Project #	Project Name Click on the item to go to the description	FY19/20 Carryover to FY 20/21	Projected FY 20/21 to FY 29/30 Total	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY26/27	FY27/28	FY28/29	FY 29/30	Projected FY 20/21 to FY 29/30 Total
Equipmen	nt Purchase & Replacement											_		
06-03	SCADA/Telemetry/Electric Controls Replacement		\$ 500,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 500,000
15-04	Vactor Truck/Trailer		\$ 500,000						\$ 500,000					\$ 500,000
19-04	Valve truck		\$ 225,000											\$ 225,000
21-08/22-05	Asset Management/ESRI GIS Software/Planning Software	\$ 60,000		\$ 60,000								_		\$ 60,000
99-02	Vehicle Fleet Replacement		\$ 320,000			\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 320,000
	Equipment Purchase & Replacement Totals	\$ 60,000	\$ 1,605,000	\$ 335,000	\$ 50,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 590,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 1,605,000
Facilities 8	& Maintenance			<u> </u>		<u>I</u>	<u>I</u>	1	·	<u>I</u>	<u>l</u>	l		
09-09	Fire Hydrant Replacement		\$ 1,260,000		\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 1,260,000
15-03	District Admin/Operations Center (moved from FY25/26 to 10+ year	rs)	\$ -											\$ -
20-07	District Office Improvements	\$ 60,000	\$ -											\$ -
18-13	Denniston WTP and Tank Road Repairs and Paving	\$ 400,000	\$ -											\$ -
99-01	Meter Change Program		\$ 200,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 200,000
	Facilities and Maintenance Totals	\$ 460,000	\$ 1,460,000	\$ 20,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 1,460,000
Pipeline P	Pipeline Replacement Under Creek at Pilarcitos Ave. (Strawflower)		\$ 750,000	\$ 750,000										\$ 750,000
14-01	Highway 92 - Replacement of Welded Steel Line	\$ 700,000	\$ 3,100,000	\$ 100,000					\$ 1,000,000	\$ 2,000,000				\$ 3,100,000
14-27	Grandview Pipeline Replacement Project		\$ 1,650,000		\$ 1,650,000									\$ 1,650,000
14-29	Replacement of Galvanized Steel Pipeline - Purissima Way		\$ 125,000								\$ 125,000			\$ 125,000
14-33	Miramar Cast Iron Pipeline Replacement		\$ 2,550,000							\$ 50,000	\$ 1,000,000	\$ 1,500,000		\$ 2,550,000
16-09	Magellan at Hwy 1/Miramar Dead Ends		\$ 450,000								\$ 450,000			\$ 450,000
18-01	Pine Willow Oak Pipeline Replacement		\$ 2,300,000							\$ 2,300,000				\$ 2,300,000
20-08	Highway 1 (Silver/Terrace/Grandview/Spindrift) -Replacement of Highway 1 crossings	\$ 30,000	\$ 2,000,000								\$ 200,000	\$ 1,800,000		\$ 2,000,000
21-01	Redondo Beach Loop to St Andrews Road		\$ 125,000			\$ 125,000								\$ 125,000
21-09	Miramar Tank/Pipeline Replacement (700 ft)		\$ 500,000			\$ 500,000								\$ 500,000
21-10	El Granada Tank #2 Pipeline Replacement		\$ 500,000	\$ 500,000										\$ 500,000
NN-00	Unscheduled CIP		\$ 3,800,000		\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 1,000,000	\$ 100,000	\$ 2,000,000	\$ 3,800,000
	Pipeline Projects Totals	\$ 730,000	\$ 17,850,000	\$ 1,450,000	\$ 1,750,000	\$ 725,000	\$ 100,000	\$ 100,000	\$ 1,100,000	\$ 4,450,000	\$ 2,775,000	\$ 3,400,000	\$ 2,000,000	\$ 17,850,000

