COASTSIDE COUNTY WATER DISTRICT

CIP Projects FY 17/18 to FY 26/27

FINAL

6/26/2017

Project #	Project Name	Comments	FY 17/18	FY18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY26/27	FY 17/18 to FY 26/27 Total
Equipment Purchase & Replacement													
06-03	SCADA/Telemetry/Electric Controls Replacement (*Backup Communications @ Cahill, PRV controls)*	$50K added for each year	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 500,000
08-10	Backhoe	cost increase (from $80K)			$ 200,000								$ 200,000
08-12	New Service Truck	cost increase (from $200K)	$ 250,000										$ 250,000
15-04	Vactor Truck/Trailer	moved from FY18/19						$ 500,000					$ 500,000
99-02	Vehicle Replacement	added vehicle replacements	$ 90,000	$ 90,000	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 420,000
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
	Equipment Purchase & Replacement Totals		**$ 398,000**	**$ 148,000**	**$ 288,000**	**$ 88,000**	**$ 88,000**	**$ 588,000**	**$ 88,000**	**$ 88,000**	**$ 88,000**	**$ 88,000**	**$ 1,950,000**
Facilities & Maintenance													
08-08	PRV Valves Replacement Project		$ 30,000	$ 30,000	$ 30,000								$ 90,000
09-07	Advanced Metering Infrastructure	moved up installation from FY18/19; added $250K for contract installation in FY17/18; removed $50K in FY19/20 and $20K/yr from FY18/19 forward; net 5 year change = + $160K	$ 850,000										$ 850,000
09-09	Fire Hydrant Replacement		$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 400,000
15-03	District Administration/Operations Center										$ 3,000,000		$ 3,000,000
16-07	Sample Station Replacement Project	moved up installation -- will complete over two years; previously budgeted at $5K per year for 8 years	$ 20,000	$ 20,000									$ 40,000
17-15	Pilarcitos Canyon Emergency Road Repairs	Permit for Feb 2017 storm repairs requires additional restoration work	$ 100,000										$ 100,000
99-01	Meter Change Program	moved up $300K from FY 18/19	$ 600,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 780,000
	Facilities and Maintenance Totals		**$ 1,640,000**	**$ 110,000**	**$ 90,000**	**$ 60,000**	**$ 60,000**	**$ 60,000**	**$ 60,000**	**$ 60,000**	**$ 3,060,000**	**$ 60,000**	**$ 5,260,000**
Pipeline Projects													
06-02	Highway 1 South Pipeline Replacement Project	moved up from FY 19/20; reduced cost $800K	$ 80,000	$ 500,000									$ 580,000
07-03	Pilarcitos Canyon Pipeline Replacement	moved up from FY 23/24 (interest from SFPUC) -- reduced cost $400K	$ 150,000	$ 600,000									$ 750,000
07-04	Bell Moon Pipeline Replacement Project								$ 60,000	$ 250,000			$ 310,000
13-02	Replace 8 Inch Pipeline Under Creek at Pilarcitos Ave						$ 400,000						$ 400,000
14-01	Replace 12" Welded Steel Line on Hwy 92 with 8"		$ 300,000			$ 1,000,000	$ 1,000,000	$ 1,000,000					$ 3,300,000
14-26	Replace 2" Pipe in Downtown Half Moon Bay	shifted from FY 16/17 - will go out to bid in April 2017 - plan is to complete in summer, 2017 (funds will be available from 2016/17 budget)	$ 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 Purissima 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			$ 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									$ 500,000	$ 1,000,000		$ 1,500,000
16-09	Slipline 10 Inch Pipeline in Magellan at Hwy 1			$ 100,000									$ 100,000
18-01	Pine Willow Oak - 2400 feet	new					$ 500,000						$ 500,000
18-12	Installation of (2) Valves - Ritz Carlton	new - given April 2017 leak; valves will allow isolation of leaks in order to avoid shutting off service to the hotel	$ 20,000										$ 20,000
NN-00	Pipeline Replacement								$ 1,050,000	$ 750,000	$ 500,000	$ 1,500,000	$ 3,800,000
	Pipeline Projects Totals		**$ 1,050,000**	**$ 1,425,000**	**$ 185,000**	**$ 1,000,000**	**$ 2,900,000**	**$ 2,000,000**	**$ 1,800,000**	**$ 1,500,000**	**$ 1,500,000**	**$ 1,500,000**	**$ 14,860,000**
Pump Stations/Tanks/Wells													
06-04	Hazen's Tank Replacement	moved from FY 16/17	$ 30,000										$ 30,000

