hours it sends up a flag on the account.

This AMR project serves the customer as well as the District in being able to provide real time meter reading that could be printed out to show customers an accurate chart of their water usage. This could also be provided over the internet. Additionally, the software is able to detect reverse flow events through the meter, assisting the District with any backflow issues and water quality concerns. This project eliminates the need to send a service person to the location of the meter to obtain final and initial readings on customer changes. In addition, with the communication system in place, additional hardware could be installed to detect system leaks on a continuous basis and provide remote disconnection of service.

An approved consultant would install the necessary hardware and software to integrate AMR into the District's existing metering system. A contractor would be hired to assist District personnel in the installation of the meters, depending upon the time frame of the project.

The estimated cost of the project is $4,384,000.

CDMWTP Lab Equipment for Nitrate Analysis

I.I.P. Group No: G4-5

GWD Project Number: N/A

Project Score: 61

Existing equipment (foreground)

Example new Ion Chromatograph (IC)

Summary

This project proposes the purchase of an ion chromatograph which better meets the state's reporting requirements for Nitrate testing. The laboratory's current method for nitrate testing utilizes older equipment and makes consistent results difficult to achieve at times.

An ion chromatograph will allow for a larger volume of analyses and can also be used to measure the concentrations of other water quality parameters. The ion chromatograph would reduce the amount of outsourced analyses and shipping costs. An analysis will review the ion chromatographs from different vendors as well as price and the cost of maintenance, training, and parts. This will also include reagents that need reordering, ease of use, and waste disposal versus the cost of completely outsourcing the testing of Nitrates. A cost benefit analysis will be performed and the most economical method will be utilized.

The estimated cost of the project is $90,000.

Well Centralization Study of Well Water Treatment

I.I.P. Group No: G4-6

GWD Project Number: N/A

Project Score: 53

Summary

This project proposes to study the feasibility of implementing a centralized treatment facility for the District's existing water production wells. This project includes review of the District's existing wells and wellhead treatment, identification of possible centralized treatment sites, and evaluation of the feasibility of creating a centralized well water treatment facility.

Currently all existing District wells have localized wellhead treatment equipment at each individual well site. This results in the need for several small scale treatment units and the need for chemical deliveries in small quantities to these scattered sites, as well as varying water quality results that while meeting standards can affect the perception of the quality of the water by the customer.

Creation of a centralized well water treatment facility would allow raw well water to be piped to a central location for treatment and distribution, boosting water quality consistency and uniform blending into the distribution system. Although significant new piping may be required, this has the potential to reduce operating costs, and improve customer satisfaction in regards to the well water use. A study of the feasibility and cost effectiveness of such a centralized system is necessary to determine if this should be integrated into the District's supply system.

An approved consultant would be selected to conduct the study, present a number of alternatives and recommend the most viable options.

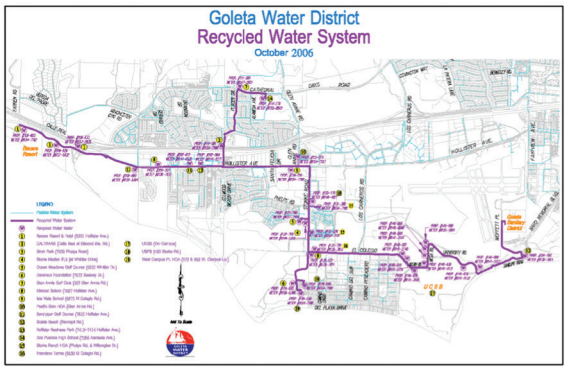
The estimated cost of the project is $119,000.

Recycled Waterline in Fairview Rd - Hollister Ave

I.I.P. Group No: G4-7

GWD Project Number: N/A

Project Score: 38



Summary

This project proposes the installation of several large diameter waterlines in order to loop the recycled water system and significantly improve reliability of service to District customers.

