# CIP Projects FY15/16 to FY24/25

NO.	PROJECT NAME		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	FY 24/25	CIP Total	
Equipn	nent Purchase & Replacement													
06-03	SCADA/Telemetry/Electrical Controls Replacement		150,000	150,000	150,000								450,000	
08-10	Backhoe						80,000						80,000	
08-12	New Service Truck			150,000									150,000	
15-04	Vactor Truck/Trailer				200,000								200,000	
16-06	Portable work lights		6,000										6,000	
99-02	Vehicle Replacement		30,000			30,000		30,000	30,000		30,000		150,000	
99-03	Computer Systems		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000		45,000	
99-04	Office Equipment/Furniture		3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000		27,000	
8	Equipment Purchase & Replacement Totals		194,000	308,000	358,000	38,000	88,000	38,000	38,000	8,000	38,000			1,108,000
Faciliti	es & Maintenance													
08-08	PRV Valves Replacement Project		30,000	30,000	30,000	30,000	30,000						150,000	
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		180,000	
09-23	District Digital Mapping		10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	\$10,000	100,000	
14-11	Replace 2" and Larger Meters with Omni Meters		30,000										30,000	
14-13	New Security Fence at Pilarcitos Well Field		20,000										20,000	
15-01	Utility Billing Software Upgrade		150,000										150,000	
15-03	District Administration/Operations Center											3,000,000	3,000,000	
16-07	Sample Station Replacement Project				5,000	5,000	5,000	5,000	5,000	5,000	5,000	\$5,000	40,000	
99-01	Meter Change Program		10,000	10,000	10,000	10,000	20,000	20,000	20,000	20,000	20,000		140,000	
10	Facilities & Maintenance Totals		270,000	70,000	75,000	75,000	1,585,000	1,555,000	55,000	55,000	55,000	3,015,000		6,810,000
Pipelin	ne Projects													
06-01	Avenue Cabrillo Phase 2 & 3 Pipeline Replacement Proje	ct		300,000									300,000	

NO.	PROJECT NAME	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	FY 24/25	CIP Total	
06-02	Highway 1 South Pipeline Replacement Project			80,000	100,000	1,200,000						1,380,000	
07-03	Pilarcitos Canyon Pipeline Replacement	100,000							150,000	1,000,000		1,250,000	
07-04	Bell Moon Pipeline Replacement Project			60,000	250,000							310,000	
10-01	Main Street Bridge Pipeline Replacement Project	2,000,000										2,000,000	
12-02	Wave Valve Automation		50,000									50,000	
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	300,000					1,000,000	1,000,000	1,000,000			3,300,000	
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	
16-09	Slipline 10-inch Pipeline in Magellan at Hwy 1	100,000										100,000	
NN-00	Disalina Daulasanant									1,500,000	4 500 000		
	Pipeline Replacement									1,300,000	1,500,000	3,000,000	
18	Pipeline Replacement  Pipeline Projects Totals	2,500,000	1,050,000	590,000	815,000	2,385,000	2,000,000	2,000,000	2,150,000	2,500,000	1,500,000	3,000,000	17,490,000
		2,500,000	1,050,000	590,000	815,000	2,385,000	2,000,000	2,000,000	2,150,000			3,000,000	17,490,000
	Pipeline Projects Totals	<b>2,500,000</b> 300,000	1,050,000	590,000	815,000	2,385,000	2,000,000	2,000,000	2,150,000			3,000,000	17,490,000
Pump S	Pipeline Projects Totals Stations/Tanks/Wells		1,050,000	590,000	<b>815,000</b> 600,000	2,385,000	2,000,000	2,000,000	2,150,000				17,490,000
<b>Pump 5</b> 06-04	Pipeline Projects Totals  Stations/Tanks/Wells  Hazen's Tank Replacement		1,050,000	590,000		<b>2,385,000</b> 15,000	2,000,000	2,000,000	2,150,000			300,000	17,490,000
Pump \$ 06-04 08-14	Pipeline Projects Totals  Stations/Tanks/Wells  Hazen's Tank Replacement  Alves Tank Recoating, Interior + Exterior		<b>1,050,000</b> 350,000	590,000			2,000,000	2,000,000	2,150,000			300,000 600,000	17,490,000
Pump 9 06-04 08-14 08-16	Pipeline Projects Totals  Stations/Tanks/Wells  Hazen's Tank Replacement  Alves Tank Recoating, Interior + Exterior  Cahill Tank Exterior Recoat			<b>590,000</b> 150,000			2,000,000	2,000,000	2,150,000			300,000 600,000 15,000	17,490,000
Pump 9 06-04 08-14 08-16 08-18	Pipeline Projects Totals  Stations/Tanks/Wells  Hazen's Tank Replacement  Alves Tank Recoating, Interior + Exterior  Cahill Tank Exterior Recoat  EG Tank #3 Recoating Interior + Exterior						2,000,000	2,000,000	2,150,000			300,000 600,000 15,000 350,000	17,490,000

