CIP Projects FY14/15 to FY23/24

NO.	PROJECT NAME	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	CIP Total	
Equipn	ent Purchase & Replacement												
06-03	SCADA/Telemetry/Electrical Controls Replacement	150,000	150,000	150,000	150,000							600,000	
08-10	Backhoe						80,000					80,000	
08-12	New Service Truck			150,000								150,000	
15-04	Vactor Trailer		100,000									100,000	
99-02	Vehicle Replacement	30,000	30,000	30,000		30,000		30,000	30,000		30,000	210,000	
99-03	Computer Systems	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	50,000	
99-04	Office Equipment/Furniture	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	30,000	
7	Equipment Purchase & Replacement Totals	188,000	288,000	338,000	158,000	38,000	88,000	38,000	38,000	8,000	38,000		1,220,000
Facilitie	es & Maintenance												
08-08	PRV Valves Replacement Project	30,000	30,000	30,000	30,000	30,000	30,000					180,000	
09-07	Advanced Metering Infrastructure				1,500,000	1,500,000						3,000,000	
09-09	Fire Hydrant Replacement	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	200,000	
09-23	District Digital Mapping	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	250,000	
14-11	Replace 2" and Larger Meters with Omni Meters	30,000	30,000									60,000	
14-13	New Security Fence at Pilarcitos Well Field	20,000										20,000	
14-14	Pilarcitos Canyon Road Improvements	70,000										70,000	
15-01	Utility Billing Software Upgrade	200,000										200,000	
15-02	Administration Building Fire Repair and Remodeling Project	300,000										300,000	
15-03	District Administration/Operations Center	25,000									3,000,000	3,025,000	
15-05	Administration Building Phone System	30,000										30,000	
99-01	Meter Change Program	10,000	10,000	10,000	10,000	10,000	20,000	20,000	20,000	20,000	20,000	150,000	
12	Facilities & Maintenance Totals	760,000	115,000	85,000	1,585,000	1,585,000	95,000	65,000	65,000	65,000	3,065,000		7,485,000
Pipelin	e Projects												
06-01	Avenue Cabrillo Phase 2 & 3 Pipeline Replacement Project	300,000		300,000								600,000	
06-02	Highway 1 South Pipeline Replacement Project				80,000	100,000	1,200,000					1,380,000	
07-03	Pilarcitos Canyon Pipeline Replacement									150,000	1,000,000	1,150,000	
07-04	Bell Moon Pipeline Replacement Project				60,000	250,000						310,000	
10-01	Main Street Bridge Pipeline Replacement Project	500,000	1,000,000									1,500,000	
12-02	Wave Valve Automation			50,000								50,000	

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NO.	PROJECT NAME	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	CIP Total	
12-03	Crystal Springs Pipeline Air/Vacuum Relief Valves											0	
13-01	Miramar Drive Pipeline Connection	80,000										80,000	
13-02	Replace 8 Inch Pipeline Under Creek at Pilarcitos Ave.	200,000										200,000	
14-01	Replace 12" Welded Steel Line on Hwy 92 with 8" DI		100,000					1,000,000	1,000,000	1,000,000		3,100,000	
14-26	Replace 2 Inch Pipe Downtown Half Moon Bay			500,000								500,000	
14-27	Grandview 2 Inch Replacement				450,000							450,000	
14-28	Replace 2 Inch Hilltop Market to Spanishtown					240,000						240,000	
14-29	Replace 2 Inch GS Purisima Way						125,000					125,000	
14-30	Replace Miscellaneous 2 Inch GS El Granada						60,000					60,000	
14-31	Ferdinand Avenue - Replace 4" WS Ferdinand Ave. to Columbus St.					225,000						225,000	
14-32	Casa Del Mar - Replace Cast Iron Mains								1,000,000	1,000,000		2,000,000	
14-33	Miramar Cast Iron Pipeline Replacement						1,000,000	1,000,000				2,000,000	
NN-00	Pipeline Replacement										1,500,000	1,500,000	
19	Pipeline Projects Totals	1,080,000	1,100,000	850,000	590,000	815,000	2,385,000	2,000,000	2,000,000	2,150,000	2,500,000		15,470,000
Pump S	Stations/Tanks/Wells												
06-04	Hazen's Tank Replacement	200,000	300,000									500,000	
08-14	Alves Tank Recoating, Interior + Exterior		400,000									400,000	
08-16	Cahill Tank Exterior Recoat		150,000									150,000	
08-17	EG Tank #2 Recoat + Ladder											0	
08-18	EG Tank #3 Recoating Interior + Exterior	350,000										350,000	
09-18	New Pilarcitos Well				150,000							150,000	
11-02	CSPS Stainless Steel Inlet Valves					100,000						100,000	
11-05	Half Moon Bay Tank #2 Interior + Exterior Recoat				200,000							200,000	
11-06	Half Moon Bay Tank #3 Interior + Exterior Recoat						200,000					200,000	
12-06	CSPS Surge Tank Control Improvements											0	
12-11	Miramar Tank Fence Replacement											0	
13-08	Crystal Springs Spare 350 HP Pump & Motor				50,000							50,000	
13-11	EG Tank #1 & Tank #2 Emergency Generators		75,000	200,000								275,000	
14-17	Crystal Springs Pump Station Electrical Controls Upgrades											0	
14-18	Crystal Springs Pump Station Spare 12 Inch Check Valve	25,000										25,000	
14-23	Alves Tank Generator Enclosure											0	
			925,000										

Water Supply Development

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NO.	PROJECT NAME	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	CIP Total	
10-02	Bridgeport Drive Pipeline Replacement Project		110,000	840,000								950,000	
12-04	Denniston Treated Water Booster Station		200,000	800,000								1,000,000	
12-12	San Vicente Diversion and Pipeline		300,000	1,000,000	1,000,000							2,300,000	
13-04	Denniston Reservoir Restoration			1,000,000								1,000,000	
13-12	CCWD-MWSD Emergency Intertie – Planning											0	
14-24	Denniston/San Vicente EIR & Permitting	50,000	50,000									100,000	
14-25	Water Shortage Plan Development	50,000	100,000									150,000	
7	Water Supply Development Totals	100,000	760,000	3,640,000	1,000,000								5,50
Water	Treatment Plants												
08-07	Nunes Filter Valve Replacement					30,000	30,000	30,000	30,000	30,000		150,000	
12-05	Nunes Access Road Repaving											0	
12-14	Nunes - Hydropneumatic System Improvements											0	
13-05	Denniston WTP Emergency Power					500,000						500,000	
14-02	Nunes - Replace Sludge Pond Media	25,000										25,000	
14-04	Denniston - Dust Control											0	
14-06	Nunes - New 1720E Turbidimeters (4)	35,000										35,000	
14-08	Nunes - New Storage Container											0	
14-10	Nunes - Emergency Power Switchgear											0	
99-05	Denniston Maintenance Dredging	35,000	35,000	35,000	35,000	35,000	35,000	35,000	3,500	35,000	35,000	318,500	