Project #	Project Name Clcik on the item to go to the description	FY19/20 Carryover to FY 20/21	Projected FY 20/21 to FY 29/30 Total	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY26/27	FY27/28	FY28/29	FY 29/30	Projected FY 20/21 to FY 29/30 Total
Pump Sta	tions/Tanks/Wells													
21-07	Carter Hill Tank Improvement Project		\$ 6,700,000	\$ 600,000			\$ 4,000,000	\$ 2,100,000						\$ 6,700,000
08-14	Alves Tank Rehabilitation/Replacement		\$ 3,300,000		\$ 300,000				\$ 3,000,000					\$ 3,300,000
19-01	EG#1 Tank Improvement Project/New Pump Station		\$ 1,000,000							\$ 1,000,000				\$ 1,000,000
14-33	Miramar Tank Rehabilitation		\$ 200,000									\$ 200,000		\$ 200,000
08-16	Cahill Tank Rehabilitation		\$ 125,000		\$ 125,000									\$ 125,000
20-16	Denniston Tank Rehabilitation		\$ 125,000		\$ 125,000									\$ 125,000
09-18	Pilarcitos Well Field Improvements		\$ 250,000			\$ 250,000								\$ 250,000
16-08	Denniston Well Field Improvements		\$ 150,000						\$ 150,000					\$ 150,000
21-02	Pilarcitos Reservoir Spillway - Pump/Emergency Generator		\$ 100,000	\$ 100,000										\$ 100,000
20-01	CSP Pump #1 Replacement		\$ 100,000								\$ 100,000			\$ 100,000
21-03	CSP Pump #3 Replacement		\$ 80,000								\$ 80,000			\$ 80,000
19-05	Tanks - THM Control		\$ 110,000		\$ 50,000									\$ 110,000
21-11	Tank Cathodic Protection Project		\$ 40,000	\$ 40,000										\$ 40,000
	Pump Stations/Tanks/Wells Totals	\$ -	\$ 12,280,000	\$ 800,000	\$ 600,000	\$ 250,000	\$ 4,000,000	\$ 2,100,000	\$ 3,150,000	\$ 1,000,000	\$ 180,000	\$ 200,000	\$ -	\$ 12,280,000
Water Sup	pply Development												_	
12-12	San Vicente/Denniston Water Supply Project		\$ 2,900,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 1,000,000	\$ 1,000,000						\$ 2,900,000
13-04	Denniston Reservoir Restoration		\$ 1,000,000					\$ 1,000,000						\$ 1,000,000
17-12	Recycled Water Project Development		\$ 100,000						\$ 100,000					\$ 100,000
			\$ -											
	Water Supply Development Totals	\$ -	\$ 4,000,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 1,000,000	\$ 2,000,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 4,000,000
	atment Plants													
20-14	Nunes Water Treatment Plant Improvement Project		\$ 7,600,000		\$ 2,900,000	\$ 4,000,000								\$ 7,600,000
21-04	Nunes/Denniston Turbidimeter Replacement		\$ 35,000	\$ 35,000										\$ 35,000
21-06	Nunes - Effluent Meter		\$ 100,000			\$ 100,000								\$ 100,000
13-05	Denniston WTP and Booster Standby Power	\$ 300,000	\$ -	\$ -										\$ -
					4 2 222 222	¢ 4100.000	¢	\$ -	\$ -	\$ -	\$ -	*		\$ 7,735,000
	Water Treatment Plants Totals	\$ 300,000	\$ 7,735,000	\$ 735,000	\$ 2,900,000	\$ 4,100,000	<b>,</b> -	-	,	, .	\$ -	\$ -		<i>ϕ 1,133,000</i>

<sup>\*</sup> red highlight = design

### **Capital Improvement Program**

**Number:** 06-03

**Entry/Rev Date:** 7/2/2020

Project Name: SCADA/Telemetry/Electrical Controls Replacement

Category: Equipment Purchase & Replacement

Budget: \$500,000 Budget Basis: Estimate

#### **Budget**

\$50,000
i
T 

**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. Programmable Logic Controllers (PLCs) at the District's facilities which monitor reservoir levels, control treatment processes and pump stations, communicate critical data/tends to the District's operations center, and notify operators of alarm conditions.

#### **Priority: 1**

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

#### Picture:



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## **Capital Improvement Program**

**Number: 15-04** 

Entry/Rev Date: 7/2/2020

Project Name: Vactor Truck/Trailer

Category: Equipment Purchase & Replacement

Budget: \$500,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 21/22	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$0	\$0	\$0	\$500,000	\$0	\$0	\$0	\$0

**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.

**Priority:** 3

**Priority Description:** Maintains essential District facilities.

Picture:



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### **Capital Improvement Program**

**Number:** 19-04

**Entry/Rev Date:** 7/2/2020

Project Name: Valve truck

Category: Equipment Purchase & Replacement

Budget: \$225,000 Budget Basis: Quote

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$225,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description:** This equipment will replace the old valve exerciser trailer (> 10 years old) with an F-550 flatbed with spray down, vacuum and valve exercising equipment mounted on the back. Modern valve exercising equipment for more torque control and adjustment. This equipment will allow the District to start a formal valve exercising program. The goal is to exercise every valve in the service area annually.