Yellow = changes from FY2016/17 CIP

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08-14	Alves Tank Recoating, Interior & Exterior	increased cost from $600K	$ 100,000	$ 1,500,000									$ 1,600,000
08-16	Cahill Tank Exterior Recoat	moved from FY 18/19 to FY 19/20			$ 75,000								$ 75,000
09-18	New Pilarcitos Well			$ 150,000									$ 150,000
11-02	CSPS Stainless Steel Inlet Valves	moved from FY 19/20 to FY 20/21			$ 100,000								$ 100,000
11-05	Half Moon Bay Tank #2 Interior & Exterior Recoat	moved from FY 17/18; increased cost from $200K			$ 20,000	$ 400,000							$ 420,000
11-06	Half Moon Bay Tank #3 Interior & Exterior Recoat	moved from FY 19/30; increased cost from $200K					$ 20,000	$ 400,000					$ 420,000
13-08	Crystal Springs Spare 350 HP Motor	cost increase of $10K	$ 60,000										$ 60,000
16-08	New Denniston Well #2	moved from FY 17/18		$ 100,000									$ 100,000
18-02	CSP Air Relief Valves	new	$ 40,000										$ 40,000
18-03	CSP Spare 500 Pump Rehabilitation	new	$ 30,000										$ 30,000
18-04	CSP Fire System	new		$ 40,000									$ 40,000
18-05	Denniston Tank THM Control (Mixer & Blower)	new	$ 80,000										$ 80,000
18-06	CSP -- (3) Butterfly Valves	new		$ 45,000									$ 45,000
18-07	EG #2 Tank Chlorination System (Residual control system)	new	$ 50,000										$ 50,000
18-08	CSP Communications	new	$ 50,000										$ 50,000
	Pump Stations/Tanks/Wells Totals		**$ 440,000**	**$ 1,835,000**	**$ 195,000**	**$ 400,000**	**$ 20,000**	**$ 400,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 3,290,000**
	Water Supply Development												
12-12	San Vicente Diversion and Pipeline	moved out 1 year			$ 300,000	$ 1,000,000	$ 1,000,000						$ 2,300,000
13-04	Denniston Reservoir Restoration				$ 1,000,000								$ 1,000,000
17-12	Recycled Water Project Development		$ 100,000										$ 100,000
	Water Supply Development Totals		**$ 100,000**	**$ -**	**$ 1,300,000**	**$ 1,000,000**	**$ 1,000,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 3,400,000**
	Water Treatment Plants												
08-07	Nunes Filter Valve Replacement	cost increase (was $30K/yr)		$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000					$ 225,000
13-05	Denniston WTP Emergency Power	moved from FY 18/19							$ 500,000				$ 500,000
17-01	Nunes Water Treatment Plant Treated Water Meter	moved from FY 16/17			$ 100,000								$ 100,000
17-04	Denniston Dam Spillway Repairs		$ 90,000										$ 90,000
18-09	Denniston Heater	new	$ 15,000										$ 15,000
18-10	Nunes Treatment Plant Improvements - Study (Filter 5, Filter Coating,etc.)	new	$ 100,000										$ 100,000
18-11	Nunes Bulk Caustic Tank	new	$ 40,000										$ 40,000
99-05	Denniston Maintenance Dredging		$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 350,000
	Water Treatment Plants Totals		**$ 280,000**	**$ 80,000**	**$ 180,000**	**$ 80,000**	**$ 80,000**	**$ 80,000**	**$ 535,000**	**$ 35,000**	**$ 35,000**	**$ 35,000**	**$ 1,420,000**
	GRAND TOTAL		**$ 3,908,000**	**$ 3,598,000**	**$ 2,238,000**	**$ 2,628,000**	**$ 4,148,000**	**$ 3,128,000**	**$ 2,483,000**	**$ 1,683,000**	**$ 4,683,000**	**$ 1,683,000**	**$ 30,180,000**
	MEMO - Prior CIP		*$ 1,968,000*	*$ 3,293,000*	*$ 3,898,000*	*$ 2,188,000*	*$ 2,588,000*	*$ 2,308,000*	*$ 2,718,000*	*$ 1,620,000*	*$ 4,615,000*		
	Difference		*$ 1,940,000*	*$ 305,000*	*$ (1,660,000)*	*$ 440,000*	*$ 1,560,000*	*$ 820,000*	*$ (235,000)*	*$ 63,000*	*$ 68,000*		

