

SOLANO IRRIGATION DISTRICT

TECHNICAL MEMORANDUM #1

WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM
CAPITAL REPLACEMENT CHARGE

JUNE 2014

I. BACKGROUND AND OVERVIEW

The Solano Irrigation District (District) maintains two major categories of capital facilities that serve District customers.

The first category generally includes the Solano Water Project facilities that deliver water from Lake Berryessa to the District's Municipal and Industrial (M & I) service areas. Under the terms of the original federal funding used to build the Solano Water Project, the District is required to maintain a "rehabilitation and betterment" program and funding for these facilities. The District collects a General Assessment from property owners in the District to pay for rehabilitation and betterment projects. This General Assessment appears on property owners' property tax bill.

A second category includes the capital facilities that treat and/or deliver water from the Solano Water Project system to individual M & I service areas. The District has historically maintained these M & I service area capital facilities through an annual maintenance program, but the District has not previously established a funding mechanism to pay for the long term replacement of the M & I service areas' capital facilities (with the exception of one particular capital facility in Gibson Canyon, where a component of the water rates is allocated to the replacement of water treatment plant membranes).

In 2012, the District prepared a five-year Capital Improvement Program Schedule, preliminarily identifying costs and schedules for the replacement of M & I service areas' capital facilities.

In 2013, the District initiated a program to begin to fund the replacement of the M & I service areas' capital facilities. A Capital Replacement Charge ("CRC") was approved by the District Board of Directors. The CRC is currently \$10 per month for $\frac{3}{4}$ " services, increasing proportionately for larger services. The CRC appears on customers' water bills. The funds collected from the CRC are set aside in separate accounts for each M & I service area.

When the \$10 per month CRC was adopted, the District acknowledged that this amount was a "placeholder" until such time as the District could identify a longer term schedule and updated cost estimates for the replacement of the M & I service areas' capital facilities. The District has now prepared a ten-year Capital Improvement Program for each M & I service area. The Capital Improvement Program establishes the timing and cost of capital replacements considered necessary to ensure water quality and reliable delivery to M & I service area customers.

This Technical Memorandum #1 provides a description of the schedule and cost for the replacement of the M & I service areas' capital facilities. It also identifies the funds that will be generated by the current \$10 per month CRC within each M & I service area.

The District intends to share this information with its customers. A subsequent Technical Memorandum will identify funding alternatives to implement the Capital Improvement Program.

II. SOLANO IRRIGATION DISTRICT MUNICIPAL AND INDUSTRIAL SERVICE AREAS

The District currently provides potable (drinking) and non-potable water to customers in many distinct geographic M & I service areas in Solano County. There are fourteen (14) M & I service areas included in the Capital Improvement Program, including public water systems (PWS) and non-public water systems (NPWS). The service areas are also classified as Industrial and Residential Service Areas, as follows:

Residential Service Areas:

- Blue Ridge Oaks NPWS
- Blue Ridge Oaks PWS
- Elmira PWS
- Gibson Canyon PWS
- Quail Canyon PWS
- Tolenas PWS

Industrial Service Areas:

- Allison/Ulatis NPWS
- Fairfield Corporate Commons NPWS
- North Cordelia NPWS
- North Village NPWS
- Nut Tree NPWS
- Paradise Valley NPWS
- Peabody PWS
- Stocking Ranch PWS

Exhibit A, attached to this Technical Memorandum #1, is a map showing the location of the District's M & I service areas.

III. MUNICIPAL & INDUSTRIAL SERVICE AREAS' CAPITAL IMPROVEMENT PROGRAMS

Each individual M & I service area has its own unique water treatment facility, mechanical system and water delivery system. Exhibit B to this Technical Memorandum #1 provides the Capital Improvement Program identified for each M & I service area. The timing for capital replacement projects is based on industry standard estimates of useful lifetimes. Exhibit B also provides the estimated cost of replacing the capital facilities, in current 2014 dollars.

The capital replacement projects fall into the following general categories:

Condition Assessment

A condition assessment will be conducted in each M & I service area to review the existing condition of assets (pipelines, meters, pumps, valves, services, etc.) and to conduct tests to determine the expected remaining useful lives of the assets. Many factors affect useful lives. Some common factors include the reactivity of the soil to corrode metals, pressure and pressure transients, external loads, and the stability of the soils in the area. A condition assessment is an important step in confirming conditions and remaining useful lives of facilities, and ensuring long term sustainability of the water delivery system.

Meter Replacement

Meters are devices that measure the volume of water delivered to a customer. This is how the District measures and bills customers for water used.

The meters are RadioRead, which means that the meters send a radio signal to a District vehicle driving through the area. Based on District studies, the average schedule for meter replacement is every fifteen (15) years. The meters will be planned to be replaced on this schedule, with every other replacement coinciding with a service replacement (as described below). Based on the future condition assessments, the meter replacement schedules may be revised.

Service Replacement

Service replacements include replacing the pipe between the main supply pipeline and the meter. The service saddles and meter yokes will be inspected during the replacement of the service pipelines, and will be replaced if necessary.

The industry standard average schedule for service replacement is every thirty (30) years. The services will be planned for replacement on this schedule unless the condition assessment dictates a shorter or longer replacement schedule.

Hydrant Replacement

The District has wharf hydrants located throughout the District, used for flushing main pipelines. They have also been used as a convenience for rural fire fighting. Please note, however, there is no guarantee of fire flow or water being available at all times since water delivery is seasonal and systems are not designed to provide urban fire flows and emergency supplies.

For planning purposes, the District considers a seventy-five (75) year schedule to be acceptable. The hydrants will be planned for replacement on this schedule unless the condition assessment dictates a shorter or longer replacement schedule.

Pipeline Replacement

Pipelines are the way water is delivered to District public and non-public water system customers. The pipelines are typically buried in or near streets, or located within easements on customers' properties. Newer pipelines are typically constructed from PVC.

While the industry standard for PVC was forty (40) years, recent studies have shown that PVC pipe can be replaced on a seventy-five (75) year schedule. The pipelines will be planned for replacement on this schedule unless the condition assessment dictates a shorter or longer replacement schedule.