#### **Priority: 1**

**Priority Description:** Maintains essential District facilities. Existing valve exercising trailer is over ten years old and beyond its service life. Several parts are no longer available.

#### Picture:



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### **Capital Improvement Program**

**Number: 22-05** 

**Entry/Rev Date:** 7/2/2020

**Project Name:** Planning/Permitting Software

Category: Equipment Purchase & Replacement

Budget: \$60,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description:** The District currently handles Plan Reviews for remodels and new development manually. Implementing software will enable the District to handle plan reviews electronically with other agencies, owners/developers, and internally with other staff members. Candidates for the software include Accela and Tyler's EnerGov.

**Priority:** 1

**Priority Description:** Conversion of a manual to an electronic process

Picture:

5

Our building permitting software guides the permitting process from start to finish, saving time, money, and paper.

EnerGov™ Community Development software automates your governmental operations in land use planning, permitting, enforcement case management, and inspections. From your office computer or a screen in the field, our multi-dimensional building permitting software expedites planning, review, and enforcement. Mobility functionality saves processing time and benefits your stakeholders, citizens, agency, and your bottom line.

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### **Capital Improvement Program**

**Number:** 99-02

Entry/Rev Date: 7/2/2020

**Project Name:** Vehicle Fleet Replacement

Category: Equipment Purchase & Replacement

Budget: \$320,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000

**Description:** The District generally considers vehicles to have a useful life of 10 years or 100,000 miles. This project provides funding for periodic replacement of the vehicle fleet. The schedule plans for a replacement of one vehicle every year (after FY21/22).

**Priority: 2** 

**Priority Description:** Replaces essential District equipment.

#### Picture:



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## **Capital Improvement Program**

**Number:** 09-09

Entry/Rev Date: 7/2/2020

**Project Name:** Fire Hydrant Replacement

Category: Facilities Maintenance

Budget: \$1,260,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 21/22	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000

**Description:** This project provides continuing funding for replacement of fire hydrants that have reached the end of their service life. The district has  $^{\sim}647$  fire hydrants, over half of these are dry barrel hydrants. The cost of replacing a hydrant ranges from \$5000-\$7000.

**Priority: 1** 

**Priority Description:** Maintains essential district infrastructure.

#### Picture:



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## **Capital Improvement Program**

**Number:** 99-01

Entry/Rev Date: 7/2/2020

**Project Name:** Meter Change Program

Category: Facilities Maintenance

**Budget: \$200,000 Budget Basis:** Click or tap here to enter text.

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$20,000	\$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. In 2017-2018, the District replaced all residential meters and smaller commercial meters. The budget provides for ongoing replacement of larger meters (2" and above.)

**Priority: 2** 

**Priority Description:** Ensures accuracy of metering for billing purposes.

Picture:



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### Capital Improvement Program

**Number:** 13-02

Entry/Rev Date: 7/10/2020

**Project Name:** Pipeline Replacement Under Creek at Pilarcitos Ave. (Strawflower)

**Category:** Pipeline Projects

**Budget: \$750,000 Budget Basis:** Engineer's Estimate

#### **Budget**

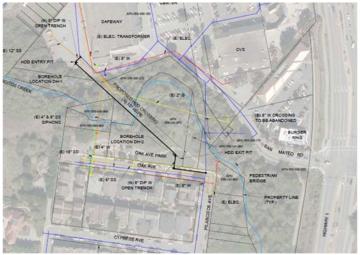
FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$750,000	\$0	\$0		\$0	\$0	\$0	\$0	\$0	\$0

**Description:** The District's Pilarcitos Creek pipeline is a 450-foot section crossing under the creek and is used to convey potable water to the southern portion of the District. The pipeline extends from Strawflower Village Shopping Center to the north and crosses underneath Pilarcitos Creek to Oak Avenue to the south. 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. Staff recommends that the District replace this pipeline with a fusible High-Density Polyethylene (HDPE) pipeline via Horizontal Directional Drilling (HDD) methodology. The preliminary design was completed by EKI Environmental Consultants in February 2020. Preparation of CEQA - IS/MND and Cultural Report will be completed approximately December 2020. Pending acquiring easements from the City of Half Moon Bay and owner of thew shopping center, construction is planned for FY2020-21.