Grand Total 2,798,000 3,223,000 5,148,000 3,768,000 3,103,000 2,833,000 2,168,000 2,136,500 2,288,000 5,638,000 33,103,500

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06-01 Avenue Cabrillo Phase 2 & 3 Pipeline Replacement Project

Pipeline Projects

Priority: 2 Improves water service and fire protection, eliminates frequent leak repairs, reduces water loss.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$600,000	300,000		300,000							

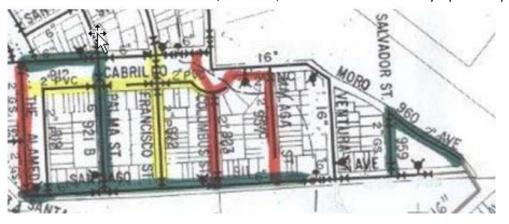
Description:

The Avenue Cabrillo project replaces old, undersized PVC and galvanized mains in the area of El Granada shown in the sketch below (Red = Phase 1, Yellow = Phase 2, Green = Phase 3). This area has been plagued by numerous leaks and by low-pressure.

The project consists of 1) constructing 1,520 linear feet of 8-inch diameter and 8,560 linear feet of 6-inch diameter water pipelines to replace old, leaky pipelines, 2) replacing 8 existing fire hydrants and installing 3 new ones, and 3) replacing or reconnecting 149 existing customer water service pipelines.

The project was first placed on the CIP in FY 05/06. District Engineer Jim Teter completed the project documents, breaking construction into three phases in order to spread out the construction costs. The district awarded Phase 1 of the project to Stoloski & Gonzales in September 2012, and the contractor completed construction in February 2013.

Because Phase 1 addressed the most serious problems, timing for Phases 2 & 3 is somewhat flexible. It will be advantageous to complete this construction in the near future, however, before San Mateo County's planned pavement overlay project.



06-01 Pipeline Projects 6/20/2014 1

06-02 Highway 1 South Pipeline Replacement Project

Pipeline Projects

Priority: 3 Replaces obsolete, substandard main and improves water service, fire protection, water quality.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$1,380,000				80,000	100,000	1,200,000				

Description:

This project would replace about 3500 feet of 2 inch galvanized steel pipe running south along Highway 1 from Miramontes Point Road. The pipeline was part of the Citizens Utilities system acquired when the district was formed in 1948. It serves six connections, one at the approximate midpoint and five at the southern end of the line. These services experience low-pressure problems due to the size and length of the pipe in the prevailing lower pressures in the southernmost part of the District. The low-pressure also creates the risk of water quality problems.

District Engineer Teter completed design drawings for the replacement project in November 2008 and prepared an Engineer's Report detailing environmental and permitting requirements and suggesting possible alternatives to replacing the existing pipe with an 8 inch ductile iron main. The District will evaluate the alternatives further before proceeding with the replacement project.



06-02 Pipeline Projects 6/20/2014 2

06-03 SCADA/Telemetry/Electrical Controls Replacement

Equipment Purchase & Replacement

Priority: 1 Improves operational efficiency, ensures reliable facility control and communication of critical operations data.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$600,000	150,000	150,000	150,000	150,000						

Description:

This project provides for phased upgrading of controls at all the District's facilities and construction of a radio-based data communications network.

Digital controllers at the District's facilities monitor reservoir levels, control treatment processes and pump stations, communicate critical data to the District's operations center, and notify operators of alarm conditions. Many of the District's operations run on controllers installed in the 1990s. These controllers are obsolete and can no longer be repaired when they fail. Replacing them before they fail prevents the disruption and higher costs associated with emergency replacements.

Transmission of essential data from District facilities to the operations center currently depends on a variety of communication channels, including leased telephone lines, radio links, and cellular network links. These communication links are not under the control of the District, vary in reliability, and can be expensive. This project will connect all District facilities with a reliable, District-owned, ethernet radio network.

06-04 Hazen's Tank Replacement

Pump Stations/Tanks/Wells

Priority: 1 Replaces essential district infrastructure.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$500,000	200,000	300,000								

Description:

<div>Hazen's tank is a 50,000 gallon redwood tank of uncertain age which was moved to the present site near the intersection of San Juan Ave. and Ferdinand Avenue in the mid-1960s. Its purpose is to stabilize water pressures in the nearby higher elevation areas of El Granada within the El Granada Tank 2 pressure zone. This tank has reached the end of its useful life, and its redwood construction raises the risk of water quality problems. The new tank will be a welded steel tank.</di>



06-04 Pump Stations/Tanks/Wells 6/20/2014 4

07-03 Pilarcitos Canyon Pipeline Replacement

Pipeline Projects

Priority:

This project is vital because gravity flow from Pilarcitos saves up to \$40,000 per month in Crystal Springs pumping costs and provides a backup water source for the district in the event of a Crystal Springs pump station failure.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$1,150,000									150,000	1,000,000

Description:

The Pilarcitos Canyon Pipeline (also called Stone Dam Pipeline) conveys water from SFPUC's Pilarcitos Reservoir by gravity into the District's system. The original 12 inch welded steel pipeline, built in 1948, failed in an inaccessible area of the pipeline alignment in August 2012. Due to the age and condition of the pipe and the difficulty of working at the failure site, District staff concluded that repairing the pipeline was not feasible. In November 2012, the District obtained a permit from San Francisco to install an emergency temporary replacement pipeline to supply water while the District plans, designs, and constructs a permanent replacement pipe. District staff and contractors completed construction of the temporary line in December 2012.

Conditions of the San Francisco permit require the District to conduct a feasibility study for the permanent replacement pipeline and undertake an environmental evaluation of the replacement project by May 2014 and complete construction by November 2015. These deadlines will likely be extended by mutual agreement.

This work will require significant coordination between the District and SFPUC. Given the sensitivity of the Pilarcitos Canyon environment and regulatory interest in Pilarcitos stream flows, completion of the permanent replacement could take significantly longer than the three years contemplated in the permit. The temporary pipeline will serve the district's needs during this time.

The CIP budgets \$75,000 per year in FY 14/15 and FY 15/16 for the feasibility study, initial environmental review, and preliminary design. The FY 17/18 CIP includes a construction cost placeholder of \$1 million.

07-03 Pipeline Projects 6/20/2014 5

Fiscal Year 2014/2015 to Fiscal Year 2023/2024

07-03 Pipeline Projects 6/20/2014 6

07-04 Bell Moon Pipeline Replacement Project

Pipeline Projects

Priority: 3 The District's welded steel pipelines are generally at least 50 years old and subject to increasing risk of failure.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$310,000				60,000	250,000					

Description:

Replaces approximately 725 feet of 12 inch welded steel pipeline serving the light industrial area between Lewis Foster Drive and Highway 92.



