

UNITED STATES DEPARTMENT OF AGRICULTURE
Rural Utilities Service
RUS Bulletin 1780

Preliminary Engineering Report (PER)

Water System Improvements Project

Prepared for:

Oceano Community Services District
1655 Front Street
Oceano, California

Prepared by:

Mike Kielborn, P.E.
Cannon
1050 Southwood Drive
San Luis Obispo, California

Date: March 2025

TABLE OF CONTENTS

1. PROJECT PLANNING	4
a. Location Maps.....	4
b. Environmental Resources Present.....	5
c. Population Trends.....	5
d. Community Engagement.....	5
2. EXISTING FACILITIES	6
a. Facilities Layout Maps.....	6
b. System Description	6
c. Condition of Existing Facilities	8
d. Financial Status of Existing Facilities	10
e. Water/Energy/Audits	12
3. NEED FOR PROJECT	13
a. Health, Sanitation and Security	13
b. Infrastructure Issues.....	13
c. Reasonable Design Capacity	13
4. ALTERNATIVES CONSIDERED	14
5. SELECTION OF AN ALTERNATIVE	14
6. PROPOSED PROJECT	16
a. Preliminary Project Design	16
b. Project Schedule.....	17
c. Permit Requirements	17
d. Sustainability Considerations	17
e. Total Project Cost Estimate	17
f. Annual OCSD Operating Budget (projected for FY 2024-25).....	20
7. CONCLUSIONS AND RECOMMENDATIONS	22

APPENDICES

Appendix A – Sanitary Survey Report 2024

Appendix B – Capital Improvement Plan (2019)

LIST OF FIGURES

Figure 1 – OCSD Location Map..... 4
Figure 2 – OCSD Service Area Boundary 4
Figure 3 – OCSD Water Facilities Layout Map..... 7
Figure 4 – Pipeline Work Location Map..... 16

LIST OF TABLES

Table 1 – Population Projection for the OCSD 5
Table 2 – Summary of OCSD Drinking Water System Components..... 8
Table 3 – OCSD Water Service..... 10
Table 4 – OCSD Calculated EDUs (USDA Method) 10
Table 5 – OCSD Water Rate Schedule 10
Table 6 – OCSD Annual Revenue FY 2021-22 11
Table 7 – OCSD Annual O&M Costs FY 2021-22 11
Table 8 - OCSD Capital Improvement Plan Summary 11
Table 9 – OCSD Water System Existing Debts 12
Table 10 – Selected CIP Projects for USDA Funding..... 15
Table 11 – Total Project Cost Estimate 18
Table 12 - Construction Cost Estimate Breakdown 19
Table 13 – OCSD Annual Revenue FY 2024-25 20
Table 14 – OCSD Annual O&M Costs FY 2024-25 20
Table 15 – Short-Lived Asset Reserve 21

1. PROJECT PLANNING

a. Location Maps

The location of the Oceano Community Services District (OCSD) is presented in Figure 1. The OCSD is located south of Grover Beach and Arroyo Grande in San Luis Obispo County, California.



Figure 1 – OCSD Location Map

The location of the OCSD service area boundary is presented in Figure 2.



Figure 2 – OCSD Service Area Boundary

b. Environmental Resources Present

A National Environmental Protection Act (NEPA) document is required to be completed based on USDA Rural Development NEPA regulations and submitted for review and acceptance as part of the funding application for the proposed project. The required NEPA document provides an evaluation of the potential for environmental impacts due to the planned construction activities of the proposed project.

On August 14, 2024, the OCSD Board of Directors approved the Final Initial Study and Mitigated Negative Declaration (IS-MND) and the Mitigation and Reporting Program for the Project in accordance with the California Environmental Quality Act (CEQA).

c. Population Trends

The population served by the OCSD in 2020 was the estimated census population (7,183) plus the additional customers outside the District (671).

The County General Plan currently uses a 0.67% annual growth rate for the Oceano area. The projected additional service connections were calculated by dividing the projected increase in population by an assumed average household size of 2.84 per connection.

Table 1 – Population Projection for the OCSD

Year	Population Served	Additional Connections
2020	7,854	0
2030	8,401	193
2040	8,987	399

d. Community Engagement

The OCSD successfully raised water rates in October 2020. As part of this effort, they have created a page on their website with water rate increase information and held multiple public meetings with public comments in accordance with Proposition 218. A public hearing may also be required to solicit public comments after the California Environmental Quality Act (CEQA) Lead Agency comes to a decision regarding CEQA. New water rates will be analyzed in 2025 and the Board will consider a new 5-year rate structure from 2025-2030.

2. EXISTING FACILITIES

a. Facilities Layout Maps

A facilities layout map of the OCSD water system is presented in Figure 3.

b. System Description

The OCSD was formed in 1980 when it took over potable water services for residential and commercial/institutional customers within its service area from the County of San Luis Obispo. The drinking water system is comprised of groundwater wells, a water supply connection to the Lopez Project/Central Coast Water Authority, an emergency water supply interconnection with the City of Grover Beach, water storage tanks, iron and manganese treatment, a hydropneumatic tank, a booster pump station and the associated pipeline distribution system.