#### **Priority:** 1

Priority Description: Replacement of key District infrastructure. Prevents water loss and environmental damage, protects water quality.

Picture:



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### **Capital Improvement Program**

Number: 14-01

**Entry/Rev Date:** 7/10/2020

Project Name: Replace 12" Welded Steel Line on Hwy 92

**Category:** Pipeline Projects

Budget: \$3,100,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$100,000	\$0	\$0	\$0	\$0	\$1,000,000	\$2,000,000	\$0	\$0	\$0

**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.

In FY2017/18, approximately 600 feet in the vicinity of La Nebbia Winery . In 2020-21 (as a carryover project from FY2019-20 and as "Phase 1", the District plans to replace one of the worst sections of the pipeline (ap. 3,000 feet) inside its easements on the Cozzolino property.

In FY2020-21, the District will continue work started in FY2019-20 with its engineers, EKI, to develop a plan for future replacement.

#### **Priority: 2**

**Priority Description:** Replace obsolete infrastructure and improves water quality.

#### Picture:



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### **Capital Improvement Program**

Number: 14-27

**Entry/Rev Date:** 7/10/2020

Project Name: Grandview Pipeline Replacement Project

Category: Pipeline Projects

Budget: \$1,650,000 Budget Basis: Engineer's estimate

#### **Budget**

FY 20/21	FY 21/22	FY	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
		22/232							
\$0	\$1,650,000		\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description:** This project would replace approximately 2300 feet of 2-inch polyvinyl chloride (PVC) pipe on Golden Gate Avenue, Bancroft Avenue, Dwight Avenue and Pacific Avenue and 1100 feet of 6" cast iron mains in the Grandview Boulevard neighborhood. These mains are beyond their service life, have been subject to numerous leaks, and do not provide required pressure/flow for fire protection.

**Priority: 1** 

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

#### Picture:



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## **Capital Improvement Program**

**Number:** 14-29

**Entry/Rev Date:** 7/10/2020

**Project Name:** Replacement of Galvanized Steel Pipeline - Purisima Way

**Category:** Pipeline Projects

Budget: \$125,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$125,000	\$0	\$0

**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 beyond its service life and does not provide required flow/pressure.

**Priority: 2** 

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

#### Picture:



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## **Capital Improvement Program**

**Number: 14-33** 

**Entry/Rev Date:** 7/10/2020

Project Name: Miramar Cast Iron Pipeline Replacement

Category: Pipeline Projects

Budget: \$2,550,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$0	\$0	\$0	\$0	\$50,000	\$1,000,000	\$1,500,000	\$0

**Description:** This project would replace ~7,000+ 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.

**Priority:** 3

Priority Description: Maintains essential District infrastructure

#### Picture:



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### **Capital Improvement Program**

**Number: 16-09** 

**Entry/Rev Date:** 7/10/2020

Project Name: Magellan at Hwy 1/Miramar Deadends

Category: Pipeline Projects

Budget: \$450,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$450,000	\$0	\$0

**Description:** On 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 water advisory in some El Granada neighborhoods. This project will prevent similar problems with this line in the future by lining it with a smaller pipe or replacement. In addition, the project will include eliminating many of the dead-ends in the Miramar neighborhoods.

**Priority: 2** 

Priority Description: Replace obsolete infrastructure; improve water service and quality

#### Picture:



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## **Capital Improvement Program**

**Number:** 18-01

**Entry/Rev Date:** 7/10/2020

Project Name: Pine Willow Oak Pipeline Replacement Project

Category: Pipeline Projects

**Budget: \$2,300,000 Budget Basis:** Engineer's Estimate

#### **Budget**

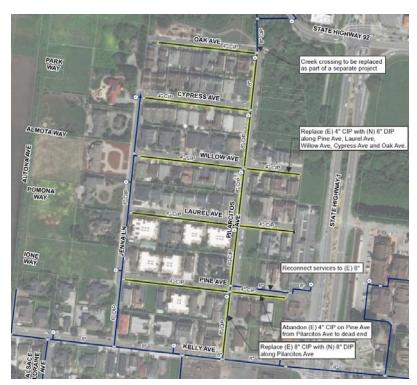
FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$0	\$0	\$0	\$2,300,000	\$0	\$0	\$0	\$0