07-04 Pipeline Projects 6/20/2014 7

08-07 Nunes Filter Valve Replacement

Water Treatment Plants

Priority: 3 Maintains essential District facilities.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$150,000					30,000	30,000	30,000	30,000	30,000	

Description:

08-07 Water Treatment Plants 6/20/2014 8

08-08 PRV Valves Replacement Project

Facilities & Maintenance

Priority: 1 Maintains distribution system circulation and water quality

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$180,000	30,000	30,000	30,000	30,000	30,000	30,000				

Description: 14 pressure reducing valves (PRV) divide the District's distribution system into four pressure zones. As the valves reach the end of their

service life, they may stop or restrict the flow between zones, creating dead ends in the system and increasing the risk of water quality

problems. This project provides funding to replace seven remaining older PRV's at one PRV per year.

08-08 Facilities & Maintenance 6/20/2014 9

replace the backhoe with a late-model used unit.

08-10	Back	hoe							E	quipment Pui	rchase & Rep	lacement
Priority:	2	Replaces ess	ential District	equipment.								
			FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budg	eted:	\$80,000						80,000				
J												

District crews use a backhoe on a frequent basis for leak repairs. The District purchased its current backhoe used in 2006. This project would

Description:

Equipment Purchase & Replacement

Fiscal Year 2014/2015 to Fiscal Year 2023/2024

08-12 New Service Truck Equipment Purchase & Replacement

Priority: 2

FY 14/15 FY 15/16 FY 16/17 FY 17/18 FY 18/19 FY 19/20 FY 20/21 FY 21/22 FY 22/23 FY 23/24

Total Budgeted: \$150,000 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 |

Total Budgeted. \$150,000

Description:

08-14 Alves Tank Recoating, Interior + Exterior

Pump Stations/Tanks/Wells

Priority: 1 Maintains critical district infrastructure.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$400,000		400,000								

Description:

Under a comprehensive program initiated in 2008, the District has inspected and performed long-deferred maintenance on its steel treated water storage tanks. The maintenance generally consists of repairing corrosion damage, recoating the interior and exterior of the tank, and bringing ladders, manways, railings and other tank features up to current standards.

The Alves Tank, located above Miramontes Point Road east of Highway 1, is the District's largest at 2.0 million gallons. This project provides for repairing and recoating the Alves Tank. Project costs will include installation and operation of a temporary pump station to ensure adequate flow and pressure to customers in the southernmost area of the District during the tank shutdown.

The project also includes replacement of the tank's altitude valve (formerly shown as Project 13-10 at a cost of \$50,000).

08-14 Pump Stations/Tanks/Wells 6/20/2014 12

08-16	Cahill Tank Exterior Recoat	Pump Stations/Tanks/Wells
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Priority: 3 Maintains essential district facilities

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$150,000		150,000								

Description:

Under a comprehensive program initiated in 2008, the District has inspected and performed long-deferred maintenance on its steel treated water storage tanks. The maintenance generally consists of repairing corrosion damage, recoating the interior and exterior of the tank, and bringing ladders, manways, railings and other tank features up to current standards.

The Cahill tank is a 250,000 gallon surge tank located on the ridge above Crystal Springs Reservoir, near Skylawn Cemetery. The tank receives raw water from the Crystal Springs pumps and provides for a uniform flow into the Nunes Water Treatment Plant. This project provides for exterior recoding of the Cahill tank.

08-16 Pump Stations/Tanks/Wells 6/20/2014 13

08-17 EG Tank #2 Recoat + Ladder Pump Stations/Tanks/Wells

Priority: 1 Maintains essential district facilities.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$0										

Description:

Under a comprehensive program initiated in 2008, the District has inspected and performed long-deferred maintenance on its steel treated water storage tanks. The maintenance generally consists of repairing corrosion damage, recoating the interior and exterior of the tank, and bringing ladders, manways, railings and other tank features up to current standards.

El Granada Tank #2 is a 150,000 gallon steel tank located at 431 El Granada Blvd.. District Engineer J. Teter prepared a January 2009 report indicating that the tank is structurally sound but requires repair of significant corrosion damage in some areas. This project provides for tank repairs, interior and exterior recoating, and additional upgrades, including a new tank ladder.

District Engineer Teter will complete the bid documents for this project in April 2013, and the work will be done in FY 13/14. The project will be challenging due to the steepness and small size of the site and the need to provide a temporary storage tank before taking the existing tank out of service.

08-17 Pump Stations/Tanks/Wells 6/20/2014 14

08-18 EG Tank #3 Recoating Interior + Exterior

Pump Stations/Tanks/Wells

Priority: 1 Maintains essential district facilities.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$350,000	350,000									

Description:

Under a comprehensive program initiated in 2008, the District has inspected and performed long-deferred maintenance on its steel treated water storage tanks. The maintenance generally consists of repairing corrosion damage, recoating the interior and exterior of the tank, and bringing ladders, manways, railings and other tank features up to current standards.

El Granada Tank #3 is a 250,000 gallon steel tank located at 712 El Granada Boulevard. It supplies the District's highest elevation zone. District Engineer J. Teter completed an inspection report for the tank in January 2009. The inspection found the tank structurally sound and in need of exterior and interior recoding to prevent corrosion.

08-18 Pump Stations/Tanks/Wells 6/20/2014 15

09-07 Advanced Metering Infrastructure

Facilities & Maintenance

Priority: 2 Ensures efficient District operation and customer service, particularly during water shortages

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$3,000,000				1,500,000	1,500,000					

Description:

Advanced Metering Infrastructure (AMI) represents an essential element of a larger District initiative to prepare the District to operate efficiently and meet the needs of its customers during future water shortages. An AMI network transmits meter readings directly to the District's office, eliminating the current labor-intensive manual reading process. AMI provides the ability to read meters daily – or even more frequently – rather than monthly or bimonthly. This facilitates leak detection and allows us to give customers timely feedback that helps them manage their water use.

The District has proven the concept of automated meter reading with approximately 500 currently installed meters. These meters operate on a drive-by reading system.

The CIP budget provides funds for phased AMI implementation over two years beginning with FY 17/18.

09-07 Facilities & Maintenance 6/20/2014 16

09-09 Fire Hydrant Replacement Facilities & Maintenance

Priority: 2 Maintains essential district infrastructure.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$200,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000

Description: This project provides continuing funding for replacement of fire hydrants that have reached the end of their service life. The district has

about 620 fire hydrants, and the cost of replacing a hydrant ranges from \$2000-\$5000.

09-09 Facilities & Maintenance 6/20/2014 17

09-18 New Pilarcitos Well Pump Stations/Tanks/Wells

Priority: 2 Maintains essential district facilities, reduces water purchased costs.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$150,000				150,000						

Description:

Water from a number of wells located on District property along upper Pilarcitos Creek represents an important water source for the District. Under the terms of a permanent water rights license, the District may pump up to 117 million gallons from these wells in the period from November 1 through March 31. Use of the wells results in substantial water cost savings versus the high cost of water purchased from San Francisco Public Utilities Commission. A new well producing 300 gallons per minute could reduce SFPUC water purchase costs by more than \$350,000 in a single pumping season (based on projected FY 18/19 SFPUC cost of \$4.35 per hundred cubic feet)

This project provides for drilling a new Pilarcitos well to replace several older wells which have, over time, become less productive.