SCADA Controls

SCADA stands for Supervisory, Control and Data Acquisition. SCADA controls allow remote monitoring and control of water plants. While most District facilities don't have SCADA already installed, some high costs are attributed to the replacement of Program Logic Controllers (PLC's) that currently control the plants. Many plants, where a high cost is shown, have old PLC's that are no longer supported and can't be repaired, which will cause significant down time in the event of failure if proper planning is not followed for their replacement. The District is beginning to see many of the old PLC's experiencing failure.

The industry standard average schedule for SCADA equipment replacement is every fifteen (15) years. The equipment will be planned for replacement on this schedule.

Pumping Plant Reconstruction

Pumping plants are some of the most complex facilities in the District, have the highest maintenance costs and relatively short useful lives, compared with other District facilities, such as pipelines.

The industry standard average schedule for complete plant replacement is every fifty (50) years. There are three components that will be assessed and scheduled: mechanical, electrical and structural. The plants will be planned for replacement on this schedule unless the condition assessment dictates a shorter or longer replacement schedule.

Treatment Plant

Treatment plants are even more complex than pumping plants because of the filtration and chemical disinfection equipment required to meet drinking water quality standards.

Each of the components within the treatment plants will be planned for replacement based on industry standard average schedules for those components. These are very similar to pumping plants. Membrane filters are planned to last ten (10) years, while proper maintenance can potentially extend that lifetime.

Brazelton Lateral Pipeline Replacement (Gibson Canyon PWS)

This project replaces a pipeline that is overgrown with trees and has historic repeated leaks requiring repair.

Pre-Treatment (Gibson Canyon PWS)

This project installs pre-treatment of the incoming raw water to the membranes located within the treatment plant, which is a standard feature of modern plants. Pre-treatment is expected to increase the uptime of the membranes, helping to ensure water supply reliability during peak demand flows. This will become especially important as demands increase on the system. Pre-treatment may also help to extend the life of the membranes, or their productivity up to the point of failure.

Filter Upgrades (Nut Tree NPWS)

This project will upgrade the filters and repair the leaking filter tanks. This project will ensure that the filtration system is in good working order and reduce water losses from the system.

Tank Replacement/Relining (Elmira PWS)

This project is a rehabilitation of the existing steel water storage tank. The project scope includes cleaning the tank, sand blasting the interior coating and recoating the interior of the steel storage tank.

Chlorinator (Quail Canyon PWS)

This project will add a needed redundant chlorinator system, because the current system does not afford a convenient way to add chlorine should the chlorinator system fail at the well. This was recently documented when the chlorinator pump failed without warning.

Reserve for Capital Replacement

The Capital Improvement Program identified in Exhibit B includes only those capital replacement projects that are planned to be constructed in the next ten years (2015 - 2024). Ideally, each M & I service area should also be accumulating partial funding for capital replacement projects that need to take place following 2024.

A line item entitled *Reserve for Capital Replacement* is included in M & I service areas in which the current \$10 per month CRC exceeds the funding required for the 2015 - 2024 period, showing an accumulation of funds for use during the following ten-year period.

No funds accumulate in the *Reserve for Capital Replacement* in the M & I service areas in which the current \$10 per month CRC does not generate sufficient funds to cover the cost of the 2015 - 2024 capital replacement projects.

IV. CAPITAL REPLACEMENT CHARGE FUNDING ANALYSIS

The District implemented a Capital Replacement Charge (“CRC”) in 2013. The CRC is \$10 per month for ¾” services, increasing proportionately for larger services. Exhibit B provides an analysis for each M & I service area, identifying the balance of funds collected at the beginning of 2014, the annual revenue expected to be received by the District from the \$10/month CRC from 2014 through 2024, and the capital replacement costs that will be incurred if projects proceed on the schedule identified in the Capital Improvement Program.

Several factors should be noted relative to Exhibit B:

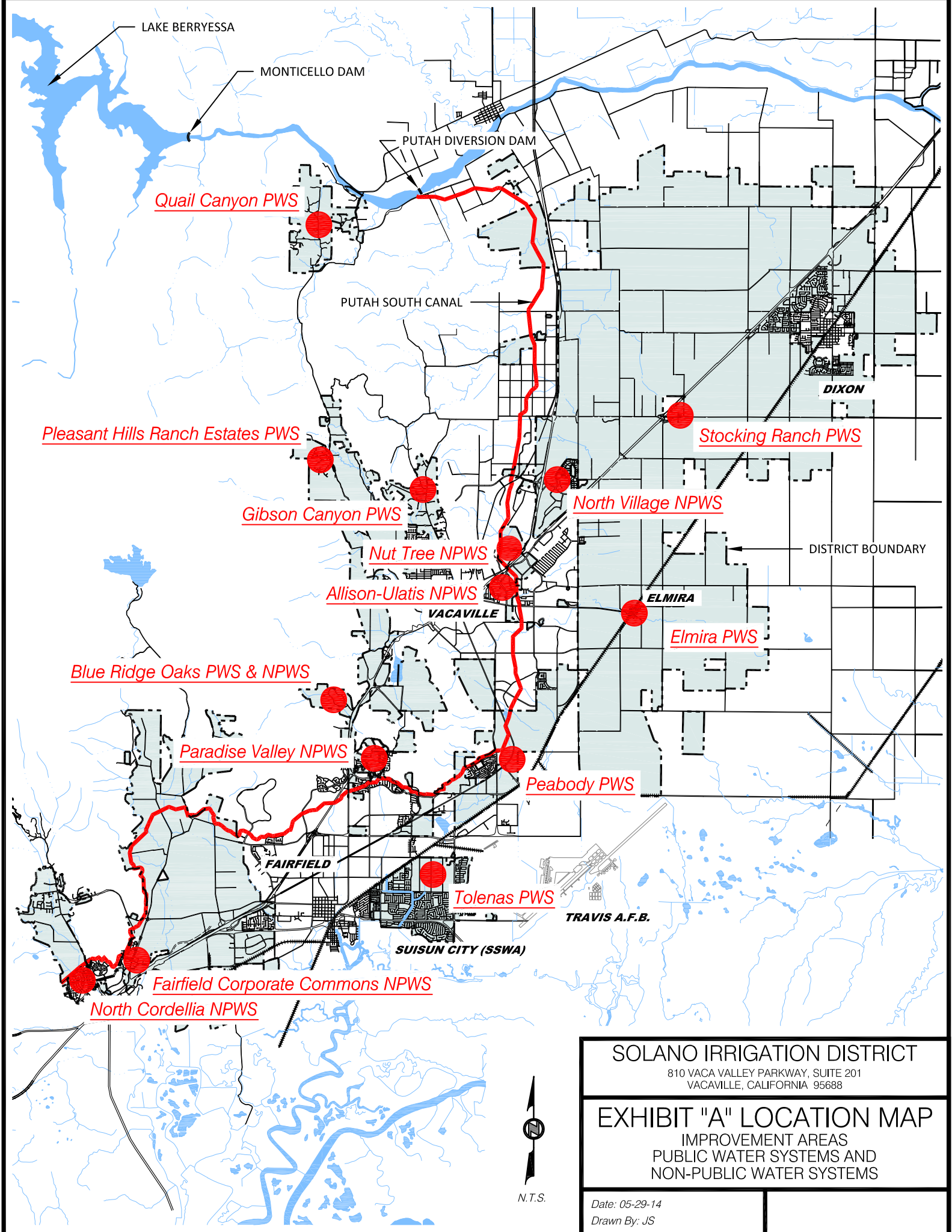
- CRC revenues are based on the existing number of customers and meters.
- Capital project costs are based on current (2014) cost estimates. Inflation escalations are not included in the cost analysis.
- Interest income on accumulated funds is not included in the analysis.
- Borrowing costs for projects in M & I service areas that have insufficient accumulated funds are not included in the analysis.