NO.	PROJECT NAME	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	FY 24/25	CIP Total	
11-06	Half Moon Bay Tank #3 Interior + Exterior Recoat					200,000						200,000	
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	
16-08	New Denniston Well			80,000								80,000	
11	Pump Stations/Tanks/Wells Totals	375,000	550,000	480,000	700,000	215,000							2,320,000
Water	Supply Development												
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	
14-24	Denniston/San Vicente EIR & Permitting	50,000										50,000	
14-25	Water Shortage Plan Development	100,000										100,000	
6	Water Supply Development Totals	760,000	3,640,000	1,000,000									5,400,000
	Water Supply Development Totals  Treatment Plants	760,000	3,640,000	1,000,000									5,400,000
		760,000	3,640,000	1,000,000	30,000	30,000	30,000	30,000	30,000			150,000	5,400,000
Water	Treatment Plants	760,000	3,640,000	1,000,000	30,000 500,000	30,000	30,000	30,000	30,000			150,000 500,000	5,400,000
<b>Water</b> 08-07	Treatment Plants  Nunes Filter Valve Replacement	<b>760,000</b> 10,000	3,640,000	1,000,000		30,000	30,000	30,000	30,000				5,400,000
<b>Water</b> 08-07 13-05	Treatment Plants  Nunes Filter Valve Replacement  Denniston WTP Emergency Power		3,640,000	1,000,000		30,000	30,000	30,000	30,000			500,000	5,400,000
Water 08-07 13-05 16-01	Treatment Plants  Nunes Filter Valve Replacement  Denniston WTP Emergency Power  Denniston WTP Coag Tank Motor Operated Valve	10,000	3,640,000	1,000,000		30,000	30,000	30,000	30,000			500,000	5,400,000
Water 08-07 13-05 16-01 16-02	Treatment Plants  Nunes Filter Valve Replacement  Denniston WTP Emergency Power  Denniston WTP Coag Tank Motor Operated Valve  Denniston WTP Filter Repairs	10,000 110,000	3,640,000	1,000,000		30,000	30,000	30,000	30,000			500,000 10,000 110,000	5,400,000
Water 08-07 13-05 16-01 16-02 16-03	Treatment Plants  Nunes Filter Valve Replacement  Denniston WTP Emergency Power  Denniston WTP Coag Tank Motor Operated Valve  Denniston WTP Filter Repairs  Denniston WTP Filter Flow Meter Replacement	10,000 110,000 10,000	3,640,000	1,000,000		30,000	30,000	30,000	30,000			500,000 10,000 110,000 10,000	5,400,000
Water 08-07 13-05 16-01 16-02 16-03 16-04	Treatment Plants Nunes Filter Valve Replacement  Denniston WTP Emergency Power  Denniston WTP Coag Tank Motor Operated Valve  Denniston WTP Filter Repairs  Denniston WTP Filter Flow Meter Replacement  Denniston WTP Pond Return Pump	10,000 110,000 10,000 25,000	<b>3,640,000</b> 35,000	<b>1,000,000</b> 35,000		30,000	30,000	30,000	30,000	35,000		500,000 10,000 110,000 10,000 25,000	5,400,000
Water 08-07 13-05 16-01 16-02 16-03 16-04 16-05	Treatment Plants Nunes Filter Valve Replacement  Denniston WTP Emergency Power  Denniston WTP Coag Tank Motor Operated Valve  Denniston WTP Filter Repairs  Denniston WTP Filter Flow Meter Replacement  Denniston WTP Pond Return Pump  Nunes Filter Valve Repairs & Replacements	10,000 110,000 10,000 25,000 15,000			500,000					35,000 <b>35,000</b>		500,000 10,000 110,000 10,000 25,000 15,000	1,103,500