09-18 Pump Stations/Tanks/Wells 6/20/2014 18

09-23 District Digital Mapping Facilities & Maintenance

Priority: 1 Provides an essential tool for District asset management.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$250,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000

Description: This project provides continuing funding for implementation of the District's Geographic Information System (GIS). The GIS effort began in FY

10/11 with conversion of the District's paper distribution system maps to digital format.

09-23 Facilities & Maintenance 6/20/2014 19

10-01 Main Street Bridge Pipeline Replacement Project

Pipeline Projects

Priority:

This remaining section of 10 inch welded steel pipe restricts flow and pressure in the portion of the District south of Pilarcitos Creek. Failure of the pipe on the bridge would cause significant environmental damage and water loss.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$1,500,000	500,000	1,000,000								

Description:

<div>The El Granada Pipeline Replacement Project, completed in 2008, included replacing the existing 10 inch welded steel pipe along Main Street with a new 16 inch ductile iron pipeline. The section crossing Pilarcitos Creek, which is suspended from the Main Street bridge, was left out of the project because it was anticipated that the City of Half Moon Bay would construct a new bridge within a few years. As of June 2014, the City has not decided whether it will replace or repair the existing bridge, and passage of Measure F requires that any bridge project be subjected to a vote. This section of pipe is critical for service in the portion of the District south of Pilarcitos Creek. Due to the deteriorated condition of the existing pipe and the difficulty of repairing it, the District must 1) be ready to quickly put an emergency temporary pipeline in place if the pipe fails, 2) proceed with a replacement that does not rely on the City's bridge. The District awarded a design contract for the replacement on June 10, 2014. Construction should take place in 2015.



10-01 Pipeline Projects 6/20/2014 20

10-02 Bridgeport Drive Pipeline Replacement Project

Water Supply Development

Priority:

This project is critical to the District's efforts to make maximum use of local water sources. It must be completed as soon as possible in order to comply with timing requirements of water rights permits for Denniston/San Vicente.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$950,000		110,000	840,000							

Description:

The Denniston Water Treatment Plant has a capacity of 1000 gpm, but gravity flow from Denniston WTP into the rest of the District's system is limited to about 400 gpm by the existing 8 inch and 10 inch cast iron pipelines along Bridgeport Drive. This limitation precludes making maximum use of the District's economical local water source. The solution to this problem has two elements: 1) construction of a treated water booster station adjacent to the Denniston pump station, and 2) construction of a 3,500 foot, 12 inch ductile iron pipeline bypassing the Bridgeport Drive bottleneck.

This project (10-02) would construct the new pipeline. The Denniston treated water booster station is covered by CIP project 12-04.



10-02 Water Supply Development 6/20/2014 21

11-02 CSPS Stainless Steel Inlet Valves Pump Stations/Tanks/Wells

Priority: 3 Maintains essential district infrastructure.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$100,000					100,000					

Description:

This project would replace the existing carbon steel butterfly valves on the Crystal Springs Pump Station raw water inlets with stainless steel valves. The existing valves are submerged in the Crystal Springs inlet tunnel and subject to corrosion which could render them inoperable. These valves supplement inlet valves located in Crystal Springs reservoir to provide a second barrier against water entering the tunnel when it is necessary to dewater and enter the tunnel for maintenance or inspection purposes.

Replacement of the steel inlet valves will complete a project initiated in 2011 to improve reliability and lower maintenance costs of the Crystal Springs Pump Station. The first project phases, completed in 2012, removed two pneumatically operated inlet valves from the tunnel, modified them for manual operation, and relocated them under the inlet screens in Crystal Springs reservoir.

11-02 Pump Stations/Tanks/Wells 6/20/2014 22

11-05 Half Moon Bay Tank #2 Interior + Exterior Recoat

Pump Stations/Tanks/Wells

Priority: 1 Maintains essential District facilities.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$200,000				200,000						

Description:

Under a comprehensive program initiated in 2008, the District has inspected and performed long-deferred maintenance on its steel treated water storage tanks. The maintenance generally consists of repairing corrosion damage, recoating the interior and exterior of the tank, and bringing ladders, manways, railings and other tank features up to current standards.

Half Moon Bay Tank #2 Is a 400,000 gallon steel tank, one of three tanks located on the Nunes Treatment Plant site. The District completed repair and recoating of Half Moon Bay Tank #1, the smallest and the oldest of the three tanks, in 2012. The Tank #1 project also included providing improved access to the roof of Tank #2 via a catwalk from the roof of Tank #1, eliminating Tank #2's access ladder.

This project provides for recoating the interior and exterior of Half Moon Bay Tank #2.

11-05 Pump Stations/Tanks/Wells 6/20/2014 23

11-06 Half Moon Bay Tank #3 Interior + Exterior Recoat

Pump Stations/Tanks/Wells

Priority: 1 Maintains essential District facilities.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$200,000						200,000				

Description:

Under a comprehensive program initiated in 2008, the District has inspected and performed long-deferred maintenance on its steel treated water storage tanks. The maintenance generally consists of repairing corrosion damage, recoating the interior and exterior of the tank, and bringing ladders, manways, railings and other tank features up to current standards.

Half Moon Bay Tank #2 Is a 400,000 gallon steel tank, one of three tanks located on the Nunes Treatment Plant site. The District completed repair and recoating of Half Moon Bay Tank #1, the smallest and the oldest of the three tanks, in 2012.

This project provides for recoating the interior and exterior of Half Moon Bay Tank #3.

11-06 Pump Stations/Tanks/Wells 6/20/2014 24

12-02 Wave Valve Automation Pipeline Projects

Priority: 3 Improves system operation, water quality due to better circulation control, employee safety.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$50,000			50,000							

Description:

The Wave Valve, located on the 16 inch El Granada Pipeline adjacent to the Highway 1 frontage road near Wave Avenue, allows isolating the northern part of the District from the southern area. Closing the valve occasionally may be necessary for operational reasons. This project would retrofit the existing valve with an electrically operated actuator, eliminating a strenuous manual operation which raises safety concerns and providing operators with the ability to control the valve remotely in the event of an emergency or other operational need.



12-02 Pipeline Projects 6/20/2014 25

12-03 C	rystal Springs Pi	Springs Pipeline Air/Vacuum Relief Valves											
Priority: 1	Reduces w	es water loss, protects critical infrastructure.											
		FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24		
Total Budgete	d: \$0												
Description:	, ,	t replaces air/vo				•	. •	•	I the Cahill Ri	dge surge ta	nk. Valves		

12-03 Pipeline Projects 6/20/2014 26

12-04 Denniston Treated Water Booster Station

Water Supply Development

Priority:

1

This project is critical to the District's efforts to make maximum use of local water sources. It must be completed as soon as possible in order to comply with timing requirements of water rights permits for Denniston/San Vicente.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$1,000,000		200,000	800,000							

Description:

The Denniston Water Treatment Plant has a capacity of 1000 gpm, but gravity flow from Denniston WTP into the rest of the District's system is limited to about 400 gpm by the existing 8 inch and 10 inch cast iron pipelines along Bridgeport Drive. This limitation precludes making maximum use of the District's economical local water source. The solution to this problem has two elements: 1) construction of a treated water booster station adjacent to the Denniston pump station, and 2) construction of a 3,500 foot, 12 inch ductile iron pipeline bypassing the Bridgeport Drive bottleneck.