V. FREQUENTLY ASKED QUESTIONS

The District understands that customers will have questions regarding the Water System Capital Improvement Program and Capital Replacement Charge. A “Frequently Asked Questions” or “FAQ” is attached to this Technical Memorandum #1 as Exhibit C, with answers to some questions that the District anticipates from customers. District staff will be available at public meetings to answer any additional questions that may arise.

VI. SUMMARY

This Technical Memorandum #1 is intended to provide background information, Capital Improvement Program information, and an initial Capital Replacement Charge funding analysis. A subsequent Technical Memorandum will identify additional funding alternatives for the implementation of the Capital Improvement Program for the replacement of existing capital facilities in the M & I service areas.



LAKE BERRYESSA

MONTICELLO DAM

PUTAH DIVERSION DAM

Quail Canyon PWS

PUTAH SOUTH CANAL

DIXON

Pleasant Hills Ranch Estates PWS

Stocking Ranch PWS

Gibson Canyon PWS

North Village NPWS

DISTRICT BOUNDARY

Nut Tree NPWS

Allison-Ulatis NPWS

VACAVILLE

ELMIRA

Elmira PWS

Blue Ridge Oaks PWS & NPWS

Paradise Valley NPWS

Peabody PWS

FAIRFIELD

Tolenas PWS

TRAVIS A.F.B.

SUISUN CITY (SSWA)

Fairfield Corporate Commons NPWS

North Cordellia NPWS

SOLANO IRRIGATION DISTRICT

810 VACA VALLEY PARKWAY, SUITE 201
VACAVILLE, CALIFORNIA 95688

EXHIBIT "A" LOCATION MAP

IMPROVEMENT AREAS
PUBLIC WATER SYSTEMS AND
NON-PUBLIC WATER SYSTEMS



N.T.S.

Date: 05-29-14

Drawn By: JS

Solano Irrigation District
CRC Revenue/Expense Summary - All Municipal & Industrial Service Systems

	Ten Year CIP (including Replacement Reserve)	CRC Revenue Collected thru 2024 at Current Rate	Projected Funding Shortfall
Allison/Ulatis NPWS	\$261,710	\$196,462	(\$65,248)
Fairfield Corp Commons NPWS	\$177,783	\$128,259	(\$49,524)
North Cordelia NPWS	\$616,023	\$616,023	\$0
North Village NPWS	\$159,003	\$159,003	\$0
Nut Tree NPWS	\$106,297	\$106,297	\$0
Paradise Valley NPWS	\$228,149	\$228,149	\$0
Peabody PWS	\$27,032	\$27,032	\$0
Stocking Ranch PWS	\$285,852	\$54,481	(\$231,371)
Gibson Canyon	\$1,573,638	\$1,061,001	(\$512,637)
Blue Ridge Oaks NPWS	\$144,660	\$50,884	(\$93,776)
Blue Ridge Oaks PWS	\$30,656	\$27,021	(\$3,635)
Elmira PWS	\$196,268	\$132,527	(\$63,741)
Quail Canyon PWS	\$60,940	\$52,551	(\$8,389)
Tolenas PWS	\$519,860	\$303,528	(\$216,332)
Total	\$4,387,871	\$3,143,218	(\$1,244,653)

Allison/Ulatis Non-Public Water System

<i>Year</i>	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance	\$13,862	\$30,462	\$4,162	\$20,762	\$37,362	\$53,962	\$70,562	\$85,265	\$101,865	\$118,465	(\$48,331)	\$13,862
Revenue												
Capital Replacement Charge	\$16,600	\$16,600	\$16,600	\$16,600	\$16,600	\$16,600	\$16,600	\$16,600	\$16,600	\$16,600	\$16,600	\$182,600
Total Funds Available	\$30,462	\$47,062	\$20,762	\$37,362	\$53,962	\$70,562	\$87,162	\$101,865	\$118,465	\$135,065	(\$31,731)	\$196,462
Expenditures												
Meter Replacement							\$1,897				\$28,563	\$30,460
Service Replacement										\$183,396	\$4,954	\$188,350
SCADA Controls		\$39,900										\$39,900
Condition Assessment		\$3,000										\$3,000
Reserve for Capital Replacement												
Total Expenditures	\$0	\$42,900	\$0	\$0	\$0	\$0	\$1,897	\$0	\$0	\$183,396	\$33,517	\$261,710
Ending Balance	\$30,462	\$4,162	\$20,762	\$37,362	\$53,962	\$70,562	\$85,265	\$101,865	\$118,465	(\$48,331)	(\$65,248)	(\$65,248)