**Grand Tot**al

4,304,000 5,653,000 2,538,000 2,193,000 4,338,000 3,658,000 2,126,500 2,278,000 2,628,000 4,515,000 34,231,500

Monday, April 13, 2015 Page 3 of 3

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

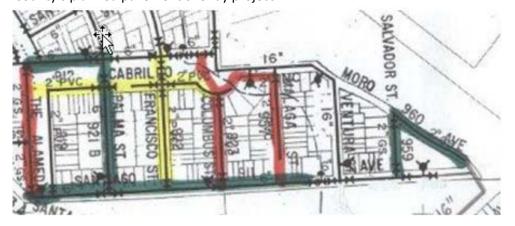
**Pipeline Projects** 

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

	FY 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	FY 24/25
Total Budgeted: \$600,000		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 4/13/2015 1

#### 06-02 **Highway 1 South Pipeline Replacement Project**

**Pipeline Projects** 

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

	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	FY 24/25
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.



4/13/2015 06-02 **Pipeline Projects** 

# 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.

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.

4/13/2015 APPROVED: June 30, 2015

### 06-04 Hazen's Tank Replacement

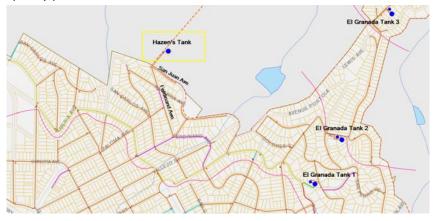
Pump Stations/Tanks/Wells

Priority: 1 Replaces essential district infrastructure.

	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	FY 24/25
Total Budgeted: \$500,000	300,000									

# Description:

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.



**06-04**Pump Stations/Tanks/Wells4/13/20154

#### 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 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 FY 24/25

100,000 150,000 1,000,000

Description:

Total Budgeted: \$1,250,000

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 4/13/2015

# 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 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	FY 24/25
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 4/13/2015 6

# 08-07 Nunes Filter Valve Replacement

**Water Treatment Plants** 

Priority: 3 Maintains essential District facilities.

	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	FY 24/25
Total Budgeted: \$150,000				30,000	30,000	30,000	30,000	30,000		

Description:

**08-07** Water Treatment Plants 4/13/2015 7

#### 08-08 PRV Valves Replacement Project

Facilities & Maintenance

Priority: 1 Maintains distribution system circulation and water quality

FY 15/16 FY 16/17 FY 17/18 FY 19/20 FY 20/21 FY 23/24 FY 18/19 FY 21/22 FY 22/23 FY 24/25 Total Budgeted: \$180,000 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 4/13/2015 8

08-10 Backhoe **Equipment Purchase & Replacement** 

Priority: 2 Replaces essential District equipment.

	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	FY 24/25
Total Budgeted: \$80,000					80,000					

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

replace the backhoe with a late-model used unit.

4/13/2015 APPROVED: June 30, 2015

9

08-12 **New Service Truck**  Equipment Purchase & Replacement

Priority: 2

FY 24/25 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:

08-12

4/13/2015 APPROVED: June 30, 2015

10

### 08-14 Alves Tank Recoating, Interior + Exterior

Pump Stations/Tanks/Wells

Priority: 1 Maintains critical district infrastructure.

	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	FY 24/25
Total Budgeted: \$600,000				600,000						

# 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 4/13/2015 11

**08-16 Cahill Tank Exterior Recoat** Pump Stations/Tanks/Wells

Priority: 3 Maintains essential district facilities

	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	FY 24/25
Total Budgeted: \$15,000					15,000					

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 4/13/2015 12

### 08-18 EG Tank #3 Recoating Interior + Exterior

Pump Stations/Tanks/Wells

Priority: 1 Maintains essential district facilities.