This project (12-04) would construct the new pump station. The Bridgeport pipeline replacement is covered by CIP project 10-02.

Denniston/San Vicente EIR process must complete before construction can proceed.

12-04 Water Supply Development 6/20/2014 27

12-05 Nu	nes Access Road	d Repaving							W	ater Treatme	ent Plants
Priority: 1	Ensures conf	tinued reliable	e delivery of	essential Nun	es Water Tre	atment Plant	chemicals ar	nd supplies.			
Total Budgeted	: \$0	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Description:	road' s cond	t several year ition represer as the pavemo	nts a hazard f	or the heavy	trucks delivei	ring essential	chemicals an	d supplies to	the plant, an	d the deterio	ration

12-05 Water Treatment Plants 6/20/2014 28

12-06 CSPS Surge Tank Control Improvements

Pump Stations/Tanks/Wells

Priority: 1 Replaces essential systems and improves worker safety.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$0										

Description:

The large pumps at the Crystal Springs Pump Station discharge through a large underground hydropneumatic tank which buffers pressure surges as the pumps start and stop. The water level probes designed to control the level of the air-water interface in the tank are not working, requiring District staff to enter the underground fault more frequently and creating safety concerns.

This project will provide new electronic water level probes and bring the surge tank controls into the pump station's automated control system, giving operators the ability to monitor the tank remotely and eliminating the need to open and enter the tank vault.

12-06 Pump Stations/Tanks/Wells 6/20/2014 29

Fiscal Year 2014/2015 to Fiscal Year 2023/2024

12-11 Miramar Tank Fence Replacement

Pump Stations/Tanks/Wells

Priority: 1

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$0										

Description:

12-11 Pump Stations/Tanks/Wells 6/20/2014 30

12-12 San Vicente Diversion and Pipeline

Water Supply Development

Priority: 1 Essential to secure vital local source water rights.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$2,300,000		300,000	1,000,000	1,000,000						

Description:

A water rights permit issued in 1969 allows the District to divert up to 2 cubic feet per second, year-round, from San Vicente Creek. In order to secure this water right on a permanent basis, the District must divert water from San Vicente. Although the District laid a temporary pipeline and diverted a small quantity of water in the 1980s, San Vicente diversion rights have essentially gone unused.

The San Vicente Diversion and Pipeline Project includes the following:

- 1) construction of a new diversion structure and pumping station at the District owned diversion site on San Vicente Creek.
- 2) replacement of the existing District owned pipeline from the diversion site to Upper San Vicente Reservoir (approximately 2300 feet).
- 3) construction of flow control and bypass piping at Upper San Vicente Reservoir.
- 4) construction of a new pipeline from Upper San Vicente Reservoir to the Denniston pump station (approximately 4000 feet).

This project includes \$300,000 in funding for design in FY 15/16 and \$2 million for construction in FY 16/17 and FY 17/18.

Denniston/San Vicente EIR process must complete before construction can proceed.

12-12 Water Supply Development 6/20/2014 31

controls.

12-14	Nune	nes - Hydropneumatic System Improvements									Water Treatment Plants				
Priority: 1	l	Improves wa	mproves water treatment plant reliability and efficiency.												
Total Budget	ed:	\$0	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24			
Description:		the existing l	large utility wa	ater pumps a	nd hydropne	umatic tank e	exceeds the p	olant's needs.	This results i	nt utility wate n excessive po d upgrade uti	ump starts a	nd high			

12-14 Water Treatment Plants 6/20/2014 32

13-01 Miramar Drive Pipeline Connection

Pipeline Projects

Priority: 3 Improves circulation, water quality, service.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$80,000	80,000									

Description:

This project provides a new pipeline bridging an approximate 400 foot gap between existing segments of 6 inch pipe along Miramar Drive below the Miramar Tank. The project would improve service to existing and future residences along Miramar Drive, improve water quality due to better circulation, and provide a second line to increase capacity between the Miramar Tank and the District's system. The Miramar Tank is currently connected only by a 6 inch line along Alto Avenue.



13-01 Pipeline Projects 6/20/2014 33

13-02 Replace 8 Inch Pipeline Under Creek at Pilarcitos Ave.

Pipeline Projects

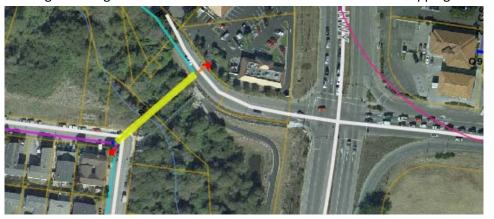
Priority: 2 Prevents water loss and environmental damage, protects water quality.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$200,000	200,000									

Description:

The 8 inch pipeline crossing Pilarcitos Creek between the end of Pilarcitos Avenue just south of the creek and Strawflower Shopping Center is one of only two pipelines supplying water to areas of the district south of Pilarcitos Creek. The pipe's age, current condition, and exact location in the creek are unknown. A break occurring in the section of pipe underneath the creek bed would be very difficult to detect and could cause significant water loss, serious water quality issues which could result in a District-wide boil water order, and environmental damage with potential fines.

The objective of this project is to replace the section of pipe under the creek with a pipe running over the creek, possibly attached to the existing footbridge between the end of Pilarcitos Avenue and the shopping center.



13-02 Pipeline Projects 6/20/2014 34

13-04 Denniston Reservoir Restoration

Water Supply Development

Priority: 2 Improves yield, quality, and reliability of the District's primary local water source.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$1,000,000			1,000,000							

Description:

Siltation in Denniston reservoir has reduced its volume to a small fraction of the capacity that existed when the District built the Denniston treatment plant. This reduction in volume reduces available yield during the dryer months and results in poor water quality during the wet months due to lack of settling time. This project would substantially restore the original volume of Denniston reservoir.

The Environmental Impact Report currently under preparation for the Denniston/San Vicente Water Supply Project includes consideration of Denniston reservoir dredging.



13-04 Water Supply Development 6/20/2014 35

13-05	Denr	niston WTP Em	nergency Pow	er						W	ater Treatme	ent Plants			
Priority:	2	Improves wa	mproves water supply reliability, emergency preparedness.												
			FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24			
Total Budg	eted:	\$500,000					500,000								

Description: This project would provide emergency backup power and associated switchgear for the Denniston Water Treatment Plant and Denniston

Pump Station. Denniston provides the only backup to the District's SFPUC water supply, which comes into the district via a single pipeline. Should the SFPUC supply be disrupted for an extended period – by an earthquake, for example – having emergency power at Denniston

would ensure continuous flow of water to the District's customers.