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge:

	# Accounts	Current Monthly CRC	Annual CRC
3/4 inch Meter	0	\$10.00	
1 inch Meter	17	\$16.67	
1 1/2 inch Meter	3	\$33.33	
2 inch Meter	15	\$53.33	
3 inch Meter	2	\$100.00	
Total	37		\$16,600

Fairfield Corporate Commons Non-Public Water System

	Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance		\$9,907	\$20,666	\$26,025	(\$22,872)	(\$12,113)	(\$1,353)	\$9,406	(\$85,606)	(\$81,802)	(\$71,043)	(\$60,284)	\$9,907
Revenue													
Capital Replacement Charge		\$10,759	\$10,759	\$10,759	\$10,759	\$10,759	\$10,759	\$10,759	\$10,759	\$10,759	\$10,759	\$10,759	\$118,352
Total Funds Available		\$20,666	\$31,425	\$36,784	(\$12,113)	(\$1,353)	\$9,406	\$20,165	(\$74,846)	(\$71,043)	(\$60,284)	(\$49,524)	\$128,259
Expenditures													
Meter Replacement				\$6,956					\$6,956				\$13,912
Service Replacement								\$105,771					\$105,771
SCADA Controls				\$52,700									\$52,700
Condition Assessment			\$5,400										\$5,400
Reserve for Capital Replacement													
Total Expenditures		\$0	\$5,400	\$59,656	\$0	\$0	\$0	\$105,771	\$6,956	\$0	\$0	\$0	\$177,783
Ending Balance		\$20,666	\$26,025	(\$22,872)	(\$12,113)	(\$1,353)	\$9,406	(\$85,606)	(\$81,802)	(\$71,043)	(\$60,284)	(\$49,524)	(\$49,524)

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge:

	# Accounts	Current Monthly CRC	Annual CRC Revenue
3/4 inch Meter	1	\$10.00	
1 inch Meter	0	\$16.67	
1 1/2 inch Meter	1	\$33.33	
2 inch Meter	16	\$53.33	
Total	18		\$10,759

North Cordelia Non-Public Water System

	Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance		\$44,928	\$96,846	\$104,567	\$99,789	\$113,811	\$143,748	\$173,684	\$203,621	\$233,558	\$263,495	\$131,747	\$44,928
Revenue													
Capital Replacement Charge		\$51,918	\$51,918	\$51,918	\$51,918	\$51,918	\$51,918	\$51,918	\$51,918	\$51,918	\$51,918	\$51,918	\$571,096
Total Funds Available		\$96,846	\$148,763	\$156,485	\$151,707	\$165,729	\$195,665	\$225,602	\$255,539	\$285,476	\$315,412	\$183,665	\$616,023
Expenditures													
Meter Replacement			\$15,915	\$15,915	\$15,915								\$47,745
Service Replacement											\$161,684	\$161,684	\$323,368
SCADA Controls				\$18,800									\$18,800
Condition Assessment			\$6,300										\$6,300
Reserve for Capital Replacement			\$21,981	\$21,981	\$21,981	\$21,981	\$21,981	\$21,981	\$21,981	\$21,981	\$21,981	\$21,981	\$219,810
Total Expenditures		\$0	\$44,196	\$56,696	\$37,896	\$21,981	\$21,981	\$21,981	\$21,981	\$21,981	\$183,665	\$183,665	\$616,023
Ending Balance		\$96,846	\$104,567	\$99,789	\$113,811	\$143,748	\$173,684	\$203,621	\$233,558	\$263,495	\$131,747	\$0	\$0

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge:

	# Accounts	Current Monthly CRC	Annual CRC Revenue
3/4 inch Meter	0	\$10.00	
1 inch Meter	0	\$16.67	
1 1/2 inch Meter	8	\$33.33	
2 inch Meter	68	\$53.33	
3 inch Meter	1	\$100.00	
4 inch Meter	2	\$166.70	
Total	79		\$51,918

North Village Non-Public Water System

	Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance		\$11,165	\$24,605	\$29,429	\$26,354	\$35,049	\$46,273	\$57,498	\$16,022	(\$28,615)	(\$17,390)	(\$6,166)	\$11,165
Revenue													
Capital Replacement Charge		\$13,440	\$13,440	\$13,440	\$13,440	\$13,440	\$13,440	\$13,440	\$13,440	\$13,440	\$13,440	\$13,440	\$147,839
Total Funds Available		\$24,605	\$38,045	\$42,869	\$39,794	\$48,488	\$59,713	\$70,938	\$29,462	(\$15,175)	(\$3,950)	\$7,274	\$159,003
Expenditures													
Meter Replacement					\$2,530							\$5,059	\$7,589
Pumping Plant Reconstruction								\$52,700	\$55,862				\$108,562
SCADA Controls				\$14,300									\$14,300
Condition Assessment			\$6,400										\$6,400
Reserve for Capital Replacement			\$2,215	\$2,215	\$2,215	\$2,215	\$2,215	\$2,215	\$2,215	\$2,215	\$2,215	\$2,215	\$22,152
Total Expenditures		\$0	\$8,615	\$16,515	\$4,745	\$2,215	\$2,215	\$54,915	\$58,077	\$2,215	\$2,215	\$7,274	\$159,003
Ending Balance		\$24,605	\$29,429	\$26,354	\$35,049	\$46,273	\$57,498	\$16,022	(\$28,615)	(\$17,390)	(\$6,166)	(\$0)	\$0

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge:

	# Accounts	Current Monthly CRC	Annual CRC Revenue
3/4 inch Meter	0	\$10.00	
1 inch Meter	2	\$16.67	
1 1/2 inch Meter	4	\$33.33	
2 inch Meter	11	\$53.33	
3 inch Meter	2	\$100.00	
4 inch Meter	1	\$166.70	
Total	20		\$13,440