**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. Engineering design and bid documents are near completion.

**Priority: 2** 

**Priority Description:** Replace obsolete infrastructure.

Picture:



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### **Capital Improvement Program**

Number: 20-08

**Entry/Rev Date:** 7/10/2020

Project Name: Highway 1 Crossings Pipeline Replacement Project

**Category:** Pipeline Projects

Budget: \$2,000,000 Budget Basis: Engineer's Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200,000	\$1,800,000	\$0

**Description:** The City of Half Moon Bay is currently designing the Highway 1 Safety and Operational Improvements Project (Highway 1 Project) between North Main Street and Spindrift Way, which includes a new multiuse path from Main to Spindrift and signalization of Highway 1 and Terrace Avenue. The District is considering replacing four (4) existing water mains that cross under Highway 1 at Terrace Ave, Silver Ave, Grandview Blvd, and Spindrift Way in Half Moon Bay, California in coordination with the City of Half Moon Bay's project. Each of these mains connect to the existing 16" DIP transmission main on the west side of Highway 1 and the distribution mains on the east side of Highway 1. The District understands that the crossings at Spindrift Way, and Grandview Blvd, and Silver Ave are older cast iron pipes and the crossing at Silver Avenue is ductile iron. Data regarding the pipe materials, pipe ages and pipe condition is being collected in a preliminary study by EKI (FY2019/20 with carryover into FY 2020/21) in order to determine the necessity and urgency of timing of the pipeline crossing replacements. The new Highway 1 crossings would be installed parallel to the existing crossing to allow the existing mains to remain in service and in a steel casing pipe via jack and bore construction in accordance with Caltrans requirements. Budget includes \$200,000 for design in FY2027/28.

**Priority:** 3

**Priority Description:** Replacement of obsolete infrastructure

**Picture:** See next page.

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### Silver/Terrace Crossing



### **Spindrift/Grandview Crossing**



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## **Capital Improvement Program**

**Number: 21-01** 

**Entry/Rev Date:** 7/10/2020

Project Name: Redondo Beach Loop to St. Andrews Road

Category: Pipeline Projects

Budget: \$150,000 Budget Basis: Estimate

#### **Budget**

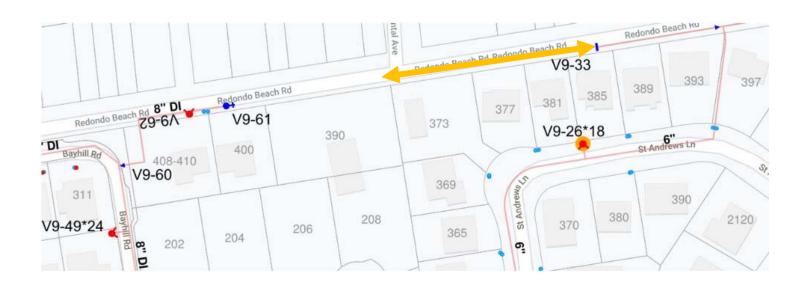
FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$125,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description:** Once the Carnoustie Phase IV project triggers a pipeline extension in Redondo Beach Rd. to the East, CCWD staff would like to loop this part of the water system by installing ~300 feet of main. This will also require relocating two existing services and has the added benefit of allowing the District to permanently abandon an old water main that crosses the adjacent golf course fairway.

#### **Priority: 1**

Priority Description: Replaces substandard infrastructure, improves water service, fire flows, risk control

#### Picture:



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## **Capital Improvement Program**

**Number: 22-01** 

**Entry/Rev Date:** 7/10/2020

**Project Name:** Miramar Tank/Pipeline Replacement (for fire flows)

**Category:** Pipeline Projects

Budget: \$500,000 Budget Basis: Estimate

#### **Budget**

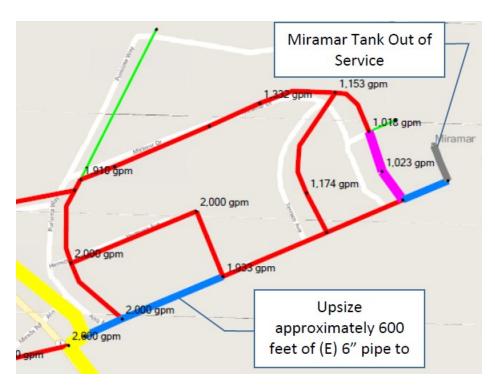
FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description:** If the District decides to remove the Miramar Tank rather than make expensive upgrades to a water tank that is difficult to operate at the elevation that it is located.