5 year change	***$ 2,585,000***
Alves/other tank cost increases	$ 1,220,000
Moved up Pilarcitos Canyon	$ 750,000
Moved HMB 2" replacement from 16/17	$ 500,000
AMI installation (net change)	$ 160,000
Hwy 1 S cost decrease	$ (800,000)
New projects/other	$ 755,000
	$ 2,585,000

5 year average ***$ 3,304,000***

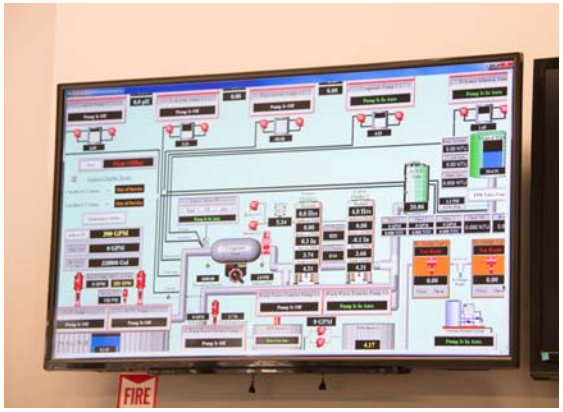
Yellow = changes from FY2016/17 CIP

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 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$500,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000

Description: This project provides for ongoing upgrading and replacement of controls at all the District's facilities and construction of a radio-based and cellular 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.



08-10 Backhoe Equipment Purchase & Replacement

Priority: 2 Replaces essential District equipment.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$200,000			200,000							

Description: District crews use a backhoe on a frequent basis for leak repairs. The District purchased its current backhoe in 2006. This project would replace the backhoe with a new unit. (Note that our 2006 model is up for smog testing in 2019, will not pass under the current standards, and cannot be economically modified to meet current standards.)

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

Priority: 2 Maintains essential District equipment.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$250,000	250,000									

Description: The District's single service truck is the field crew's most important asset in responding to leaks, main breaks, and other critical system maintenance tasks. The current truck (model year 2000) is near the end of its service life and does not have sufficient load capacity to carry necessary equipment safely and efficiently.

15-04 **Vactor Truck/Trailer** Equipment Purchase & Replacement

Priority: 2 Maintains essential District facilities.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$500,000						500,000				

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 truck.

99-02 Vehicle Replacement Equipment Purchase & Replacement

Priority: 2 Replaces essential District equipment.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$420,000	90,000	90,000	30,000	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. The District's vehicle fleet has not been upgraded/replaced according to our planned replacement schedule over the last fives years. As of FY 2016/17, the District has 5 vehicles older than 10 years. 3 more vehicles will reach 10 years old in FY 2017/18. The CIP reflects: 1) replacing 2 vehicles in FY 2017/18, and buying an additional treatment plant vehicle (given our expanded use of the Denniston facility.) 2) replacing 3 more vehicles in FY 2018/19. 3) 1 vehicle per year thereafter.

99-03 Computer Systems Equipment Purchase & Replacement

Priority: 2 Maintains essential District facilities.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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.

08-08 PRV Valves Replacement Project Facilities & Maintenance

Priority: 1 Maintains distribution system circulation and water quality

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$90,000	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 PRV's at one PRV per year. Project will be completed by FY 2019/20.

09-07 Advanced Metering Infrastructure Facilities & Maintenance

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

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$850,000	850,000									

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 began implementing the Aclara AMI network in FY 2016/17 and plans to complete the installation District-wide (7,400 radio endpoints) during FY 2017/18. In conjunction with the AMI installation, the District is replacing all of its residential meters and many of its non-residential and fire meters (see project 99-01.) The FY 2017/18 budget includes $250,000 for an outside contracter to assist with the AMI installation and meter replacement.