Nut Tree Non-Public Water System

<i>Year</i>	2014	2015	2016	2017	218	2019	2020	2021	2022	2023	2024	Total
Beginning Balance	\$5,981	\$15,101	\$15,528	(\$2,146)	\$2,180	\$6,506	\$10,833	\$7,043	\$3,253	(\$537)	(\$4,326)	\$5,981
Revenue												
Capital Replacement Charge	\$9,120	\$9,120	\$9,120	\$9,120	\$9,120	\$9,120	\$9,120	\$9,120	\$9,120	\$9,120	\$9,120	\$100,315
Total Funds Available	\$15,101	\$24,221	\$24,647	\$6,973	\$11,300	\$15,626	\$19,952	\$16,163	\$12,373	\$8,583	\$4,793	\$106,297
Expenditures												
Meter Replacement							\$8,116	\$8,116	\$8,116	\$8,116		\$32,464
Filter Upgrades			\$15,000									\$15,000
SCADA Controls			\$7,000									\$7,000
Condition Assessment (System Inventory)		\$3,900										\$3,900
Reserve for Capital Replacement		\$4,793	\$4,793	\$4,793	\$4,793	\$4,793	\$4,793	\$4,793	\$4,793	\$4,793	\$4,793	\$47,933
Total Expenditures	\$0	\$8,693	\$26,793	\$4,793	\$4,793	\$4,793	\$12,909	\$12,909	\$12,909	\$12,909	\$4,793	\$106,297
Ending Balance	\$15,101	\$15,528	(\$2,146)	\$2,180	\$6,506	\$10,833	\$7,043	\$3,253	(\$537)	(\$4,326)	(\$0)	\$0

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge:

	# Accounts	Current Monthly CRC	Annual CRC Revenue
3/4 inch Meter	0	\$10.00	
1 inch Meter	4	\$16.67	
1 1/2 inch Meter	8	\$33.33	
2 inch Meter	8	\$53.33	
Total	20		\$9,120

Paradise Valley Non-Public Water System

	Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance		\$16,082	\$35,361	\$11,711	\$23,375	\$8,741	\$25,305	\$41,869	\$58,433	\$74,996	(\$33,128)	(\$16,564)	\$16,082
Revenue													
Capital Replacement Charge		\$19,279	\$19,279	\$19,279	\$19,279	\$19,279	\$19,279	\$19,279	\$19,279	\$19,279	\$19,279	\$19,279	\$212,066
Total Funds Available		\$35,361	\$54,640	\$30,990	\$42,654	\$28,020	\$44,584	\$61,147	\$77,711	\$94,275	(\$13,849)	\$2,715	\$228,149
Expenditures													
Meter Replacement			\$24,914										\$24,914
Service Replacement					\$31,198					\$124,688			\$155,886
Pipeline Replacement													\$0
SCADA Controls				\$4,900									\$4,900
Condition Assessment			\$15,300										\$15,300
Reserve for Capital Replacement			\$2,715	\$2,715	\$2,715	\$2,715	\$2,715	\$2,715	\$2,715	\$2,715	\$2,715	\$2,715	\$27,149
Total Expenditures		\$0	\$42,929	\$7,615	\$33,913	\$2,715	\$2,715	\$2,715	\$2,715	\$127,403	\$2,715	\$2,715	\$228,149
Ending Balance		\$35,361	\$11,711	\$23,375	\$8,741	\$25,305	\$41,869	\$58,433	\$74,996	(\$33,128)	(\$16,564)	(\$0)	\$0

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge:

	# Accounts	Current Monthly CRC	Annual CRC Revenue
3/4 inch Meter	0	\$10.00	
1 inch Meter	0	\$16.67	
1 1/2 inch Meter	0	\$33.33	
2 inch Meter	2	\$53.33	
4 inch Meter	1	\$166.70	
6 inch Meter	4	\$333.30	
Total	7		\$19,279

Peabody Public Water System

<i>Year</i>	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance	\$1,952	\$4,232	\$4,021	\$4,909	\$5,797	\$6,686	\$7,574	(\$3,554)	(\$2,665)	(\$1,777)	(\$888)	\$1,952
Revenue												
Capital Replacement Charge	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$25,080
Total Funds Available	\$4,232	\$6,512	\$6,301	\$7,189	\$8,077	\$8,966	\$9,854	(\$1,274)	(\$385)	\$503	\$1,392	\$27,032
Expenditures												
Meter Replacement							\$12,016					\$12,016
Condition Assessment		\$1,100										\$1,100
Reserve for Capital Replacement		\$1,392	\$1,392	\$1,392	\$1,392	\$1,392	\$1,392	\$1,392	\$1,392	\$1,392	\$1,392	\$13,916
Total Expenditures	\$0	\$2,492	\$1,392	\$1,392	\$1,392	\$1,392	\$13,408	\$1,392	\$1,392	\$1,392	\$1,392	\$27,032
Ending Balance	\$4,232	\$4,021	\$4,909	\$5,797	\$6,686	\$7,574	(\$3,554)	(\$2,665)	(\$1,777)	(\$888)	\$0	\$0

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge:

	# Accounts	Current Monthly CRC	Annual CRC Revenue
3/4 inch Meter	19	\$10.00	
1 inch Meter	0	\$16.67	
1 1/2 inch Meter	0	\$33.33	
2 inch Meter	0	\$53.33	
Total	19		\$2,280