**Priority: 2** 

**Priority Description:** : Replaces substandard infrastructure, improves water service and quality.

#### Picture:



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## **Capital Improvement Program**

**Number: 22-04** 

**Entry/Rev Date:** 7/10/2020

Project Name: El Granada Tank #2 Pipeline Replacement

Category: Pipeline Projects

Budget: \$500,000 Budget Basis: Estimate

#### **Budget**

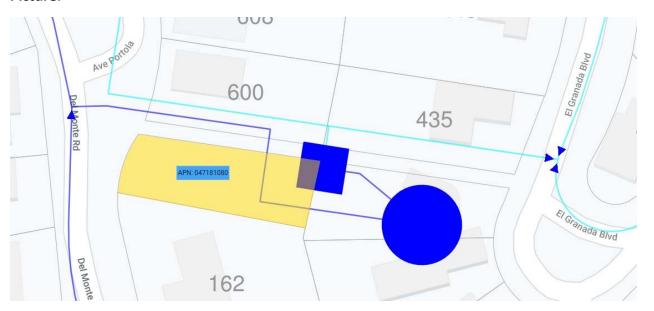
FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description:** The water main that feeds the EG2 tank, and an upper zone main both reside in a very tight and crowded 10 foot public utility easement that runs from El Granada Boulevard to Del Monte Road. The undeveloped lot below EG2 has submitted plans for a construction of a single-family residence that will make future replacement/repair of these 50+ year old pipes very difficult. Staff is evaluating options to replace both water mains in the same location or along another alignment.

**Priority: 1** 

Priority Description: Maintains essential District infrastructure

#### Picture:



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### **Capital Improvement Program**

Number: 21-07

**Entry/Rev Date:** 7/10/2020

Project Name: Carter Hill Tank Improvement Project

Category: Pump Stations/Tanks/Wells

**Budget: \$6,700,000 Budget Basis:** Engineer's Prelim Estimate

#### **Budget**

FY 20/21	FY 21/22	FY22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$600,000	\$0	\$0	\$4,000,000	\$2,100,000	\$0	\$0	\$0	\$0	\$0

**Description:** There are three welded steel water storage tanks located below Nunes Water Treatment Plant. HMB #1 is 0.4MG, HMB #2 is 0.6 MG and HMB #3 is 1.5 MG. HMB #2 and 3 were constructed over 50 years ago and have never had and interior recoating. Granted the expense to rehabilitate these tanks with minor seismic improvements is so high the District is looking to replace HMB#3 with a prestressed concrete tank that meets current seismic standards and will not require recoating in future years. The overall lifecycle cost of a prestressed concrete tanks is much lower than welded steel.

**Priority: 1** 

**Priority Description:** Maintains essential district infrastructure.

#### Picture:



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### **Capital Improvement Program**

**Number:** Various

**Entry/Rev Date:** 7/10/2020

**Project Name:** CCWD Tank Improvement Project – Alves, EG #1, Miramar, Cahill, Denniston

Category: Pump Stations/Tanks/Wells

Budget: \$4,750,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$300,000	\$0	\$0	\$0	\$3,000,000	\$1,000,000	\$0	\$200,000	Click or
	\$125,000								tap here
	\$125,000								to enter
									text.

**Description:** Alves tank - 2 MG welded steel tank, constructed in 1974, never been professionally recoated. EG1 - 0.2 MG welded steel tank partially recoated in 2008. Miramar 1MG welded steel tank partially recoated in 2010. Staff has evaluated the use of the existing storage and has suggested the removal of both EG1 and Miramar rather than do expensive recoating and retrofits/repairs. Miramar and EG1 have been deemed to have limited use due to their location and functionality.

**Priority: 1** 

**Priority Description:** Maintains essential district infrastructure.

Picture:



Alves Miramar EG1

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## **Capital Improvement Program**

**Number:** 09-18

**Entry/Rev Date:** 7/10/2020

**Project Name:** Pilarcitos Well Field Improvements

**Category:** Pump Stations/Tanks/Wells

Budget: \$250,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**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.