Groundwater Supply

The OCSD gets approximately 15% of their water supply from groundwater wells. The OCSD has a total of four groundwater wells including two active wells (Well 6 and Well 8) and two inactive wells (Wells 4 and 7 are disconnected from the system, to be decommissioned). Well 6 is equipped with a 40 hp pump that produces 325 gpm. Well 8 is equipped with a 125 hp pump that produces approximately 950 gpm. Well 4 has been inactive since November 2019 due to sediment issues and a collapsed casing. Well 7 does not produce sufficient water and has water quality issues.

Surface Water Supply

The primary water supply source for the OCSD is through the use of surface water supply contracts. The OCSD purchases treated surface water from the Lopez Project (LP) system and the Central Coast Water Authority (CCWA) system. The surface water from the Lopez Project is supplied from nearby Lopez Lake. The lake water is released into the Terminal Reservoir before treatment in the adjacent Lopez Water Treatment Plant. The treated water is then distributed to the OCSD through an eight-inch diameter pipeline connection that provides approximately 600 gpm. The CCWA is a wholesale distributor of treated surface water from the State Water Project. The Department of Water Resources provides raw surface water to the CCWA's Polonio Pass Water Treatment Plant. The treated surface water is then distributed to participating member agencies in SLO County, including the OCSD.

Storage Tanks

The OCSD has two storage tanks, Tank 1 and Tank 2, that store up to a total of 1.3 million gallons of water. The water supplied from Well 6 and the Lopez Project/Central Coast Water Authority feeds into the two storage tanks through inlets on top of the tanks, and Well 8 feeds directly into the water distribution system. Tank 1 is constructed of welded steel and has a storage capacity of 300,000 gallons. Tank 2 is also constructed of welded steel and has a storage capacity of 1.0 million gallons. A hydropneumatic tank is also part of the OCSD system.

Treatment

OCSD injects 12.5% sodium hypochlorite into the well discharge line for Wells 6 and 8 for disinfection. Tank 2 is used to blend water from the groundwater supply wells with surface water supplied from the LP/CCW system for iron and manganese treatment. This blending is classified as a T1 treatment facility. Tank 1 also blends/floats with Tank 2.

Booster Pump Station

The OCSD has one booster pump station to pressurize the water distribution system. The booster station has four pumps with pumping capacities from 250 to 1,000 gpm. The booster station is equipped with emergency power backup.

Distribution Pipeline System

The OCSD distribution system is comprised of one pressure zone. Mainlines consist of PVC, AC and metal pipelines with 450 valves. The distribution system is pressurized between 45 and 85 psi.

Table 2 – Summary of OCSD Drinking Water System Components

Component	Number	Capacity/Size	Age (years)	Material/Type
Service Connections	2,115			
Water Meters	2,115	---		
Treatment (NaClO)	1	0.5 to 1.0 mg/L		PE storage tanks + pump
Distribution Pipeline	22.4 miles	2-inch to 12-inch	16-69	DIP, ACP, PVC
Booster Pump Station	1	550, 400, and 250 gpm		
LP/CCWA Connection		600 gpm		
Well #4		inactive	69	
Well #6		350 gpm	42	12" diameter steel casing
Well #8		1,000 gpm	37	12" diameter steel casing
Well #7		inactive	37	
Tank 01		0.3 MG	30	Welded Steel
Tank 02		1.0 MG	39	Welded Steel

c. Condition of Existing Facilities

Water Supply

The OCSD uses two active groundwater wells, a connection to the LP/CCWA system, and two storage tanks to meet their water system demand. The groundwater wells produce 1,275 gpm and the LP/CCWA system provides 600 gpm for a total active water source supply of 1,875 gpm. The current Title 22 maximum day demand (MDD) calculated for the system is 1,802 gpm and therefore the OCSD water supply source capacity is greater than the required MDD.

The OCSD serves more than 2,115 service connections and should meet four hours of peak hourly demand with source capacity, storage capacity, and/or emergency service connections. The OCSD has a total of 1.3 MG of storage. The required calculated peak hourly demand is 2,702 gpm or 162,120 gallons per hour. The OCSD could provide eight hours of storage and therefore has adequate storage capacity to meet the California Waterworks Standard.

Water Quality

The District's surface water supply is treated by the Lopez Lake Water Treatment Plant for water from the Lopez Project system and by the Polonio Pass Water Treatment Plant for water from the CCWA system. The quality of the groundwater supply meets the State's primary regulatory standards. The water from Well 6 needs blending treatment to meet the secondary regulatory standards for iron. There are currently no regulatory water quality supply violations.