Stocking Ranch Public Water System

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance	\$2,119	\$6,879	(\$23,361)	(\$18,601)	(\$13,841)	(\$10,977)	(\$36,678)	(\$31,918)	(\$27,157)	(\$23,029)	(\$236,131)	\$2,119
Revenue												
Capital Replacement Charge	\$4,760	\$4,760	\$4,760	\$4,760	\$4,760	\$4,760	\$4,760	\$4,760	\$4,760	\$4,760	\$4,760	\$52,363
Total Funds Available	\$6,879	\$11,639	(\$18,601)	(\$13,841)	(\$9,080)	(\$6,217)	(\$31,918)	(\$27,157)	(\$22,397)	(\$18,269)	(\$231,371)	\$54,481
Expenditures												
Meter Replacement					\$1,897				\$632			\$2,529
Service Replacement						\$30,461						\$30,461
Pumping Plant Reconstruction										\$217,862		\$217,862
SCADA Controls		\$20,000										\$20,000
Condition Assessment		\$15,000										\$15,000
Reserve for Capital Replacement												
Total Expenditures	\$0	\$35,000	\$0	\$0	\$1,897	\$30,461	\$0	\$0	\$632	\$217,862	\$0	\$285,852
Ending Balance	\$6,879	(\$23,361)	(\$18,601)	(\$13,841)	(\$10,977)	(\$36,678)	(\$31,918)	(\$27,157)	(\$23,029)	(\$236,131)	(\$231,371)	(\$231,371)

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge:

	# Accounts	Current Monthly CRC	Annual CRC
3/4 inch Meter	0	\$10.00	
1 inch Meter	1	\$16.67	
1 1/2 inch Meter	0	\$33.33	
2 inch Meter	4	\$53.33	
4 inch Meter	1	\$166.70	
Total	6		\$4,760

Gibson Canyon Public Water System

	Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance		\$269,487	\$134,653	\$90,709	\$62,665	(\$12,515)	(\$265,559)	(\$218,603)	(\$199,420)	(\$326,458)	(\$438,901)	(\$559,593)	\$269,487
Revenue													
Membrane Replacement from													
Current Rates		\$16,879	\$16,879	\$16,879	\$16,879	\$16,879	\$16,879	\$16,879	\$16,879	\$16,879	\$16,879	\$16,879	\$185,669
Capital Replacement Charge		\$55,077	\$55,077	\$55,077	\$55,077	\$55,077	\$55,077	\$55,077	\$55,077	\$55,077	\$55,077	\$55,077	\$605,845
Total Funds Available		\$341,443	\$206,609	\$162,665	\$134,620	\$59,441	(\$193,603)	(\$146,647)	(\$127,465)	(\$254,502)	(\$366,945)	(\$487,637)	\$1,061,001
Expenditures													
Brazelton Lateral Pipeline Replacement					\$122,135								\$122,135
Meter Replacement								\$15,863	\$15,863	\$1,269	\$9,518		\$42,513
Service Replacement									\$158,130	\$158,130	\$158,130		\$474,390
Membrane Replacement		\$206,790	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$456,790
Pumping Plant Reconstruction			\$30,000					\$11,910					\$41,910
Tank Replacement (200,000 gal)						\$300,000							\$300,000
Pre-Treatment				\$75,000									\$75,000
SCADA Controls			\$15,100										\$15,100
Condition Assessment			\$45,800										\$45,800
Reserve for Capital Replacement													
Total Expenditures		\$206,790	\$115,900	\$100,000	\$147,135	\$325,000	\$25,000	\$52,773	\$198,993	\$184,399	\$192,648	\$25,000	\$1,573,638
Ending Balance		\$134,653	\$90,709	\$62,665	(\$12,515)	(\$265,559)	(\$218,603)	(\$199,420)	(\$326,458)	(\$438,901)	(\$559,593)	(\$512,637)	(\$512,637)

Note: Interest earnings/cost of borrowing funds not included in analysis

Monthly Capital Replacement Charge

	# Accounts	Current Monthly CRC	Annual CRC Revenue
3/4 inch Meter	3	\$10.00	
1 inch Meter	36	\$16.67	
1 1/2 inch Meter	114	\$33.33	
2 inch Meter	3	\$53.33	
Total	156		\$55,077

Blue Ridge Oaks Non-Public Water System

	Year	2014	2015	2016	2018	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance		\$3,795	\$8,076	(\$22,543)	(\$18,262)	(\$13,981)	(\$63,000)	(\$112,018)	(\$107,737)	(\$103,456)	(\$99,176)	(\$94,895)	\$3,795
Revenue													
Capital Replacement Charge		\$4,281	\$4,281	\$4,281	\$4,281	\$4,281	\$4,281	\$4,281	\$4,281	\$4,281	\$4,281	\$4,281	\$47,089
Total Funds Available		\$8,076	\$12,357	(\$18,262)	(\$13,981)	(\$9,701)	(\$58,719)	(\$107,737)	(\$103,456)	(\$99,176)	(\$94,895)	(\$90,614)	\$50,884
Expenditures													
Meter Replacement												\$3,162	\$3,162
Service Replacement						\$53,299	\$53,299						\$106,598
SCADA Controls			\$33,100										\$33,100
Condition Assessment			\$1,800										\$1,800
Reserve for Capital Replacement													
Total Expenditures		\$0	\$34,900	\$0	\$0	\$53,299	\$53,299	\$0	\$0	\$0	\$0	\$3,162	\$144,660
Ending Balance		\$8,076	(\$22,543)	(\$18,262)	(\$13,981)	(\$63,000)	(\$112,018)	(\$107,737)	(\$103,456)	(\$99,176)	(\$94,895)	(\$93,776)	(\$93,776)

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge

	# Accounts	Current Monthly CRC	Annual CRC
	4	\$10.00	
3/4 inch Meter	19	\$16.67	
1 inch Meter	0	\$33.33	
1 1/2 inch Meter	0	\$53.33	
2 inch Meter			
Total	23		\$4,281

Blue Ridge Oaks Public Water System

	Year	2014	2015	2016	2018	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance		\$1,941	\$4,221	(\$12,099)	(\$9,819)	(\$7,539)	(\$5,259)	(\$2,979)	(\$699)	\$1,581	\$3,861	(\$5,915)	\$1,941
Revenue													
Capital Replacement Charge		\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$2,280	\$25,080
Total Funds Available		\$4,221	\$6,501	(\$9,819)	(\$7,539)	(\$5,259)	(\$2,979)	(\$699)	\$1,581	\$3,861	\$6,141	(\$3,635)	\$27,021
Expenditures													
Meter Replacement											\$12,056		\$12,056
SCADA Controls			\$13,300										\$13,300
Condition Assessment			\$5,300										\$5,300
Reserve for Capital Replacement													
Total Expenditures		\$0	\$18,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,056	\$0	\$30,656
Ending Balance		\$4,221	(\$12,099)	(\$9,819)	(\$7,539)	(\$5,259)	(\$2,979)	(\$699)	\$1,581	\$3,861	(\$5,915)	(\$3,635)	(\$3,635)