#### **Priority: 2**

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

#### Picture:







Well 4

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## **Capital Improvement Program**

**Number: 16-08** 

**Entry/Rev Date:** 7/10/2020

**Project Name:** Denniston Well Field Improvements

Category: Pump Stations/Tanks/Wells

Budget: \$150,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0

**Description:** Due to deterioration over the 40+ years of life, Denniston wells 1 and 9 produce a minimal quantity of water (~20-80 gpm combined). Denniston wells 2, 3 and 4 are beyond repair. Subject to further evaluation of potential water availability by our hydrologists, this project would abandon the out of service wells and install a new well at an existing well site.

**Priority: 2** 

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

#### Picture:





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## **Capital Improvement Program**

**Number:** 21-02

**Entry/Rev Date:** 7/10/2020

Project Name: Pilarcitos Reservoir Spillway - Pump/Emergency Generator

Category: Pump Stations/Tanks/Wells

Budget: \$100,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description:** In the event the District experiences an extended power outage while the level in the Pilarcitos reservoir is low, staff has developed an emergency plan which includes a diesel powered mobile pump for pumping water over the dam into the spillway. This pump will be able to deliver a flow range of ~400-2800 gpm

**Priority: 1** 

**Priority Description:** Emergency preparedness

Picture:





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## **Capital Improvement Program**

Number: 20-01

**Entry/Rev Date:** 7/10/2020

Project Name: CSP Pump #1 Replacement

Category: Pump Stations/Tanks/Wells

Budget: \$100,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$0	\$0 \$0	\$0	\$0	\$0	\$100,000	\$0	\$0

**Description:** The District has three pumps currently in operation at the Crystal Springs Pump Station (CSP). Two 350 Hp and one 500 Hp pumps deliver water from the Crystal Springs Pump Station to the Cahill tank. The District has a spare pump and motor for both sizes of pumps stored at CSP in case of an emergency failure. This is for scheduled replacement once the pumping performance falls out of range.

**Priority:** 1

**Priority Description:** Maintains critical infrastructure

Picture:





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### **Capital Improvement Program**

Number: 22-02

**Entry/Rev Date:** 7/10/2020

Project Name: CSP Pump #3 Replacement

Category: Pump Stations/Tanks/Wells

Budget: \$80,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$80,000	\$0	\$0

**Description:** The District has three pumps currently in operation at the Crystal Springs Pump Station (CSP). Two 350 Hp and one 500 Hp pumps deliver water from the Crystal Springs Pump Station to the Cahill tank. The District has a spare pump and motor for both sizes of pumps stored at CSP in case of an emergency failure. This is for scheduled replacement once the pumping performance falls out of range.

**Priority:** 1

**Priority Description:** Maintains critical infrastructure

Picture:





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### **Capital Improvement Program**

**Number:** 19-05

**Entry/Rev Date:** 7/10/2020

Project Name: Tanks - THM Control

Category: Pump Stations/Tanks/Wells

Budget: \$110,000 Budget Basis: Estimate

#### **Budget**

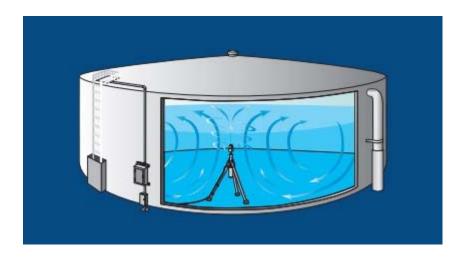
FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$60,000	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description:** This project will help address the disinfection byproducts, Total Trihalomethanes (TTHMS) and Halo Acetic Acid (HAAs) that are regulated by DDW. Over the years, the District's Running Annual Average for TTHMs has been very close to the MCL compliance limit. As the District has added these mixers to tanks we have seen the RAA drop below the MLC. This will provide funding for tank mixers and residual control chlorination systems and allow for reduction in the TTHM levels in the distribution system.

**Priority: 2** 

**Priority Description:** Regulatory compliance, improved water quality

Picture:



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### **Capital Improvement Program**

**Number: 22-03** 

**Entry/Rev Date:** 7/10/2020

**Project Name:** Tank Cathodic Protection Project

Category: Pump Stations/Tanks/Wells

Budget: \$40,000 Budget Basis: Estimate

#### **Budget**

FY 20/2	1 FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$40,00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description:** Project involves adding cathodic protection to Denniston and Miramontes Tank to prevent and minimize corrosion of the tanks steel shell.