09-09 Fire Hydrant Replacement Facilities & Maintenance

Priority: 3 Maintains essential district infrastructure.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$400,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000

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 $5000-$7000.

16-07 Sample Station Replacement Project Facilities & Maintenance

Priority: 3

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$40,000	20,000	20,000								

Description: Our present (24) 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 started in FY 2016/17, and all stations will be replaced by FY 2018/19.

17-15 Pilarcitos Canyon Emergency Road Repairs Facilities & Maintenance

Priority: 1 Repairs to comply with permit

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$100,000	100,000									

Description: During FY 2016/17, the District sustained heavy damage to our access road in Pilarcitos Canyon which required significant emergency repairs. This project provides for the restoration of the environment surrounding Pilarcitos Creek and our access road, as required by our emergency permit from the Army Corps of Engineers.

99-01 Meter Change Program Facilities & Maintenance

Priority: 1 Ensures accuracy of metering for billing purposes.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$780,000	600,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000

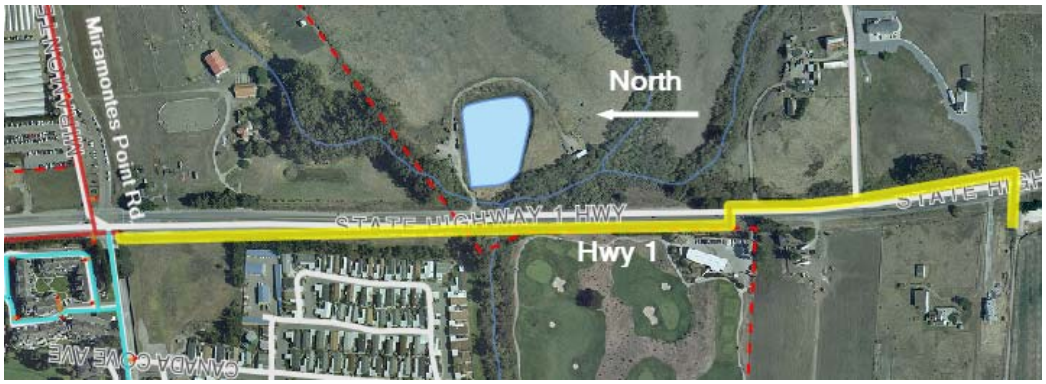
Description: This project provides funding for the District's replacement of meters that have reached the end of their service life. New meters will be Badger ultrasonic meters, guaranteed to maintain their original accuracy for 20 years. Existing mechanical meters, which lose their accuracy over time, will be phased out. In FY2016/17, the District began replacing its residential meters in conjunction with the implementation of Advanced Metering Infrastructure (AMI). The District plans to complete its replacement of residential meters as well as many commercial and fire meters during FY 2017/18 . Following the AMI implementation period, the budget provides for a lower level of continuing meter replacement including ongoing replacement of larger meters (2" and above.)

06-02 Highway 1 South Pipeline Replacement Project Pipeline Projects

Priority: 2 Replaces obsolete, substandard main and improves water service and water quality.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$580,000	80,000	500,000								

Description: This project would replace about 3500 feet of 2 inch galvanized steel pipe running south along Highway 1 from Miramontes Point Road with 2" HDPE installed by directional boring. 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 deteriorated state of the existing pipe as well as the corrosion induced small 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.



07-03 Pilarcitos Canyon Pipeline Replacement Pipeline Projects

Priority: 1 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 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$750,000	150,000	600,000								

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. We propose to remove the approximately 2,600 linear feet of temporary above-ground Yelomine PVC pipeline and replace it in the same general alignment with approximately 2,300 linear feet of buried 12 inch ductile iron pipeline.

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 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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.