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge:

	# Accounts	Current Monthly CRC	Annual CRC Revenue
3/4 inch Meter	19	\$10.00	
1 inch Meter	0	\$16.67	
1 1/2 inch Meter	0	\$33.33	
2 inch Meter	0	\$53.33	
Total	19		\$2,280

Elmira Public Water System

	Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance		\$8,447	\$19,727	(\$10,693)	\$587	\$11,867	\$23,147	\$34,427	\$32,065	\$29,703	\$27,341	\$24,979	\$8,447
Revenue													
Capital Replacement Charge		\$11,280	\$11,280	\$11,280	\$11,280	\$11,280	\$11,280	\$11,280	\$11,280	\$11,280	\$11,280	\$11,280	\$124,080
Total Funds Available		\$19,727	\$31,007	\$587	\$11,867	\$23,147	\$34,427	\$45,707	\$43,345	\$40,983	\$38,621	\$36,259	\$132,527
Expenditures													
Meter Replacement								\$13,642	\$13,642	\$13,642	\$13,642		\$54,568
Tank Replacement/Relining												\$100,000	\$100,000
SCADA - Tank & Pumping Plant			\$15,000										\$15,000
Condition Assessment			\$26,700										\$26,700
Reserve for Capital Replacement													
Total Expenditures		\$0	\$41,700	\$0	\$0	\$0	\$0	\$13,642	\$13,642	\$13,642	\$13,642	\$100,000	\$196,268
Ending Balance		\$19,727	(\$10,693)	\$587	\$11,867	\$23,147	\$34,427	\$32,065	\$29,703	\$27,341	\$24,979	(\$63,741)	(\$63,741)

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge:	# Accounts	Current	Annual CRC
		Monthly CRC	Revenue
3/4 inch Meter	82	\$10.00	
1 inch Meter	2	\$16.67	
1 1/2 inch Meter	1	\$33.33	
2 inch Meter	1	\$53.33	
Total	86		\$11,280

Quail Canyon Public Water System

<i>Year</i>	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance	\$3,711	\$8,151	(\$11,109)	(\$26,379)	(\$36,939)	(\$35,029)	(\$30,589)	(\$26,149)	(\$21,709)	(\$17,269)	(\$12,829)	\$3,711
Revenue												
Capital Replacement Charge	\$4,440	\$4,440	\$4,440	\$4,440	\$4,440	\$4,440	\$4,440	\$4,440	\$4,440	\$4,440	\$4,440	\$48,840
Total Funds Available	\$8,151	\$12,591	(\$6,669)	(\$21,939)	(\$32,499)	(\$30,589)	(\$26,149)	(\$21,709)	(\$17,269)	(\$12,829)	(\$8,389)	\$52,551
Expenditures												
Meter Replacement			\$19,710		\$2,530							\$22,240
Pumping Plant Reconstruction (chlorinator)				\$15,000								\$15,000
Condition Assessment		\$23,700										\$23,700
Reserve for Capital Replacement												
Total Expenditures	\$0	\$23,700	\$19,710	\$15,000	\$2,530	\$0	\$0	\$0	\$0	\$0	\$0	\$60,940
Ending Balance	\$8,151	(\$11,109)	(\$26,379)	(\$36,939)	(\$35,029)	(\$30,589)	(\$26,149)	(\$21,709)	(\$17,269)	(\$12,829)	(\$8,389)	(\$8,389)

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge:

	<u># Accounts</u>	<u>Current Monthly CRC</u>	<u>Annual CRC Revenue</u>
3/4 inch Meter	37	\$10.00	
1 inch Meter	0	\$16.67	
1 1/2 inch Meter	0	\$33.33	
2 inch Meter	<u>0</u>	<u>\$53.33</u>	
Total	37		<u>\$4,440</u>

Tolenas Public Water System

	Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Beginning Balance		\$21,039	\$46,720	\$69,001	\$94,682	\$120,363	\$146,043	\$171,724	\$179,592	\$205,273	\$230,954	\$55,848	\$21,039
Revenue													
Capital Replacement Charge		\$25,681	\$25,681	\$25,681	\$25,681	\$25,681	\$25,681	\$25,681	\$25,681	\$25,681	\$25,681	\$25,681	\$282,489
Total Funds Available		\$46,720	\$72,401	\$94,682	\$120,363	\$146,043	\$171,724	\$197,405	\$205,273	\$230,954	\$256,635	\$81,528	\$303,528
Expenditures													
Meter Replacement								\$17,813				\$97,073	\$114,886
Service Replacement											\$200,787	\$200,787	\$401,574
Condition Assessment			\$3,400										\$3,400
Reserve for Capital Replacement													
Total Expenditures		\$0	\$3,400	\$0	\$0	\$0	\$0	\$17,813	\$0	\$0	\$200,787	\$297,860	\$519,860
Ending Balance		\$46,720	\$69,001	\$94,682	\$120,363	\$146,043	\$171,724	\$179,592	\$205,273	\$230,954	\$55,848	(\$216,332)	(\$216,332)

Note: Interest earnings/cost of borrowing funds not included in analysis

Current Capital Replacement Charge:

	# Accounts	Current Monthly CRC	Annual CRC
3/4 inch Meter	150	\$10.00	
1 inch Meter	26	\$16.67	
1 1/2 inch Meter	3	\$33.33	
2 inch Meter	2	\$53.33	
Total	181		\$25,681

Solano Irrigation District
Frequently Asked Questions
Water System Capital Improvement Program and Capital Replacement Charge
June 2014

1. *What is the Water System Capital Improvement Program? What projects are included in the Capital Improvement Program?*

The Solano Irrigation District (SID, or District) provides potable (drinking) and non-potable water to customers in many distinct geographical service areas in Solano County, known as Municipal and Industrial (“M & I”) service areas. Each individual M & I service area has its own unique water treatment, mechanical system and water delivery system. These systems were typically installed many years ago and funded through loans or other means. The District has recently prepared and adopted a Capital Improvement Program to identify a schedule for the replacement of the original M & I service area water systems.