Infrastructure Issues

The system is comprised of approximately 22.5 miles of pipelines that vary in age from recently installed to almost 70 years old. While a major portion of the system was installed or replaced in the 1980's and 1990's, there are still several water mains in the system that are reaching the end of their useful life expectancy. There is also a mix of several different pipe materials that have been installed over the years, and approximately 2,200 connections tied into those pipelines. There are 25 dead ends reported for the pipeline system.

The pipeline system consists of undersized pipeline sections that do not provide adequate fire flow at the minimum operational pressure of 20 psi. Approximately 15,000 feet of pipeline needs to be replaced with larger appropriately sized pipe to provide adequate fire flow and service pressure. There are sections of undersized mains that are at the end of their useful life. These old small diameter pipe sizes are at risk of breakage and leakage. There are several pipeline sections that need improvements such as looping dead-end mains, increasing the pipeline size to the District's eight-inch minimum diameter, and control valve replacements or additions.

The OCSD has some system water loss through leakage or breaks (real losses), and some loss may be through data collection errors or unauthorized consumption (apparent losses). The current system water loss is estimated to be less than 10%.

Over time the linings and coatings on steel tanks break down and need replacement. Regular inspections of the tank and coatings should be performed by a qualified coating specialist either by diving, or at the next scheduled tank cleaning, to assess the condition of both tanks. Additionally, an inspection report was prepared in July of 2020 for the 0.3 MG tank that noted several deficiencies in the coatings of the tank. Based on the findings in this report, the 0.3 MG water storage tank was repaired, re-coated, and re-lined in 2024.

Sanitary Survey

The Division of Drinking Water (DDW) also performed an inspection of OCSD's system in 2024 for their Sanitary Survey Report. OCSD has responded to the comments, but the most noteworthy issue identified was that Tank 2 needs spot-repairs to address external corrosion, particularly on the tank roof, access ladder, and guardrails. The work to identify the repairs was completed in 2024, and design plans are currently being prepared to address these issues. Once the bid package is complete, it will be distributed for competitive bids, and the work will be completed.

d. Financial Status of Existing Facilities

Table 3 – OCSD Water Service

Type	Number of Service Connections	Number of Water Meters	Average Monthly Usage per Connection in gallons (over the last 12 months)
Residential	1,959	1,959	5,596
Other	156	156	19,984
Total:	2,115	2,115	

Table 4 – OCSD Calculated EDUs (USDA Method)

User Type	Average Monthly Water Usage (total gallons)	Number of Users (connections)	Average Monthly Usage per Connection (gal)	Number of EDUs
Residential	6,513	1,959	6,513	2,804
Other	25,250	156		571
Total:	32,034	2,115		3,375

Table 5 – OCSD Water Rate Schedule

		<u>Bi-Monthly Rates</u>					
		FY 2019-2020	FY 2020-2021	FY 2021-2022	FY 2022-2023	FY 2023-2024	FY 2024-2025
Single Family Residential Base Charge		\$53.56	\$60.52	\$66.58	\$73.23	\$75.43	\$77.69
Multi Family Residential Base Charge		N/A	\$45.39	\$49.93	\$54.92	\$56.57	\$58.27
Non-Residential Base Charge							
	5/8	\$59.80	\$67.57	\$74.33	\$81.76	\$84.22	\$86.74
	3/4	\$72.81	\$82.28	\$90.50	\$99.55	\$102.54	\$105.62
	1	\$111.40	\$125.88	\$138.47	\$152.32	\$156.89	\$161.59
	1&1/2	\$201.21	\$227.37	\$250.10	\$275.11	\$283.37	\$291.87
	2	\$312.52	\$353.15	\$388.46	\$427.31	\$440.13	\$453.33
	3	\$497.30	\$561.95	\$618.14	\$679.96	\$700.36	\$721.37
	4	\$844.80	\$954.62	\$1,050.09	\$1,155.10	\$1,189.75	\$1,225.44
	6	\$1,317.12	\$1,488.35	\$1,637.18	\$1,800.90	\$1,854.93	\$1,910.57
Volume Charges (1 CCF= unit)							
	per unit	per unit	per unit	per unit	per unit	per unit	per unit
	0-6 units	\$1.80	\$3.30	Actual	Actual	Actual	Actual
	7-12 units	\$5.44	\$6.47	Actual	Actual	Actual	Actual
	13-18 units	\$5.83	\$6.47	Actual	Actual	Actual	Actual
	19-24 units	\$6.31	\$6.47	Actual	Actual	Actual	Actual
	24+ units	\$6.54	\$6.47	Actual	Actual	Actual	Actual
Other:							
	Hydrant Meter	\$3.53	\$6.47	Actual	Actual	Actual	Actual
	Out of Area Charge	\$8.51	\$9.62	\$10.58	\$11.64	\$11.98	\$12.34
	Backflow Preventer Inspection	N/A	Pass-through	Pass-through	Pass-through	Pass-through	Pass-through
	Meter Test Charge	\$40.00	\$150.00	\$150.00	\$150.00	\$150.00	\$150.00