13-05 Water Treatment Plants 6/20/2014 36

13-08 Crystal Springs Spare 350 HP Pump & Motor

Pump Stations/Tanks/Wells

Priority: 2 Ensures reliability of critical facilities.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$50,000				50,000						

Description:

The Crystal Springs Pump Station has two 350 HP pumps and one 500 HP pump. Because failure of any one of the three pumps during peak demand months could impose an immediate water shortage on the District, the District maintains spare replacement units for pumps and motors. This ensures that the District could bring a failed pump back online with in a few days, rather than waiting the 10 to 14 weeks it could take to order and receive a new unit.

This project would provide a spare 350 HP pump and motor which could replace either of the operating 350 HP units in the event of a failure. The pump and motor will be purchased in FY 13/14 and FY 17/18, respectively.

13-08 Pump Stations/Tanks/Wells 6/20/2014 37

13-11 EG Tank #1 & Tank #2 Emergency Generators

Pump Stations/Tanks/Wells

Priority: 1 Ensures adequate water supplies, fire flows.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$275,000		75,000	200,000							

Description:

The pump station at El Granada (EG) Tank #1 llifts water to EG Tank #2, where the EG Tank #2 pump station pumps the water further up El Granada Boulevard to EG Tank #3. In the event of a power failure at EG Tank #1, the higher elevation areas served by tanks 2 and 3 would have only the limited supply (400,000 gallons) contained in those tanks. This would significantly reduce the system's ability to provide adequate fire flows.

This project will provide emergency generators and associated switchgear for the EG Tank #1 and EG Tank #2 pump stations.

13-11 Pump Stations/Tanks/Wells 6/20/2014 38

13-12 CCWD-MWSD Emergency Intertie – Planning

Water Supply Development

Priority: 3 Enhances water supply reliability

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$0										

Description:

In October 2010, Coastside County Water District and Montara Water and Sanitary District signed an Agreement for Emergency Water Supply providing for the agencies to provide each other with a temporary, interruptible water supply in the event of a water shortage emergency. The agreement does not specify the means by which the emergency supply would be provided. There is currently no point of connection between the two water systems.

This project provides funding for the District's share of planning and preliminary engineering for an intertie between the CCWD and MWSD systems

13-12 Water Supply Development 6/20/2014 39

14-01 Replace 12" Welded Steel Line on Hwy 92 with 8" DI

Pipeline Projects

Priority: 2 Replacing this pipeline is important to reduce costs, lower environmental risks, and improve water quality.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$3,100,000		100,000					1,000,000	1,000,000	1,000,000	

Description:

When the District built the new Pilarcitos East Pipeline to bring untreated water from Pilarcitos Reservoir and Crystal Springs to the Nunes Water Treatment Plant, the existing 12 inch welded steel raw water pipeline running along Highway 92 was repurposed to supply treated water to services along Highway 92. This (approximately) 12,000 foot pipeline is one of the oldest in the District and, like other welded steel pipelines, is at the end of its useful life. District crews have repaired a number of leaks along the pipe in recent years, and we would expect the frequency of repairs to increase. A large leak in a section of pipeline close to Pilarcitos Creek could cause significant environmental damage. In addition, the large size of the pipe relative to the low flow demands of the limited number of services along Highway 92 creates water quality problems. We are currently addressing water quality concerns with a schedule of regular flushing, but the flushing itself raises additional issues, including discharge of treated water into Pilarcitos Creek.

Given its length and the challenges of construction along the busy highway, replacing this pipe will be expensive – on the order of several million dollars. Construction would occur in phases, beginning with the sections at highest risk for costly failures. The CIP budget for the project includes \$100,000 for planning in FY 15/16 and construction cost placeholders of \$1 million per year in FY 20/21 through FY 22/23.



14-01 Pipeline Projects 6/20/2014 40

14-02 Nunes - Replace Sludge Pond Media

Water Treatment Plants

Priority: 2 Maintains essential District facilities.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$25,000	25,000									

Description:

The Nunes Water Treatment Plant facilities include two backwash solids drying ponds. Filter backwash water flows to the ponds, where the water drains through a bed of sand and gravel media, leaving concentrated sludge solids on the surface of the media. The clarified water returns to the plant influent. Solids deposited on the surface of the media dry and are removed for disposal. Over time, solids penetrate the media and the mechanical equipment used to remove the solids breaks down the media, reducing drying performance and necessitating media replacement.

This project will replace the media in the Nunes backwash ponds over a two-year period from FY 13/14 to FY 14/15.

14-02 Water Treatment Plants 6/20/2014 41

14-04 Den	niston - Dust C	ton - Dust Control Water Treatment Plants											
Priority: 2	Maintains es	sential Distri	ct facilities.										
Total Budgeted:	\$0	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24		
Description:	The Denniston Water Treatment Plant site is unpaved, and vehicle traffic and wind can raise dust. The dust interferes with sensitive equipment and instruments. This project provides for application of a dust control agent on the Denniston site.												

14-04 Water Treatment Plants 6/20/2014 42

14-06 Nunes - New 1720E Turbidimeters (4)

Water Treatment Plants

Priority: 1 Improves treatment plant reliability.

Description: This project would replace existing Nunes water treatment plant turbidity meters. The manufacturer no longer supports the model

currently installed, making it more difficult to keep the units and reliable service.

14-06 Water Treatment Plants 6/20/2014 43

Fiscal Year 2014/2015 to Fiscal Year 2023/2024

14-08	Nune	es - New Stora	ige Container							W	ater Treatme	ent Plants
Priority:	3	Equipment r	eplacement.									
Total Budge	eted:	\$0	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Description	ı:	Replaces rus	sted out shipp	ing containe	r used for sto	rage at the N	unes treatme	ent plant.				

14-08 Water Treatment Plants 6/20/2014 44

14-10 Nun	es - Emergency	y Power Swit		Water Treatment Plants							
Priority: 1	Replaces crit	ical water tre	eatment plant	emergency p	oower equipr	ment.					
		FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted:	\$ 0										
Description:	failure but de	oes not work		y to return to	utility powe	r when the po	itches the pla	_			•

14-10 Water Treatment Plants 6/20/2014 45

14-11 Replace 2" and Larger Meters with Omni Meters

Facilities & Maintenance

Priority: 2 Ensures equitable collection of revenue from larger customers.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$60,000	30,000	30,000								

Description: This program provides for replacing 2 inch and larger meters with newer technology that more accurately measures low flows, ensuring

equitable collection of revenue.

14-11 Facilities & Maintenance 6/20/2014 46

14-13 New Security Fence at Pilarcitos Well Field

Facilities & Maintenance

Priority: 2 Maintains security of district property and facilities.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$20,000	20,000									

Description: Replaces the fence and gate leading into the District's property in Pilarcitos Canyon. The fence separates District property from the public

areas of the adjoining Christmas tree farm. The current fence and gate do not provide adequate security.