The projects and schedule for replacement in the Capital Improvement Program will be different for each M & I service area. Projects may include condition assessments, pipeline replacements, meter replacements, service replacements, hydrant replacements, pumping plant reconstruction, treatment plant replacements, tank replacements, and computerized control system replacements.

2. *How many separate M & I service areas are included in the Capital Replacement Program?*

There are fourteen Municipal and Industrial service areas included in the Capital Improvement Program, including public water systems (PWS) and non-public water systems (NPWS). The service areas are: Allison/Ulatis NPWS, Blue Ridge Oaks NPWS, Blue Ridge Oaks PWS, Elmira PWS, Fairfield Corporate Commons NPWS, Gibson Canyon PWS, North Cordelia NPWS, North Village NPWS, Nut Tree NPWS, Paradise Valley NPWS, Peabody PWS, Quail Canyon PWS, Stocking Ranch PWS and Tolenas PWS.

3. *How does SID intend to collect funds and pay for the replacement of the original water treatment, mechanical systems and delivery systems?*

In 2013, SID adopted an interim \$10 per month (for ¾ inch services, increasing for larger services) Capital Replacement Charge (CRC) that appears on your water bill. The interim CRC was intended as a placeholder until SID could identify the actual projects and schedule for replacements for each service area. A Study is underway to identify the scope and schedule for the needed projects, and to finalize the CRC fee.

4. *Is the \$10 per month CRC sufficient to pay for future capital replacement projects?*

During upcoming public meetings, SID staff will provide an analysis of the cost and timing for the projects in each M & I service district, and the funds generated by the existing CRC.

For some M & I service areas, however, our preliminary analysis indicates that the \$10 per month CRC will not be sufficient to pay for all of the capital replacement projects.

5. *How do I know that I will not be paying for improvements for other service areas?*

Revenue received by SID from the Capital Replacement Charge is recorded in a separate account for each M & I service area. Project costs for each M & I service area are charged to these separate accounts. This prevents you from paying for improvements for projects required by other M & I service areas.

6. *If the Capital Replacement Charge pays for capital replacement projects within my service area only, how does SID pay for other capital projects that are of benefit to all of its customers?*

SID collects a General Assessment that is on your property tax bill each year. The General Assessment funds are used to pay for district-wide water delivery system rehabilitation and betterment projects, which are capital improvements on the water delivery system moving water from Lake Berryessa to the beginning of your individual M & I service area's water delivery system.

7. *Doesn't my monthly water charge pay for the replacement of the original water treatment, mechanical systems and delivery systems? If not, what does it pay for?*

Except for the \$10 per month CRC, your monthly water charge provides funding for operations and maintenance costs and does not provide funding for capital replacements. Your monthly water charge pays for the operational and maintenance costs to deliver and treat (if required) the water delivered to your property within your M & I service area. For most M & I service areas, current monthly water charges are not sufficient to cover all operational and maintenance costs. The remaining costs are covered by district-wide revenues.

8. *I see on my tax bill two, and in some cases three, "special assessments" for SID. It is my understanding that SID uses these funds to pay for capital improvements. I also pay my Proposition 13 one-percent ad valorem property tax. What do these charges pay for?*

There are up to three (3) special assessments SID levy's on properties as follows:

- ✓ **General Assessment:** This is a land based charge that all properties within the District pay. The funds collected through this assessment pays for the district-wide water delivery system rehabilitation, betterment and debt. These funds are not used for operational or maintenance costs. **This assessment is restricted from being used for capital improvement needs within the M & I service areas.** Also, the General Assessment funds are used to pay for district-wide water delivery system rehabilitation

and betterment projects, which are capital improvements on the water delivery system moving water from Lake Berryessa to the beginning of your individual M & I service area's water delivery system. These funds, therefore, were not intended to fund individual M & I service system costs.

- ✓ **Standby Assessment:** This is a fee paid by owners of parcels of 5 acres or more, based on soil classification, not property value. The funds collected through this assessment are utilized to supplement the agricultural water delivery system.
- ✓ **Special Assessment District:** This is a fee charged to owners of parcels who, in the past, elected to participate in separate assessment district set up to assume debt and construct either a water treatment plant, community well, or some other potable water delivery system. There are three such "special improvement districts" within SID. All of the funds collected through these assessments are placed in a restricted fund for the purpose of the repayment of the original debt for these separate improvement districts only.
- ✓ **Ad Valorem Tax:** SID receives 1% of the Proposition 13 allowable 1% property tax collected from properties within the District. Each M & I service area receives their proportionate share of the Ad Valorem Tax.

9. *When will we learn more about how much the Capital Replacement Charge will be for my service area?*

We will be holding a second public meeting, where we will discuss the Capital Replacement Charge amount that may be required to pay for the water treatment, mechanical systems and delivery system requirements for your M & I service area. These will be community workshops and we will be seeking your input. The District will mail postcards to customers with the date for this second public meeting.

10. *What is the process for implementing the Capital Replacement Charge? Will I have a chance to vote on the proposed charge?*

As required by California statutes, you will have the opportunity to submit a written protest vote on any proposed increase in the Capital Replacement Charge. Later in 2014, we will bring to our customers a proposal for needed increases in Capital Replacement Charges and water rates. We will schedule a public outreach open house to present the proposed changes and to answer questions from our customers. If the SID Board of Directors adopts a proposed increase, then each property owner, and if applicable, current tenant will be provided a notice with instructions on how to protest any proposed increase in the CRC.

Approximately 45 days after the mailing of the notice, the Board of Directors will hold a public meeting and prior to or at this meeting you may submit a protest vote. There can only be one protest per property.