Actual costs are wholesale pass-through costs for Lopez and State water supplies

Table 6 – OCSD Annual Revenue FY 2023-24

Revenues	Amount
Water Sales	\$ 3,169,495
Front Footage Fees	\$ 4,080
Delinquent Fees	\$ 81,482
New Account Setup Fees	\$ 4,350
Courtesy Notices Fees	\$ 3,623
Wheeling Fees	\$ 21,871
Interest	\$ 51,373
Grant Revenue	\$ 0
Other Revenues	\$ 31,700
Total:	\$ 3,367,974

Table 7 – OCSD Annual O&M Costs FY 2023-24

Expenses	Amount
Water Supply - Lopez (Pass through)	\$ 527,159
Water Supply - State (Pass through)	\$ 1,126,227
Salaries & Benefits	\$ 340,560
Admin Allocation	\$ 551,152
Services & Supplies	\$ 290,376
Capital Outlay	\$ 115,116
Debt Service	\$ 54,005
Total:	\$ 3,004,595

Capital Improvement Plan

The OCSD has developed a Capital Improvement Plan (CIP) to provide better water availability and reliability of the drinking water system by planning for the maintenance, replacement and addition of water system components. A copy of the OCSD CIP is in Appendix B. Some of the projects in the CIP have been completed since the last update. The remaining projects are summarized below.

Table 8 is a summary of the remaining CIP projects. Refer to Table 10 for a comprehensive list of the projects that will need to be completed.

Table 8 - OCSD Capital Improvement Plan Summary

Improvement Program	Number of Projects Planned	Estimated Cost
Pipeline Replacement/Connection	29	\$ 3,139,150

Table 9 – OCSD Water System Existing Debts

Description	Amount	Annual Debt Service
CalPERS – UAL	\$ 906,000	\$ 80,980

e. Water/Energy/Audits

As part of the 2009 Water Master Plan unaccounted-for water use was tabulated for years between 2003 and 2008, averaging 9%. The OCSD also recently completed water audits for 2019, 2020, 2021, 2022 and 2023 and found that overall unaccounted-for water was typically less than 10%, which was lower than anticipated given the age of the system.

3. NEED FOR PROJECT

a. Health, Sanitation and Security

There are currently no water supply issues and no water quality issues with the OCSD drinking water system. The pipeline system consists of undersized pipeline sections that do not provide adequate fire flow at the minimum operational pressure of 20 psi. Approximately 15,000 feet of pipeline needs to be replaced with larger, appropriately sized pipe to provide adequate fire flow and service pressure.

b. Infrastructure Issues

There are sections of undersized main pipelines that are at the end of their useful life. The old and small diameter pipe sizes are at risk of breakage and leakage. There are several pipeline sections that need improvements such as looping dead-end mains, increasing the pipeline size to the District's eight-inch minimum diameter, and control valve replacements or additions.

c. Reasonable Design Capacity

The reasonable design capacity for the development of additional water system infrastructure is based on the current population and the allowable estimated growth rate indicated in Section 1.c. of this report.

4. ALTERNATIVES CONSIDERED

The OCSD pipeline system issues are addressed by the District's Capital Improvement Plan. The CIP includes the listing of pipeline replacement projects to upgrade sections of old and undersized pipelines to improve fire flow and service pressure and to remove pipeline sections that are at risk of breakage and leakage.

5. SELECTION OF AN ALTERNATIVE

The OCSD CIP includes pipeline projects that have been evaluated for priority need as described below. Some of the projects from the CIP have been completed in the last several years, and have been excluded from the table. The remaining projects needed are listed.

Priority 1 CIP Projects: Pipelines that need the replacement and upsizing of main pipeline sections across the system in areas that are significantly deficient in the required fire flow at the minimum pressure of 20 psi within five years.

Priority 2 CIP Projects: Pipeline sections needed to correct existing and anticipated future lower priority pipeline system deficiencies (depending on growth and development) within one to ten years. Second priority projects also include those pipeline areas that have deficient fire flow requirements at the minimum residual pressure of 20 psi but are operating closer to the required minimums. These projects may also include the upgrade of undersized pipeline mains that are nearing the end of their useful life. These older, smaller diameter pipe sizes are more at risk to leak or break.

Priority 3 CIP Projects: Pipeline sections that do not have immediate deficiencies but should be corrected in the future as budgets allow. The pipeline system improvement work would include looping dead-end mains, increasing water main sizes when a pipeline's useful life is nearing the end, increasing undersized pipelines to the District's 8-inch minimum, and valve replacements or additions.

In addition to the operational deficiencies noted above, the project ranking procedure also considered future County and Caltrans street improvement projects. The projects that are in areas where development or street improvements projects are planned have been elevated on the priority list to minimize excavation in recently repaved streets or where service to new development would be provided.

The proposed USDA funded project work is described in Table 10.