14-13 Facilities & Maintenance 6/20/2014 47

14-14 Pilarcitos Canyon Road Improvements

Facilities & Maintenance

Priority: 3 Maintains essential District facilities and infrastructure

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$70,000	70,000									

Description: This project provides for improvement of a portion of the road leading to the District's essential facilities in Pilarcitos Canyon. A layer of

base rock placed on the road facilitates year-round access. The upper portion of the road, approximately a half mile long, was improved in a

previous project.

14-14 Facilities & Maintenance 6/20/2014 48

14-17 Crystal Springs Pump Station Electrical Controls Upgrades

Pump Stations/Tanks/Wells

Priority: 1 Required for operational flexibility, compliance with safety regulations.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$0										

Description:

In order to switch the existing main circuit breakers for the large pumps at Crystal Springs Pump Station, operators must open the electrical cabinets. Electrical safety standards promulgated since the Crystal Springs station was built recognize the hazards of exposure to unshielded conductors within electrical cabinets and require that cabinets be opened only by trained, qualified personnel wearing specified protective equipment. It is not practical for the District to bring in specialized personnel each time these breakers must be operated.

This project addresses significant safety and operational flexibility issues by modifying Crystal Springs pump switchgear to allow switching the main circuit breakers from outside the electrical cabinets.

14-17 Pump Stations/Tanks/Wells 6/20/2014 49

14-18 Crystal Springs Pump Station Spare 12 Inch Check Valve

Pump Stations/Tanks/Wells

Priority: 3 Improves operational reliability of critical facilities.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$25,000	25,000									

Description:

A discharge check valve on each of the three pumps at Crystal Springs Pump Station prevents water from flowing back through the pump into the pump station wet well when the pump is off. Because the failure of a single check valve can significantly reduce capacity of the pump station by taking a pump out of service, and because the valves are long-lead items, it is desirable to maintain a spare valve. This project provides for the purchase of a spare check valve.

14-18 Pump Stations/Tanks/Wells 6/20/2014 50

Fiscal Year 2014/2015 to Fiscal Year 2023/2024

14-23	Alves	s Tank Genera	nk Generator Enclosure Pump Stations/Tanks/Wells											
Priority:	2	Maintains es	aintains essential district facilities.											
Total Budge	eted:	\$0	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24		
Description	ı:		•			, 0	tor enclosure es to the Mira			•		•		

14-23 Pump Stations/Tanks/Wells 6/20/2014 51

14-24 Denniston/San Vicente EIR & Permitting

Water Supply Development

Priority: 1 Essential to the District's efforts to secure vital local water sources.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$100,000	50,000	50,000								

Description:

Preparing an Environmental Impact Report (EIR) for the Denniston/San Vicente Water Supply Project is a key element of the District's efforts to secure its rights to vital local water supply sources. Given the environmental sensitivity of the Denniston and San Vicente watersheds and the number of interested parties – the State Water Resources Control Board, farmers, the National Park Service, Montara Water and Sanitary District, Peninsula Open Space Trust, California Department of Fish and Game, National Marine Fisheries Service, San Mateo County, the California Coastal Commission, and others – completing the EIR and obtaining permits for the District's projects and water diversions will require significant resources. This project provides funding for work on Denniston/San Vicente by the District's EIR consultant, water rights counsel, legal counsel, hydrology consultants, biologists, fisheries consultants, and others.

14-24 Water Supply Development 6/20/2014 52

14-25 Water Shortage Plan Development

Water Supply Development

Priority: 1 Ensures the district will be able to meet customer needs, equitably recover revenue, and manage water supplies during a water shortage.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$150,000	50,000	100,000								

Description:

Although the District has a Drought Contingency Plan which broadly specifies actions to be taken in response to various levels of water shortage, the District does not have in place the policies, procedures, and administrative infrastructure to efficiently control water demand, ensure equitable revenue recovery, and provide increased levels of customer service during a severe water shortage. The District's utility billing software, for example, does not have the capability to bill each customer based on the customer's water allocation or to apply surcharges for use exceeding the allocation. In addition, the District needs to establish a water shortage rate structure.

This project provides funding for a multi-year effort aimed at preparing the District to manage water shortages. Elements of this effort include:

- Conducting a drought rate study.
- Implementing a drought rate and fee schedule through the required public input and board decision-making processes.
- Reviewing and obtaining public input on water allocations to classes of users.
- Identifying and evaluating alternatives for modifying or replacing the District's utility billing software.
- Implementing new or revised utility billing software.
- Developing plans for the significant increase in billing and customer service resources that would be required during a water shortage.

14-25 Water Supply Development 6/20/2014 53

14-26 Replace 2 Inch Pipe Downtown Half Moon Bay

Pipeline Projects

Priority: 3 Replaces obsolete infrastructure, improves water service, fire protection.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$500,000			500,000							

Description:

This project would replace approximately 2500 feet of 2 inch galvanized mains in and around downtown Half Moon Bay. These mains are old, subject to frequent leaks, and incapable of supplying required pressures and flows. Replacing them will allow the District to increase the water pressure in downtown Half Moon Bay and areas to the south.



14-26 Pipeline Projects 6/20/2014 54

14-27 Grandview 2 Inch Replacement

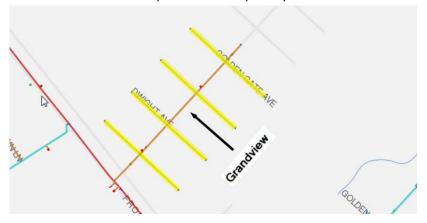
Pipeline Projects

Priority: 3 Replaces substandard infrastructure, improves water service, fire flows.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$450,000				450,000						

Description:

This project would replace approximately 2300 feet of 2 inch plastic mains in the Grandview Boulevard neighborhood. These mains are substandard and do not provide the required pressure and flow for fire protection.



14-27 Pipeline Projects 6/20/2014 55

14-28 Replace 2 Inch Hilltop Market to Spanishtown

Pipeline Projects

Priority: 3 Replaces obsolete infrastructure, improves water service, fire flows.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$240,000					240,000					

Description:

This project would replace approximately 1200 feet of 2 inch galvanized steel main running along Highway 92 from Hilltop Market to Spanishtown. This main is old, substandard, and incapable of providing required flow and pressure.



14-28 Pipeline Projects 6/20/2014 56

14-29 Replace 2 Inch GS Purisima Way

Pipeline Projects

Priority: 3 Replaces obsolete infrastructure, improves water service, fire flows.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$125,000						125,000				

Description:

This project would replace approximately 700 feet of 2 inch galvanized steel main along Purisima Way, north of Miramar Drive. The steel main is substandard and does not provide required flow and pressure.



14-29 Pipeline Projects 6/20/2014 57

14-30 Replace Miscellaneous 2 Inch GS El Granada

Pipeline Projects

Priority: 3

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$60,000						60,000				

Description:

This project would replace approximately 300 feet of 2 inch galvanized steel mains in El Granada that were not included under other projects.