The recycled waterline is configured in a linear fashion. If the recycled waterline breaks or needs repair, all customers downstream from where service is interrupted will be out of recycled water (UCSB, Bacara, Glen Annie Golf Course). A loop system will allow recycled water to be supplied to customers from a different area of the distribution system. Only customers between the recycled water reservoir and the break/repair would be out of service. As an example, UCSB could be out of water, but the District could still supply water to Bacara and Glen Annie Golf Course. The end of the first phase of the recycled waterline extension will provide the opportunity for Twin Lakes Golf Course to irrigate with recycled water.

This project includes installation of 5000' of large diameter C905 PVC recycled waterline. The various waterline diameters are 20", 16" and 12". This is the first phase of looping the system, representing approximately 1/3rd of the length of the pipeline required to complete the loop at Storke and Hollister. The point of connection (POC) for the recycled waterline is just outside of the GSD WWTP. From the POC, the line will be aligned to the north in Moffett Place. The alignment will continue in the roads that border the Airport on the east. The alignment of the recycled waterline will continue from Moffett Place, east on Fowler Road, north on Fairview Avenue and west on Hollister. The recycled waterline will continue west on Hollister Avenue and end approximately 300' past the San Pedro Creek at Twin Lakes Golf Course.

The estimated cost of the project is $3,564,000.

CDMWTP Softening Study to Improve Water Quality

I.I.P. Group No: G4-8
GWD Project Number: N/A

Project Score: 34

Summary

This project proposes to perform a study of the feasibility, cost and water quality impacts related to reducing water hardness leaving Corona del Mar Water Treatment Plant. Water softening has many advantages both for the District's customers and the District as well.

Water leaving the treatment plant is typically in the range of 200 to 380 mg/L of Total Hardness. This is considered very hard water. Water hardness contributes to white scale buildup on home water fixtures, which limits the effectiveness of detergents used for cleaning in the individual homes in the District. Currently, for customers to enjoy the benefits of soft water, they need to install or maintain their own home water softener.

Hard water entering the area's waste water treatment plant includes a significant amount of salt which affects not only the water quality leaving the waste water treatment plant, but also the water quality in the District's recycled water system.

Reducing water hardness benefits customers by reducing white scale buildup on home water fixtures and increasing the effectiveness of detergents. Additionally, customers will no longer need to install or maintain their own home water softener, and this typically improves the taste of the water. Other environmental benefits include reduction of salts entering the area's waste water treatment plant, due to no longer needing water softeners. This would not only improve the water quality leaving the waste water treatment plant, but also improve water quality in the District's recycled water system.

While it is clear that water softening provides many benefits to water treatment and consumption, a study of the feasibility of adding water softening facilities to the CDMWTP and the type of softening proposed is needed to determine if it is practical as well as beneficial to the customers.

An approved consultant will be selected by the District to perform the study. Viable options and recommendations based upon the findings of the study will be developed.

The estimated cost of the project is $100,000.

Well Sites – Zero Liquid Discharge Study

I.I.P. Group No: G4-9
GWD Project Number: N/A

Project Score: 33


Summary

This study proposes to determine the feasibly of reducing or eliminating water discharges from well operations to water ways, storm drains, creeks or sanitary sewers. Currently, water is discharged into sewer or storm drain systems during well production and injection operations, which incurs expenses to the Goleta Sanitary District.

By treating the water that's being wasted to sewer or drain during well production and injection modes, the District can reduce expenses to the Goleta Sanitary District.

The study would be performed by a contracted engineering firm to put together a cost analysis of retaining, treating and recycling all process backwash and flush water used to maintain the wells.

The estimated cost of the project is $100,000.

Recycled Waterline Extensions

I.I.P. Group No: G4-10

GWD Project Number: N/A

Project Score: 29

Summary

This project proposes the continuation of adding connections to the existing recycled water system. This increases the use of recycled water while decreasing the use of potable water, thereby increasing the level of conservation of potable water.