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

Priority: 1 Prevents water loss and environmental damage, protects water quality.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$400,000					400,000					

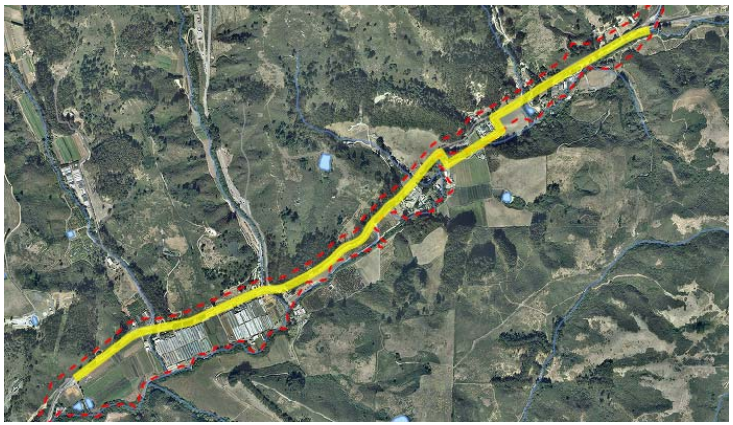
Description: The 8 inch pipeline crossing Pilarcitos Creek between the end of Pilarcitos Avenue just south of the creek and Strawflower Shopping Center is one of only two pipelines supplying water to areas of the district south of Pilarcitos Creek. The pipe's age, current condition, and exact location 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. This project will replace the section of pipe under the creek with either 1) a pipe running over the creek, attached to the existing footbridge between the end of Pilarcitos Avenue and the shopping center, or 2) a pipe installed under the creek by horizontal directional drilling. Initial phase work to be completed in June 2017 will consist of installing approximately 400 feet of 8-inch pipe within the Strawflower access road from Highway 92, which would ensure water supply to commercial customers in the event of a problem with the existing pipe in the creek.

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 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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. Given its length and the need for construction along the busy highway, replacing this pipe will be challenging. Construction would occur in phases, beginning with the sections at highest risk for costly failures. FY 2017/18 CIP: Approximately 600 feet in the vicinity of La Nebbia Winery is in very poor condition and is very costly and dangerous to repair given its proximity to Highway 92, high pressure gas mains and fiber optic communication lines. We propose to replace this section first using horizontal directional drilling.



14-26 Replace 2 Inch Pipe Downtown Half Moon Bay Pipeline Projects

Priority: 1 Replaces obsolete infrastructure, improves water service, fire protection.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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.

14-27 Grandview 2 Inch Replacement Pipeline Projects

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

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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.

14-28 Replace 2 Inch Hilltop Market to Spanishtown Pipeline Projects

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

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$240,000							240,000			

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

14-29 Replace 2 Inch GS Purisima Way Pipeline Projects

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

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$125,000			125,000							

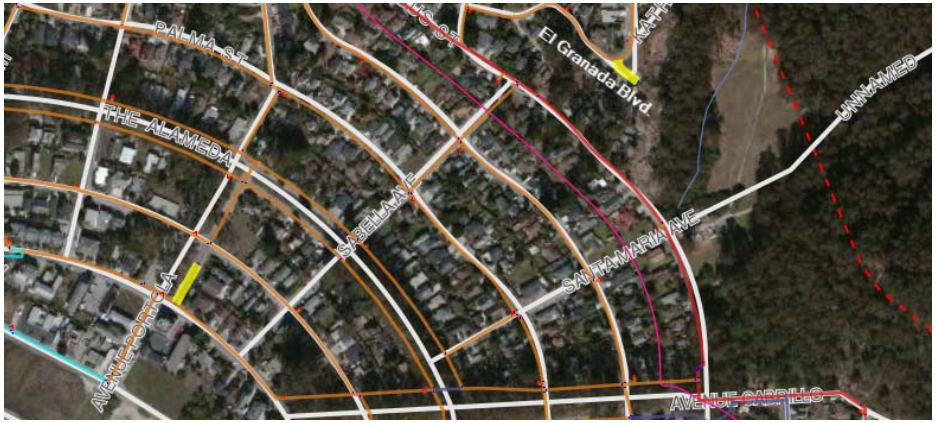
Description: This project would replace approximately 700 feet of 2 inch galvanized steel main along Purisima Way, north of Miramar Drive. The steel main is substandard and does not provide required flow and pressure.