	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	FY 24/25
Total Budgeted: \$700,000		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/Wells4/13/201513

#### 09-07 Advanced Metering Infrastructure

Facilities & Maintenance

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

	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	FY 24/25
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 19/20.

**09-07** Facilities & Maintenance 4/13/2015 14

**09-09** Fire Hydrant Replacement Facilities & Maintenance

Priority: 3 Maintains essential district infrastructure.

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 FY 24/25 Total Budgeted: \$200,000 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 4/13/2015 15

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

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

	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	FY 24/25
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 4/13/2015 16

**09-23 District Digital Mapping** Facilities & Maintenance

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

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 FY 24/25 Total Budgeted: \$100,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000

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 4/13/2015 17

#### 10-01 Main Street Bridge Pipeline Replacement Project

**Pipeline Projects** 

Priority:

1

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 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	FY 24/25
Total Budgeted: \$2,500,000	2,000,000									

Description:

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.



4/13/2015 18 10-01 Pipeline Projects

#### 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 1 to comply with timing requirements of water rights permits for Denniston/San Vicente.

	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	FY 24/25
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.



4/13/2015 19 Water Supply Development

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

Priority: 3 Maintains essential district infrastructure.

	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	FY 24/25
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 4/13/2015 20

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

Pump Stations/Tanks/Wells

Priority: 1 Maintains essential District facilities.

	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	FY 24/25
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 4/13/2015 21

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

Pump Stations/Tanks/Wells

Priority: 1 Maintains essential District facilities.

	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	FY 24/25
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 4/13/2015 22

12-02 Wave Valve Automation Pipeline Projects

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

	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	FY 24/25
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 4/13/2015 23

#### 12-04 **Denniston Treated Water Booster Station**

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 1 to comply with timing requirements of water rights permits for Denniston/San Vicente.

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 FY 24/25 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.

4/13/2015 24 12-04 Water Supply Development

#### 12-12 **San Vicente Diversion and Pipeline**

Water Supply Development

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

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 FY 24/25 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.

4/13/2015 25 12-12 Water Supply Development

### 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 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	FY 24/25
Total Budgeted: \$400,000		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 4/13/2015 26

#### 13-04 **Denniston Reservoir Restoration**

Water Supply Development

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

	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	FY 24/25
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.



Water Supply Development 4/13/2015 13-04 APPROVED: June 30, 2015

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#### 13-05 **Denniston WTP Emergency Power Water Treatment Plants** Priority: Improves water supply reliability, emergency preparedness. 2

	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	FY 24/25
Total Budgeted: \$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.

4/13/2015 28 13-05 **Water Treatment Plants** 

#### 13-08 Crystal Springs Spare 350 HP Pump & Motor

Pump Stations/Tanks/Wells

Priority: 2 Ensures reliability of critical facilities.

	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	FY 24/25
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 4/13/2015 29

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

Pump Stations/Tanks/Wells

Priority: 1 Ensures adequate water supplies, fire flows.

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 4/13/2015 30

#### 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 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	FY 24/25
Total Budgeted: \$3,300,000	300,000					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
- \$200,000 in FY15/16 for sliplining a problematic secion near La Nebbia winery
- Construction cost placeholders of \$1 million per year in FY 20/21 through FY 22/23.



31 14-01 **Pipeline Projects** 4/13/2015

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

Facilities & Maintenance

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

	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	FY 24/25
Total Budgeted: \$60,000	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 4/13/2015 32

# 14-13 New Security Fence at Pilarcitos Well Field

Facilities & Maintenance

Priority: 2 Maintains security of district property and facilities.

	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	FY 24/25
Total Budgeted: \$40,000	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 4/13/2015 33

#### 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 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 FY 24/25 Total Budgeted: \$100,000 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.