The community is becoming aware of the benefit of recycled water use as a conservation measure. Recycled water conserves potable water supplies and aids in the establishment of a stable water supply for the community. Currently, a Water Supply Management Plan is being developed that analyzes all sources of water for the community, which includes the most cost effective means available to meet customer demands for water during wet and drought conditions. In addition, an Urban Water Management Plan (UWMP) is also being developed that is required by law to be updated every five years. The UWMP will include measures for conservation activities and methods for developing the required savings in water by the year 2020. Converting potable water use to recycled water use is one conservation measure that will be included in the UWMP. The existing recycled water system has excess capacity that is available to meet customer demands for irrigation and non potable water uses. Currently, an analysis is being performed to identify potential customers for recycled water that are in close proximity to the existing system.

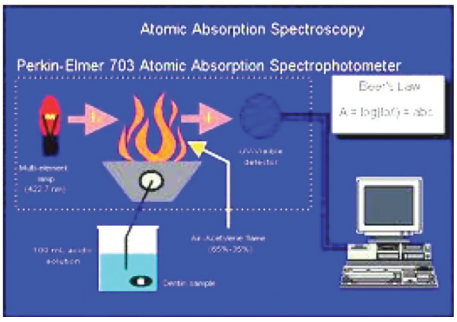
This project will provide for the installation of recycled waterlines in close proximity to the existing recycled waterlines to convert existing customers who use potable water for irrigation and non-potable uses to recycled water. This project will support the goal of reducing potable water use.

The estimated cost of the project is $50,000 per year.

CDMWTP Atomic Absorption Unit Metals Testing

I.I.P. Group No: G4-11
GWD Project Number: N/A

Project Score: 20



Need for Project

This project proposes the purchase of an atomic absorption unit for the CDMWTP. An atomic absorption unit analyzes various water samples for metal concentrations. The purchase would reduce the dependence and cost of outside lab expenses, and reduce testing time for quicker results.

The District will review the atomic absorption units from different vendors, pricing, supply costs, training expenses, and labor time versus the cost of conducting the tests by an outside commercial lab, which is currently the practice. A cost benefit analysis will be completed for determining the most efficient method of conducting these tests.

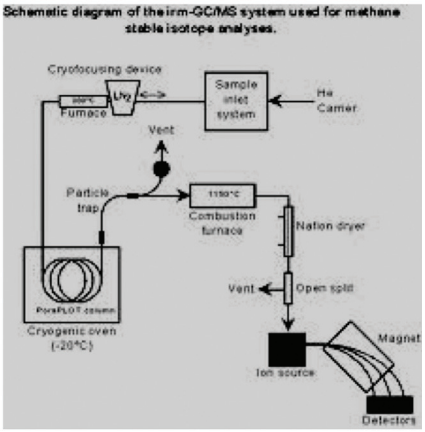
The estimated cost of the project is $150,000.

CDMWTP Spectrophotometer TTHM, HAA5, VOC, SOC

I.I.P. Group No: G4-12

GWD Project Number: N/A

Project Score: 20



Summary

This project proposes the purchase of a gas chromatograph/mass spectrometer for the CDMWTP. A gas chromatograph/mass spectrometer is required to perform analyses on organic constituents found in drinking water such as trihalomethanes, halocetic acids, synthetic and volatile organic chemicals.

The laboratory currently sends out all organics analyses to an outside laboratory. By performing analyses in-house, the District will reduce shipping and contractor fees. Having the equipment on-site will allow for quicker turnaround time in case there is a need for immediate results.

The District will review the gas chromatograph/mass spectrometers pricing from different vendors. The cost of maintenance, training, parts and reagents that need reordering, ease of use, waste disposal and labor costs to conduct the tests will be performed. A cost benefit analysis will be performed to determine the most cost effective method to conduct these analyses. This will help determine whether the District should continue having an outside commercial lab perform these analysis (current practice) or purchase the equipment and perform the tests by District employees.

The estimated cost of the project is $100,000.