**Priority: 1** 

**Priority Description:** Maintains critical infrastructure

Picture:



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### **Capital Improvement Program**

Number: 12-12

**Entry/Rev Date:** 7/2/2020

Project Name: San Vicente/Denniston Water Supply Project

**Category:** Water Supply Development

Budget: \$2,900,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$300,000	\$300,000	\$300,000	\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0

**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).

**Priority: 1** 

**Priority Description:** Essential to secure vital local source water rights.



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### **Capital Improvement Program**

**Number:** 13-04

**Entry/Rev Date:** 7/2/2020

**Project Name:** Denniston Reservoir Restoration

**Category:** Water Supply Development

Budget: \$1,000,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$0	\$0	\$1,000,000	\$0	\$0	\$0	\$0	\$0
							-		

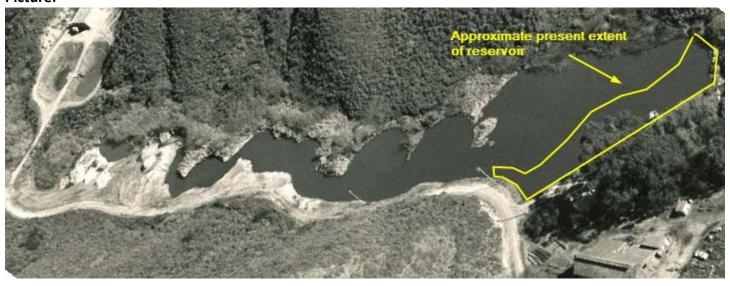
**Description:** Siltation in Denniston reservoir has reduced its volume to a small fraction of the capacity that existed when the District built the Denniston treatment plant. This reduction in volume reduces available yield during the dryer months and results in poor water quality during the wet months 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.

#### **Priority: 2**

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

#### Picture:



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### **Capital Improvement Program**

Number: 20-14

**Entry/Rev Date:** 7/10/2020

Project Name: Nunes Water Treatment Plant Improvement Project

**Category:** Water Treatment Plants

**Budget: \$7,600,000 Budget Basis:** Engineer's estimate

#### **Budget**

FY 20/21	FY 21/22	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$700,000	\$2,900,000	\$4,000,000	\$0	\$0	\$0	\$0	\$0	\$0

**Description:** The Nunes Water Treatment Plant was originally constructed in 1982 and later upgraded in 1992 as part of the Crystal Springs project. The filter basins and clearwell have never been recoated since they were originally constructed. In addition, the sedimentation basin has not had a thorough inspection/evaluation for replacement of the sedimentation basin moving parts. These portions of the Nunes facility are now 30-40 years old and in need of repair/replacement. This project include rehabilitation and coating of all 4 filters, replacement of the filter valves and actuators, clearwell coating and replacement of the ladder and overflow pipe, additional caustic storage and construction of an additional sedimentation basin as per the original design.

**Priority:** 1

**Priority Description: Regulatory** 

Picture:



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## **Capital Improvement Program**

**Number:** 21-04

**Entry/Rev Date:** 7/10/2020

**Project Name:** Nunes/Denniston Turbidimeter Replacement Project

**Category:** Water Treatment Plants

**Budget: \$35,000 Budget Basis:** Vendor Quote

#### **Budget**

FY 20/21	FY 21/22	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$35,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description:** The existing 9 Hach online 1720 filter turbidimeters at both Denniston and Nunes water treatment plants have limited support and parts as they are being discontinued. In addition, the existing benchtop turbidimeters, at both plants, that are used for confirmation of the online analyzers, will be replaced also for consistent confirmation turbidity reads as required by our DDW permit.

**Priority:** 1

**Priority Description: Regulatory** 

Picture:





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## **Capital Improvement Program**

**Number: 21-06** 

**Entry/Rev Date:** 7/10/2020

Project Name: Nunes Effluent Meter

**Category:** Water Treatment Plants

Budget: \$100,000 Budget Basis: Estimate

#### **Budget**

FY 20/21	FY 21/22	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30
\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0

**Description:** In order to better measure Nunes Water Treatment Plant production, staff has suggested installing an 18" mag meter to measure water going to and from the Carter Hill tanks. This way the District can create a better leak loss data utilizing WTP output as compared to metered consumption.

**Priority: 2** 

**Priority Description: Regulatory** 

#### Picture:



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