4/13/2015 34 14-24 Water Supply Development

### 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 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	FY 24/25
Total Budgeted: \$150,000	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 4/13/2015 35

## 14-26 Replace 2 Inch Pipe Downtown Half Moon Bay

**Pipeline Projects** 

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

	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	FY 24/25
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 4/13/2015 36

# 14-27 Grandview 2 Inch Replacement

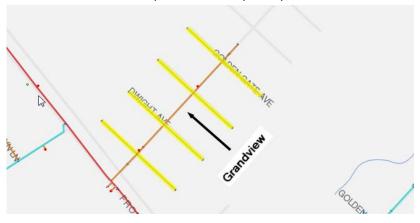
**Pipeline Projects** 

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

	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	FY 24/25
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 4/13/2015 37

# 14-28 Replace 2 Inch Hilltop Market to Spanishtown

**Pipeline Projects** 

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

	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	FY 24/25
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 4/13/2015 38

# 14-29 Replace 2 Inch GS Purisima Way

**Pipeline Projects** 

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

	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	FY 24/25
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 4/13/2015 39

# 14-30 Replace Miscellaneous 2 Inch GS El Granada

**Pipeline Projects** 

Priority: 3

	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	FY 24/25
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 4/13/2015 40

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

**Pipeline Projects** 

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

	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	FY 24/25
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.



**Pipeline Projects** 4/13/2015 41 14-31

### 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 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	FY 24/25
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 4/13/2015 42

# 14-33 Miramar Cast Iron Pipeline Replacement

**Pipeline Projects** 

Priority: 2

	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	FY 24/25
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 4/13/2015 43

# 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 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	FY 24/25
Total Budgeted: \$150,000	150,000									

## Description:

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

**15-01** Facilities & Maintenance 4/13/2015 44

15-03 District Administration/Operation
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Facilities & Maintenance

Priority:

	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	FY 24/25
Total Budgeted: \$25,000										3,000,000

Description: Evaluation of District space needs performed in connection with the 2014 administration building remodeling project indicated that the

District's current facilities are inadequate to meet the District's long-term needs. This project is included in the CIP as a placeholder in

anticipation of the need to provide additional space for District operations and administration functions.

**15-03** Facilities & Maintenance 4/13/2015 45

15-04 Vactor Truck/Trailer

**Equipment Purchase & Replacement** 

Priority: 2

	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	FY 24/25
Total Budgeted: \$200,000			200,000							

Description:

Due to increased regulation of potable water discharges and risks associated with excavating around existing underground utilities, many water agencies have adopted the use of vacuum equipment for excavation of leaks. This item would fund purchase of a vactor trailer or a used vactor truck.

4/13/2015 46 APPROVED: June 30, 2015 16-01 Denniston WTP Coag Tank Motor Operated Valve

**Water Treatment Plants** 

Priority: 3

	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	FY 24/25
Total Budgeted: \$10,000	10,000									

Description:

Presently the coagulation tank is drained when the plant is shut down which prevents old water from affecting the process when the plant is started back up. In the process of draining the coag tank the contact clarifiers also drain, which causes trouble with entrained air upon startup.

**16-01** Water Treatment Plants 4/13/2015 47

16-02 Denniston WTP Filter Repairs Water Treatment Plants

Priority: 1

Description: Last inspection of the filter showed loss of greensand and significant corrosion where the suface wash laterals screw into the header. This

will result in loss of filter cleaning and iron/manganese removal efficiency. The project includes opening the filters, removing media, installing

new stainless steel surface wash headers, replacing the laterals, replacing media.

**16-02** Water Treatment Plants 4/13/2015 48

# 16-03 Denniston WTP Filter Flow Meter Replacement

**Water Treatment Plants** 

Priority:

	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	FY 24/25
Total Budgeted: \$10,000	10,000									

Description: The differential pressure flowmeters give indication of gpm through the filter. SWRCB requires that the filter flows be displayed and

recorded. All three DP flowmeters are presently not functional and or inaccurate.

**16-03** Water Treatment Plants 4/13/2015 49

16-04 Denniston WTP Pond Return Pump

**Water Treatment Plants** 

Priority: 2

	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	FY 24/25
Total Budgeted: \$25,000	25,000									

Description: This project will complete the washwater handling system at Denniston WTP by adding a sump pump in the washwater holding pond that

can be used when it is necessary to route pond water to locations other than the influent flow stream.