14-30 Replace Miscellaneous 2 Inch GS El Granada Pipeline Projects

Priority: 3

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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.



14-31 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 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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).

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 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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.

14-33 Miramar Cast Iron Pipeline Replacement Pipeline Projects

Priority: 2 Maintains essential District infrastructure

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$1,500,000								500,000	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.

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

Priority: 1

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$100,000		100,000								

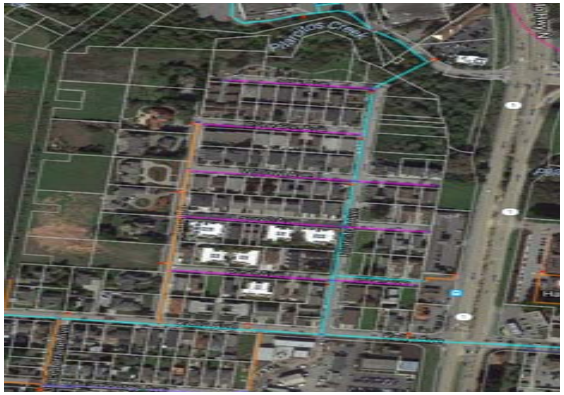
Description: On the night of November 23, 2014, the 10-inch cast iron pipeline which runs down Magellan from 5th Avenue and across Highway 1 failed in the field east of Highway 1, causing the loss of more than 750,000 gallons of water and leading to a boil order in some El Granada neighborhoods. This project will prevent similar problems with this line in the future by lining it with a smaller pipe.

18-01 Pine - Willow - Oak 2,400 feet Pipeline Replacement Pipeline Projects

Priority: 2

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$500,000					500,000					

Description: The cast iron 4" mains were installed in the early sixties and are now approaching 60 years old. This neighborhood has had 10 breaks, 8 of which occurred since 2007.



18-12 Addition of (2) Valves at Ritz Carlton/Ocean Colony Pipeline Projects

Priority: 1

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$20,000	20,000									

Description: This project would add 2 valves to the main near the Ritz Carlton that will enable our operators to isolate leaks while still continuing service to the hotel. (Note that in April 2017, a leak resulted in the Ritz Carlton hotel being without water for a few hours.)

NN-00 **Pipeline Replacement** Pipeline Projects

Priority: 3

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$2,300,000							1,050,000	750,000	500,000	

Description: Placeholder for cost of continuing pipeline replacement.

06-04 Hazen's Tank Replacement Pump Stations/Tanks/Wells

Priority: 3

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$30,000	30,000									

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. Hazen's Tank may no longer be needed when the Denniston Treated Water Booster Station (Project 12-04) becomes operational. (The Denniston Booster Station will be completed Summer, 2017.) The current budget of $30,000 would cover removal of the existing tank.

08-14 Alves Tank Recoating, Interior + Exterior Pump Stations/Tanks/Wells

Priority: 1 Maintains critical district infrastructure.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$1,600,000	100,000	1,500,000								

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).

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

Priority: 3 Maintains essential district facilities

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$75,000			75,000							

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.

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

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

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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 $4.10 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.

11-02 Crystal Springs Pump Station Stainless Steel Inlet Valves Pump Stations/Tanks/Wells

Priority: 3 Maintains essential District infrastructure; Safety

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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. These valves would be closed when work is done in the tunnel. They provide an additional level of security to prevent engulfment of those working in the tunnel.

11-05 Half Moon Bay Tank #2 Interior + Exterior Recoat Pump Stations/Tanks/Wells

Priority: 1 Maintains essential District facilities.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$420,000			20,000	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. 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.

11-06 Half Moon Bay Tank #3 Interior + Exterior Recoat Pump Stations/Tanks/Wells

Priority: 1 Maintains essential District facilities.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$420,000					20,000	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. 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.

13-08 Crystal Springs Spare 350 HP Motor Pump Stations/Tanks/Wells

Priority: 2 Ensures reliability of critical facilities.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$60,000	60,000									

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 provides a spare 350 HP motor which could replace either of the operating 350 HP units in the event of a failure. (A spare pump is included on project 18-03.)