Table 10 – Selected CIP Projects for USDA Funding

CIP Project No.	Description
Priority 1 CIP Projects	
<u>Pipeline Projects</u>	
1-2	Cabrillo Hwy. and Front St.
1-3	22nd St. at Paso Robles St.
1-4	Truman Dr.
1-5	Railroad St. Alley (Truman to Air Park)
1-7	Strand Way (South of Utah)
1-8	Laguna Dr. Alley (South of Utah)
1-10	Utah Ave Alley (Strand Way to Utah)
1-11	Pershing Drive across Hwy 1
Priority 2 CIP Projects	
<u>Pipeline Projects</u>	
2-1	Pier Ave. (Lakeside to Hwy. 1)
2-2	Norswing Dr. Loop (North of Pier)
2-3	Railroad Street (Creek to 17th)
2-4	Creek Road (Sand Dollar to Railroad)
2-5	16th St. at Warner St.
2-6	14th St. at Wilmar Ave.
2-7	Vista St. (19th to 21st)
2-8	Warner St. (19th to 21st)
2-9	South 4th St. Upgrade
2-10	Temple St. and Halcyon Rd.
Priority 3 CIP Projects	
<u>Pipeline Projects</u>	
3-1	La Verne Avenue (22nd to 23rd)
3-2	23rd Street at Wilmar Ave.
3-3	18th St at Wilmar Ave.
3-4	Laguna Dr. Alley (Utah to Juanita)
3-5	Utah Ave. Alley (York to Utah)
3-6	Rochelle Way Loop
3-7	Security Ct. at Sunset Ln.
3-8	21 st St. at River Ave.
3-9	La Vista Ct. at The Pike
3-10	Lancaster Drive at The Pike
3-11	Trinidad Drive at Martinique

6. PROPOSED PROJECT

a. Preliminary Project Design

The major work components of the proposed OCSD Water System Improvement Project are based on the water system needs previously described in the CIP and are described below:

Pipeline Work (approximately 15,000 feet)

- Install new eight-inch diameter pipeline main sections.
- Replace existing main pipeline sections with upsized eight-inch diameter pipe.
- Extend dead-end pipeline to form pipeline loops.
- Install new and replace old control valves in the pipeline system.

The project construction work will be completed in compliance with the State, County, AWWA and OCSD construction standards, and other relevant standards as required.

A location map of the proposed pipeline work is presented in Figure 4.

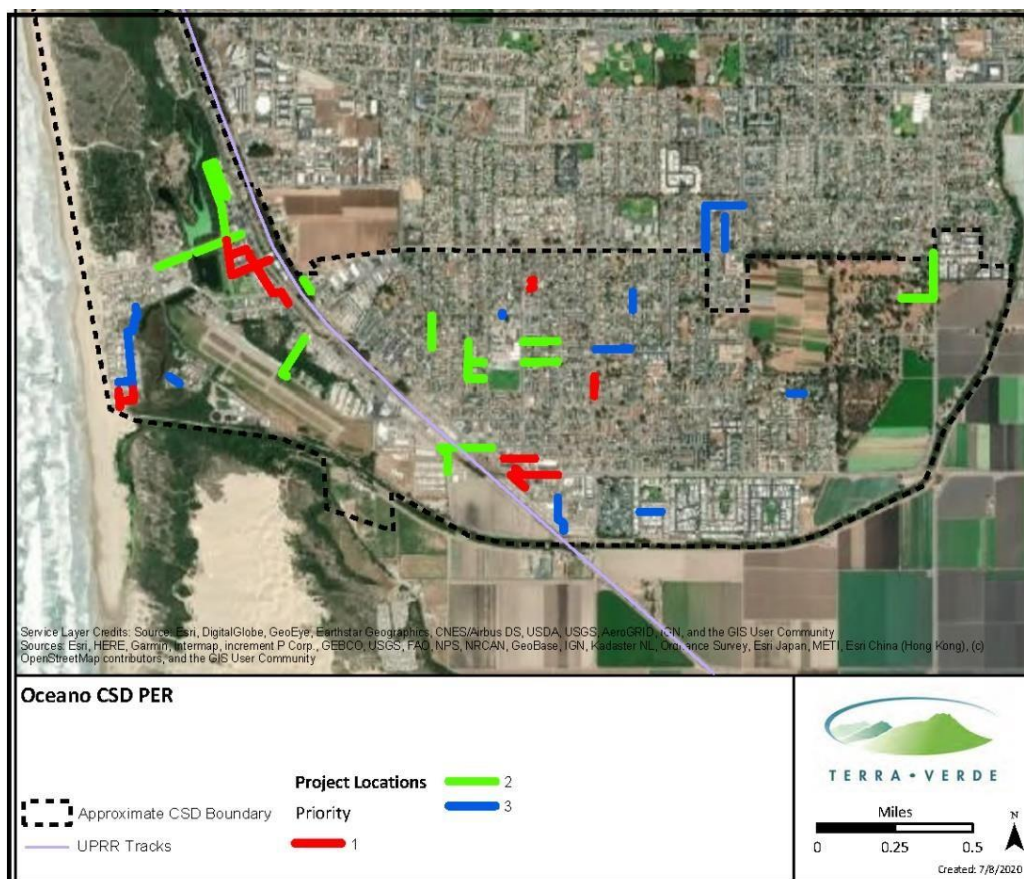


Figure 4 – Pipeline Work Location Map

b. Project Schedule

Milestone	Estimated Completion
USDA RD Approval of PER	May 2025
Project Funding Obtained	August 2025
Begin Design of Remaining Projects	September 2025
Permits Obtained	November 2025
Environmental Clearances Obtained	January 2026
Final Design Complete	March 2026
USDA RD Approval of Final Design	June 2026
Advertisement to Bid/Contract Award	November 2026
Final Construction Complete	November 2028