**16-04** Water Treatment Plants 4/13/2015 50

16-05 Nunes Filter Valve Repairs & Replacments

**Water Treatment Plants** 

Priority: 1

	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	FY 24/25
Total Budgeted: \$15,000	15,000									

Description: These valves are original equipment and some have failed on all four filters. Currently the operator must climb scaffolding and support

brackets to manually operate the broken Surface Wash valve on side B of Filter #3 during backwash. This is a significant safety issue.

**16-05** Water Treatment Plants 4/13/2015 51

16-06 Portable work lights

**Equipment Purchase & Replacement** 

Priority: 1

	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	FY 24/25
Total Budgeted: \$6,000	6,000									

Description: This portable lighting will work in areas where we have emergency main repairs and the trailer-mounted lights cannot be used. They will also

be used when we need multiple lights for traffic control.

4/13/2015 52 APPROVED: June 30, 2015 16-07 Sample Station Replacement Project

Facilities & Maintenance

Priority: 3

	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	FY 24/25
Total Budgeted: \$35,000			5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000

Description: Our present sample stations are not suitably designed for use on the coast. The housing corrodes causing difficulty with opening and closing.

In addition, many stations need to be raised above the ground level. This project would replace three stations per year over eight years.

**16-07** Facilities & Maintenance 4/13/2015 53

16-08 New Denniston Well Pump Stations/Tanks/Wells

Priority: 2

Description: Due to deterioration over 40+ years of life, the Denniston wells produce a minimal quantity of water. Denniston wells 2, 3 and 4 are beyond

repair. Wells on the south side of creek (3 and 4) are very low producers (<20 gpm) and have a serious iron bacteria problem. The casing in well 2 is damaged beyond repair. Subject to further evaluation of potential water availability by our hydrologists, this project would abandon

the existing wells and install a new well on the site of well

**16-08** Pump Stations/Tanks/Wells 4/13/2015 54

16-09 Slipline 10-inch Pipeline in Magellan at Hwy 1

**Pipeline Projects** 

Priority: 1

	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	FY 24/25
Total Budgeted: \$100,000	100,000									

Description: On the night of November 23, 2014, the 10-inch cast iron pipeline which runs down Magellan from 5th Avenue and across Highway 1 failed in

the field east of Highway 1, causing the loss of more than 750,000 gallons of water and leading to a boil order in some El Granada

neighborhoods. This project will prevent similar problems with this line in the future by lining it with a smaller pipe.

**16-09** Pipeline Projects 4/13/2015 55

99-01 Meter Change Program Facilities & Maintenance

Priority: 1 Ensures accuracy of metering for billing purposes.

FY 15/16 FY 16/17 FY 17/18 FY 18/19 FY 19/20 FY 20/21 FY 21/22 FY 23/24 FY 22/23 FY 24/25 Total Budgeted: \$150,000 10,000 10,000 20,000 20,000 20,000 10,000 10,000 20,000 20,000

Description: 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.

**99-01** Facilities & Maintenance 4/13/2015 56

99-02 Vehicle Replacement

Equipment Purchase & Replacement

Priority: 2 Replaces essential District equipment.

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 FY 24/25 Total Budgeted: \$180,000 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.

4/13/2015 57 APPROVED: June 30, 2015

# 99-03 Computer Systems

Equipment Purchase & Replacement

Priority: 2 Maintains essential District facilities.

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 FY 24/25 Total Budgeted: \$50,000 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.

4/13/2015 58 APPROVED: June 30, 2015

#### Office Equipment/Furniture 99-04

Equipment Purchase & Replacement

Priority: 2 Maintains essential district facilities.

	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	FY 24/25
Total Budgeted: \$30,000	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.

> 4/13/2015 APPROVED: June 30, 2015

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## 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 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 FY 24/25 Total Budgeted: \$318,500 35,000 35,000 35,000 35,000 35,000 35,000 35,000 35,000 3,500

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 4/13/2015 60

Fiscal Year 2015/2016 to Fiscal Year 2024/2025

NN-00 Pipeline Replacement Pipeline Projects

Priority: 3

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 FY 24/25

Total Budgeted: \$1,500,000 1,500,000

Description: Placeholder for cost of continuing pipeline replacement.

**NN-00** Pipeline Projects 4/13/2015 61