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

Priority: 2

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$100,000		100,000								

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

18-02 Crystal Springs Pump Station Air Relief Valves Pump Stations/Tanks/Wells

Priority: 2

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$40,000	40,000									

Description: This project involves replacing the (4) air relief valves at Crystal Springs Pump Station, one behind each pump and one on the main line. Note that the air relief valves are starting to leak water from years of pump/motor starts and from raw water corroding the seals.

18-03 Crystal Springs Pump Station - Spare500 HP Pump Pump Stations/Tanks/Wells

Priority: 1

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$30,000	30,000									

Description: In April 2017, we replaced Pump #3 at Crystal Springs Pump Station utilizing the existing 500 HP spare pump. We are now in need of a spare pump for the site for emergency response should one of the pump fails. (The lead time for a new pump is 14-16 weeks.)

18-04 **Crystal Springs Pump Station - Fire System** Pump Stations/Tanks/Wells

Priority: 2

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$40,000		40,000								

Description: The existing fire system uses raw water which has corroded most of the system. The current fire control system is also obsolete, and most of the parts are not available to rebuild the system.

18-05 Denniston Tank Trihalomethane Control System (Mixer & Blower) Pump Stations/Tanks/Wells

Priority: 1

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$80,000	80,000									

Description: This project involves installing a mixer and a positive air blower system in the Denniston Tank in order to reduce the potential for formation of Trihalomethanes and Haloacetic acids at the site. (The potential for formation of Trihalomethanes and Haloacetic acids is much greater with Denniston water than the Pilarcitos and Hetch Hetchy Systems.) We installed mixers in the El Granada Tanks in previous years with a subsequent 10% reduction in the formation of Trihalomethanes and Haloacetic acids at theses sites. The existing Disinfection/Disinfection By Products Rule (DDBPR) mandates quarterly monitoring for Trihalomethane and Haloacetic acids at select sites within our distribution system.

18-06 **Crystal Springs Pump Station -- (3) Butterfly Valves** Pump Stations/Tanks/Wells

Priority: 1

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$45,000		45,000								

Description: The three valves that are located behind each pump leak from years of 300 psi flowing by them. When we need to isolate an individual valve, the valves will not completely seal.

18-07 EG #2 Tank chlorination System (residual control system) Pump Stations/Tanks/Wells

Priority: 2

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$50,000	50,000									

Description: The PAX Residual Control System (RCS) is a smart and automated disinfectant residual boosting system that gives water operators the ability to set and precisely control disinfectant residual levels in water storage tanks and key locations in the water distribution system. The RCS system treats the total volume of the tank other than just the incoming water in order to maintain a consistent chlorine residual from the pump effluent water and to minimize Trihalomethane formation.

18-08 Crystal Springs Pump Station Communications Pump Stations/Tanks/Wells

Priority: 1

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$50,000	50,000									

Description: This project will upgrade the obsolete Crystal Springs motor controls giving the operators the ability to reset, start and switch pumps remotely, reducing the need for trips to the station.

12-12 San Vicente Diversion and Pipeline Water Supply Development

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

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$2,300,000			300,000	1,000,000	1,000,000					

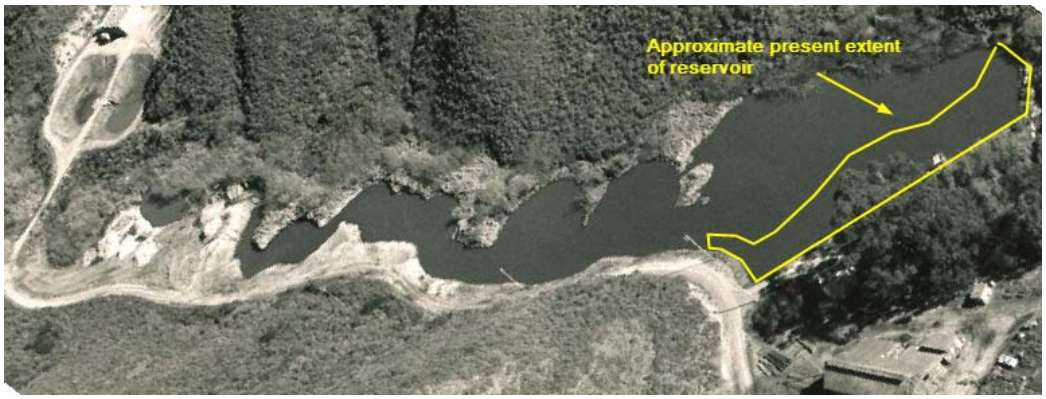
Description: A water rights permit issued in 1969 allows the District to divert up to 2 cubic feet per second, year-round, from San Vicente Creek. In order to secure this water right on a permanent basis, the District must divert water from San Vicente Creek. Although the District laid a temporary pipeline 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).