c. Permit Requirements

Each of the proposed pipeline projects will require an encroachment permit. Most will be with the County of San Luis Obispo, but some will be with Caltrans, UPRR, and the City of Arroyo Grande.

Local, state, and federal government resource agencies will require various project permits or conditions to avoid or reduce potential impacts to such resources to a level that is less than significant. These permits or conditions will include a list of measures to be completed before, during, and/or after construction and may include such items as a jurisdictional delineation and waters assessment for waters, wetlands, and riparian areas; preconstruction biological surveys for special-status plants and animals; necessary actions to avoid and/or reduce any impacts during construction; and habitat restoration following construction.

d. Sustainability Considerations

The replacement of the pipes will provide reliable fire flow pressures and upgrade older system pipes to ensure that there will not be any leaks or breaks in the pipes, causing water loss.

e. Total Project Cost Estimate

The total project cost estimate for the proposed project is presented in Table 11.

A construction cost estimate breakdown for the construction part of the total project cost is presented in Table 12. Note, these construction costs have been updated since the preparation of the CIP in 2019, to reflect current construction installation costs.

Table 11 – Total Project Cost Estimate

Oceano CSD – PER
(as of March 2025)

Item		Amount
Legal Counsel and Bond Counsel		\$ 60,000
Interim Financing Expense		\$ 190,000
Environmental Report Services		\$ 25,000
Engineering Services	Subtotal	
<u>Exhibit A</u>	---	
- A1.01 Study and Report Phase (PER)	\$ 25,000	
- A1.02/3 Design Phase	\$ 427,700	
- A1.04 Bidding/Negotiating Phase	\$ 88,285	
- A1.05 Construction Phase	\$ 176,566	
- A1.06 Post Construction Phase	\$ 25,000	
<u>Exhibit D</u>	---	
- D1.01 Resident Project Representative	\$ 706,275	
Total - Engineering Services:		\$ 1,448,826
Construction Contract (based on construction cost estimate)		\$ 3,531,375
Total Project Contingency (15% of construction estimate)		\$ 529,706
Total:		\$ 5,784,907

"The estimated project cost is based on the understanding that the project is required to be in compliance with the USDA Rural Development American Iron and Steel (AIS) requirements."

**Table 12 - Construction Cost Estimate Breakdown
(as of March 2025)**

CIP Project No.	Description	Pipeline Diameter (in)	Pipeline Length (ft)	Unit Cost (\$/ft)	Cost Estimate
Priority 1 CIP Projects					
<u>Pipeline Projects</u>					
1-2	Cabrillo Hwy. and Front St.	8	400	225	\$ 90,000.00
1-3	22nd St. at Paso Robles St.	8	225	225	\$ 50,625.00
*1-4	Truman Dr.	8	250	225	\$ 56,250.00
*1-5	Railroad St. Alley (Truman to Air Park)	10	1,000	225	\$ 225,000.00
*1-7	Strand Way (South of Utah)	8	235	225	\$ 52,875.00
*1-8	Laguna Dr. Alley (South of Utah)	8	130	225	\$ 29,250.00
*1-10	Utah Ave Alley (Strand Way to Utah)	8	195	225	\$ 43,875.00
1-11	Pershing Drive across Hwy 1	8	200	375	\$ 75,000.00
Total Priority 1:					\$ 622,875.00
* Projects 1-4, 1-5, 1-7, 1-8, and 1-10 are currently out to bid in a Construction package (estimated total Project cost ~ \$700,000)					
Priority 2 CIP Projects					
<u>Pipeline Projects</u>					
2-1	Pier Ave. (Lakeside to Hwy. 1)	10	1,140	225	\$ 256,500.00
2-2	Norswing Dr. Loop (North of Pier)	8	1,750	225	\$ 393,750.00
2-3	Railroad Street (Creek to 17th)	8	650	315	\$ 204,750.00
2-4	Creek Road (Sand Dollar to Railroad)	8	480	225	\$ 108,000.00
2-5	16th St. at Warner St.	8	940	225	\$ 211,500.00
2-6	14th St. at Wilmar Ave.	8	380	225	\$ 85,500.00
2-7	Vista St. (19th to 21st)	8	480	225	\$ 108,000.00
2-8	Warner St. (19th to 21st)	8	480	225	\$ 108,000.00
2-9	South 4th St. Upgrade	8	190	225	\$ 45,000.00
2-10	Temple St. and Halcyon Rd.	12	1,075	240	\$ 258,000.00
Total Priority 2:					\$ 1,779,000.00
Priority 3 CIP Projects					
<u>Pipeline Projects</u>					
3-1	La Verne Avenue (22nd to 23rd)	8	500	225	\$ 112,500.00
3-2	23rd Street at Wilmar Ave.	8	300	225	\$ 67,500.00
3-3	18th St at Wilmar Ave.	8	40	225	\$ 9,000.00
3-4	Laguna Dr. Alley (Utah to Juanita)	8	1,195	225	\$ 211,500.00
3-5	Utah Ave. Alley (York to Utah)	8	195	225	\$ 43,875.00
3-6	Rochelle Way Loop	8	200	225	\$ 45,000.00
3-7	Security Ct. at Sunset Ln.	8	280	225	\$ 63,000.00
3-8	21 st St. at River Ave.	8	690	225	\$ 155,250.00
3-9	La Vista Ct. at The Pike	8	425	225	\$ 95,625.00
3-10	Lancaster Drive at The Pike	8	1,150	225	\$ 258,750.00
3-11	Trinidad Drive at Martinique	8	300	225	\$ 67,500.00
Total Priority 3:					\$ 1,129,500.00
Total Construction Cost Estimate:					\$3,531,375.00