14-30 Pipeline Projects 6/20/2014 58

14-31 Ferdinand Avenue - Replace 4" WS Ferdinand Ave. to Columbus St.

Pipeline Projects

Priority: 1 Pipeline is welded steel, more than 50 years old, has had numerous leaks.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$225,000					225,000					

Description:

This project would replace approximately 1500 feet of 4 inch welded steel pipeline in El Granada, running along Carmel Avenue and along Ferdinand from Carmel to Columbus (partially paper street). It may be possible to abandon rather than replace the 360 foot section running in the undeveloped Ferdinand right-of-way between Vallejo and Columbus.



14-31 Pipeline Projects 6/20/2014 59

14-32 Casa Del Mar - Replace Cast Iron Mains

Pipeline Projects

Priority: 2 These cast iron pipelines are nearing the end of their useful life, leaks are increasing, and repairs are expensive.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$2,000,000								1,000,000	1,000,000	

Description:

Cast iron mains in the Casa Del Mar neighborhood (between Kehoe Avenue and Wave Avenue) were installed between 1965 and 1976. This project would replace approximately 10,700 feet of 4 inch, 6 inch, 8 inch, and 10 inch cast iron pipelines. There have been numerous leaks in this neighborhood, and leaks have caused significant pavement damage due to high pressure in the area.



14-32 Pipeline Projects 6/20/2014 60

14-33 Miramar Cast Iron Pipeline Replacement

Pipeline Projects

Priority: 2

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$2,000,000						1,000,000	1,000,000			

Description:

This project would replace about 11,000 feet of 8 inch and 10 inch cast iron mains in an area of Miramar bounded approximately by Highway 1, Medio Avenue, and Washington Blvd. Most of these pipes were installed in the mid-1960's.



14-33 Pipeline Projects 6/20/2014 61

15-01 Utility Billing Software Upgrade

Facilities & Maintenance

Priority: 1 Capable and well supported utility billing software is essential to the District's operations.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$200,000	200,000									

Description:

<div>The District's utility billing software (Springbrook) does not have the capability to handle budget-based water billing, which is required for the higher stages of our Water Shortage Contingency Plan and may become a permanent feature of the District's future billing approach. District staff has been unsuccessful in obtaining the necessary software modifications from the current vendor. In addition, poor support of the current software makes it difficult for District staff to obtain important information from the billing system. Replacing the current software package will:

Improve software support

Allow for budget-based billing as necessary under the Water Shortage Contingency Plan

Provide improved access to utility billing information

Allow for better integration of web-based payments and customer online account access

15-01 Facilities & Maintenance 6/20/2014 62

15-02 Administration Building Fire Repair and Remodeling Project

Facilities & Maintenance

Priority: 1 This project is essential to improve the District's outdated administration building.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$150,000	150,000									

Description:

<div>In January 2014, the District's administration building was damaged by a fire in the computer server room. The District's insurance coverage will pay all of the costs necessary to restore the building to its pre-fire condition, including the costs of housing District staff in temporary office space. Updating this 40+ year-old building to improve its function, layout, and energy efficiency while performing the necessary fire repairs will provide significant benefits at a much lower cost than a stand-alone remodeling project.</di>

15-02 Facilities & Maintenance 6/20/2014 63

15-03 District Administration/Operations Center

Facilities & Maintenance

Priority:

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$3,025,000	25,000									3,000,000

Description:

15-03 Facilities & Maintenance 6/20/2014 64

Equipment Purchase & Replacement

Fiscal Year 2014/2015 to Fiscal Year 2023/2024

15-04 Vactor Trailer Equipment Purchase & Replacement

Priority: 2

FY 14/15 FY 15/16 FY 16/17 FY 17/18 FY 18/19 FY 19/20 FY 20/21 FY 21/22 FY 22/23 FY 23/24

Total Budgeted: \$100,000 100,000

Description:

15-05 Administration Building Phone System

Facilities & Maintenance

Priority: 1 Having an expandable phone system with up-to-date capabilities is essential to the District's administrative and customer service functions.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$30,000	30,000									

Description:

<div>The District's phone system is outdated, cannot be expanded, and is no longer supported. Replacing the phone system will provide the capabilities and expansion capacity needed for District staff to handle the additional administrative and customer service requirements that a water shortage would impose. </div>

15-05 Facilities & Maintenance 6/20/2014 66

99-01 Meter Change Program Facilities & Maintenance

Priority: 1 Ensures accuracy of metering for billing purposes.

FY 15/16 FY 14/15 FY 16/17 FY 17/18 FY 18/19 FY 20/21 FY 19/20 FY 21/22 FY 22/23 FY 23/24 10,000 10,000 10,000 10,000 10,000 20,000 20,000 20,000 20,000 20,000 Total Budgeted: \$150,000

Description: <div>This project provides on-going funding for the District's replacement of meters that have reached the end of their service life.

Anticipating comprehensive replacement of smaller meters in association with AMI implementation (Project 09-07), program

reduced beginning FY14/15, to be resumed FY19/20. </div>

99-01 Facilities & Maintenance 6/20/2014 67

Equipment Purchase & Replacement

99-02 Vehicle Replacement

Equipment Purchase & Replacement

Priority: 2 Replaces essential District equipment.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$210,000	30,000	30,000	30,000		30,000		30,000	30,000		30,000

Description: The District generally considers vehicles – primarily pickup trucks – to have a useful life of 10 years or 100,000 miles. This project provides

funding for periodic replacement of the vehicle fleet.

99-03 Computer Systems

Equipment Purchase & Replacement

Priority: 2 Maintains essential District facilities.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$50,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000

Description: Provides for ongoing replacement of computer systems on a lifecycle of 3 to 5 years.

99-04 Office Equipment/Furniture

Equipment Purchase & Replacement

Priority: 2 Maintains essential district facilities.

	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Total Budgeted: \$30,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000

Description: Provides for ongoing replacement of District office equipment and furniture.

99-05 Denniston Maintenance Dredging

Water Treatment Plants

Priority: 1 Dredging is essential to maintain storage capacity and improve the quality of water going into the Denniston Water Treatment Plant.

FY 14/15 FY 15/16 FY 16/17 FY 17/18 FY 18/19 FY 19/20 FY 20/21 FY 21/22 FY 22/23 FY 23/24 35,000 35,000 35,000 35,000 35,000 35,000 35,000 3,500 35,000 35,000 Total Budgeted: \$318,500

Description: This CIP item provides funding for annual maintenance dredging of Denniston Reservoir. The budget for FY 13/14 is higher to provide for

planned reestablishment of the creek channel.

99-05 Water Treatment Plants 6/20/2014 71

NN-00 Pipeline Replacement Pipeline Projects

Priority: 3

Description: Placeholder for cost of continuing pipeline replacement.

NN-00 Pipeline Projects 6/20/2014 72