13-04 Denniston Reservoir Restoration Water Supply Development

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

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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 completed in 2015 for the Denniston/San Vicente Water Supply Project includes consideration of Denniston reservoir dredging.



17-12 Recycled Water Project Development Water Supply Development

Priority: 2 Addresses District need to diversify water supply portfolio, lower water costs, develop drought-proof supply.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$100,000	100,000									

Description: This project provides funding for planning and development of a future recycled water project.

08-07 **Nunes Filter Valve Replacement** Water Treatment Plants

Priority: 3 Maintains essential District facilities.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$225,000		45,000	45,000	45,000	45,000	45,000				

Description:

13-05 Denniston WTP Emergency Power Water Treatment Plants

Priority: 2 Improves water supply reliability, emergency preparedness.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
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.

17-01 Nunes Water Treatment Plant Treated Water Meter Water Treatment Plants

Priority: 1 Needed to comply with regulatory requirements for water audit in accordance with SB555.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$100,000			100,000							

Description: The WSO water audit performed in 2015-2016 identified the need for water treatment plant production meters to measure treatment plant output accurately without the need to correct for in-plant flows. This project provides a treated water meter for the Nunes plant.

17-04 Denniston Dam Spillway Repairs Water Treatment Plants

Priority: 2 Maintains essential District facilities.

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$90,000	90,000									

Description: The overflow/spillway structure in the middle of Denniston dam, which dates back to the dam's original construction in the 1930's, includes two openings into the reservoir to allow for draining of water and sediment. The redwood boards covering one of these openings began leaking in 2014, raising concern that the boards could fail and release damaging flows of water and sediment. District staff and contractors applied a temporary fix in 2015 to stop the leak. This project will provide a more permanent solution for both spillway openings to prevent future problems and improve reservoir operations.

18-09 Denniston Heater Water Treatment Plants

Priority: 2

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$15,000	15,000									

Description: The District's Denniston Water Treatment Plant currently does not have an interior heating system. Given the FY 16/17 Denniston improvements, the plant will be operating nearly full time throughout the year, and staff will be required to man the plant during the cooler weather. The project would include hiring an HVAC contractor to install a propane heater with a programmable thermostat so we could warm the building during business hours.

18-10 Nunes Treatment Plant Improvements - Study (Filter 5, Filter Coating, etc.) Water Treatment Plants

Priority: 2

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$100,000	100,000									

Description: This project would involve engaging with an engineering firm that specializes in Drinking Water Treatment Plant infrastructure to assess and recommend needed capital improvements/replacements for the Nunes Treatment Plant that we should factor into or 10 year CIP. (Note that the last time such a study was conducted was in 2005 by Camp, Dresser, McKee.) Items to be evaluated would include assessing the timing for repairing and recoating of interior walls of our filters as well as evaluating the potential expansion to eight filters to allow filters to be taken offline.

18-11 **Nunes Bulk Caustic Tank** Water Treatment Plants

Priority:

		FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$40,000	40,000									

Description: This project involves replacing the existing smaller caustic tanks with a larger bulk tank. The larger bulk tank will provide greater safety for our staff in handling caustic and allows for better pricing and operational efficiency. By adding an additional 2500 gallon double contained tank, we will reduce the total yearly deliveries from 10 or 11 to 3 or 4. This project will free up operator time with ordering and receiving each delivery. It will also allow us to take a "full load" with every delivery which will cut more than $.50 per gallon from our costs. We would save $1900 per delivery, or $6000-$8000 annually.

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 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26:	FY 26/27:
Total Budgeted:	$315,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	

Description: This CIP item provides funding for annual maintenance dredging of Denniston Reservoir.