f. Annual OCSD Operating Budget (projected for FY 2024-25)

Income

Table 13 – OCSD Annual Revenue FY 2024-25

Revenues	Amount
Water Rate Revenue	\$3,150,000
Capacity Charge	\$40,704
Delinquent Fees	\$70,750
New Account Setup Fees	\$6,000
Courtesy Notices Fees	\$3,700
Wheeling Fees	\$25,000
Interest	\$51,373
Other Revenues	\$55,030
Total:	\$3,402,557

Annual O&M Costs

Table 14 – OCSD Annual O&M Costs FY 2024-25

Expenses	Amount
Water Supply - Lopez (Pass through)	\$553,575
Water Supply - State (Pass through)	\$1,151,000
Salaries & Benefits	\$396,370
Admin Allocation	\$660,921
Services & Supplies	\$291,755
Debt Service	\$54,000
CIP Projects - Fixed Assets	\$150,000
Total:	\$3,257,621

Debt Repayments

The OCSD requests a funding amount of \$5,784,907 for the proposed project.

A loan only funding request for the proposed project work has the following components (USDA will evaluate for grant funding):

Current interest rate:	2.00%
Loan term:	40 years
Loan amount:	\$5,784,907
Annual payment amount:	\$210,218

Other District debt service payments:

\$ 80,980 annual payment to CalPERS, which is included in the District's budget.

Reserves

Debt Service Reserve

USDA requires a 10% debt service reserve which is \$ 21,022 per year until a full annual payment is accrued in a restricted asset account held by the District.

Short-Lived Asset Reserve

Table 15 – Short-Lived Asset Reserve

Short-Lived Asset	Useful Life	Replacement Cost	Annual Reserve Amount
Booster Pump – 15 hp	10	\$ 10,500	\$ 1,050
Booster Pump – 20 hp	10	\$ 12,500	\$ 1,250
Booster Pump – 25 hp	10	\$ 14,500	\$ 1,450
Flow Meter – 8"	10	\$ 8,300	\$ 830
Booster Pump – Natural Gas	15	\$ 20,000	\$ 1,333
Pump Motor – 60 hp (Well 6)	15	\$ 7,000	\$ 467
Pump Motor – 125 hp (Well 8)	15	\$ 10,000	\$ 667
Back-Up Generator	15	\$ 40,000	\$ 2,667
Total:			\$ 9,714

7. CONCLUSIONS AND RECOMMENDATIONS

The recommended Priority 1, 2, and 3 projects are straightforward and will result in significant improvements to the water system needs. The District would like to make each of the recommended upgrades so that they can strengthen their system reliability, security, and longevity. The District is seeking assistance from USDA Rural Development and other funding sources to construct the project. It is recommended that the District pursue funding and implementation of the projects outlined above.

APPENDIX A

Sanitary Survey Report 2024



State Water Resources Control Board Division of Drinking Water

July 3, 2024

Oceano Community Services District
Attn: Anthony Marraccino, Utilities System Manager
1655 Front Street
Oceano, CA 93445

System Number CA4010005 – 2024 Sanitary Survey

Dear Mr. Marraccino,

On June 7, 2024, the Division of Drinking Water (DDW) conducted a sanitary survey of the Oceano Community Services District (OCSD) potable water system with the assistance of the Utilities System Manager and his staff. The findings of this sanitary survey inspection are detailed in the enclosed Sanitary Survey Report. Please acknowledge receipt of this Report by July 15, 2024.

Below is a list of required items DDW has found. Please review and respond accordingly.

1. Tank 1 is undergoing rehabilitation, which consisted of an interior and exterior recoat and the addition of a staircase and roof guardrails. OCSD anticipates the rehabilitation to be completed in July 2024. OCSD must perform a 5-day soak test and VOC and coliform sampling and submit results to DDW prior to releasing water to the distribution system.

All requirements have been met with the exception of VOC results. Requires 10 days and should be completed late July 2024. Tank 1 rehab completion and NOC anticipated in August 2024.

2. The flow control valve for surface water from the Lopez Project is located in an uncovered below-grade vault. OCSD is required to monitor and inspect the vaults on a routine basis to ensure adequate drainage is occurring and prevent standing water from accumulating in the vault.

OCSD staff daily monitors the valve and is able to use a submersible pump for when standing water accumulates in the vault.

3. Tank 2 has obvious exterior corrosion on the roof, vent, and sides of the tank near the roof. Exterior corrosion issues were noted on the access ladder and roof guardrails. Within 60 days of this report, OCSD is required to submit a plan and time schedule for an exterior recoat at Tank 1. OCSD is also required to provide adequate and safe access of the roof and roof hatch for tank inspection and maintenance.

The inspection for Tank 2 is completed and has a small punch list of items to complete. The required submittal plan and time schedule for exterior recoating of

the tank will be completed within 60 days of July 3, 2024. Additionally, some rehabilitation is required to comply with OSHA. Staff is seeking a comprehensive quote for all Tank 2 repairs.

4. OCSD noted (mainline?) water outages in 2021, 2022, and 2023 due to water main breaks. DDW recommends OCSD notify DDW immediately when an unplanned event causes the distribution system to drop below 5 psi, as this would require issuance of a Boil Water Notice or other public notification. OCSD is required to maintain a minimum operating pressure of 20 psi at all times.

OCSD has a protocol in place to maintain 20 psi and issue all proper notifications in the event of an emergency line break, causing the system to drop below 5 psi. Public notification should take place for affected customers only (not districtwide) in the event of a drop below 5 psi.

5. On January 15, 2021, the US EPA issued revisions to the federal Lead and Copper Rule (LCR). US EPA's new Lead and Copper Rule Revisions (LCRR) aim to strengthen the LCR to better protect communities and children in elementary schools and childcare facilities from the impacts of lead exposure. The US EPA also maintains a compliance date of October 16, 2024, for updated lead service line inventories. OCSD is required to submit an updated lead service line inventory to DDW by October 16, 2024.

OCSD is currently inspecting and identifying service lines for both District and private. October 16th deadline will be met, 1 of 3 meter reading routes have been completed. Boxes are being dug up at the meters to document service line material.

6. The State Water Board has developed a Cross-Connection Control Policy Handbook (CCCPH) that was adopted on December 19, 2023, and will be effective July 1, 2024. Standards described in the CCCPH will be applicable to all California Public Water Systems, as defined in California's Health and Safety Code (CHSC, Section 116275(h)) and compliance with the CCCPH is mandatory. Public water systems are required to submit a Cross Connection Control Plan to DWW within one year after the effective date of the CCCPH. In accordance with the CCCPH, OCSD is required to submit a Cross Connection Control Plan to DDW by July 1, 2025.

OCSD has a cross-connection control program in place, and contracted a cross-connection control specialist, Matt Giuffrida, who is certified with AWWA. OCSD has incorporated cross connection control requirements in Chapter 6.12.100 of its Code of Ordinances. OCSD is required to regularly survey its service area for new potential hazards and cross connections, and is continuing to do so as needed at regular intervals.

7. Well 06 exceeds the secondary MCLs for iron. To reduce iron levels, groundwater from Well 06 must be blended with imported surface water at the storage tanks. OCSD is required to provide a monthly blending report to DDW. The blending report must include production numbers from Well 06 and the Lopez Project turnout, monthly iron results from Well 06, and weekly iron results taken from the Tank 2.

Well 06 hasn't been used for production since 2019. However, this item is currently being addressed and there are no concerns. If/when Well 06 is used, the well and the tank are sampled and proper blending occurs.

Below is a list of recommendations. A response is not required for recommendations.

1. Groundwater treatment includes disinfection with chlorine. OCSD blends its disinfected well water with imported surface water supplies at its storage tanks. Because OCSD blends chloraminated surface water with free-chlorinated groundwater at its storage tanks, DDW strongly recommends OCSD monitor for total and free chlorine and total ammonia at its storage tanks weekly to ensure an adequate chlorine to ammonia ratio is maintained.

The necessary equipment to meet this requirement was recently purchased and is currently being utilized with no concerns. OCSD is currently monitoring total and free chlorine/total ammonia at our storage tanks.

2. OCSD operates one booster pump station located at its maintenance yard, which is used to transfer water to the distribution system from the storage tanks. The pump station consists of four pumps and a 5,466-gallon hydropneumatic tank. DDW recommends the hydropneumatic tank be inspected every 5 years.

The tank was recently inspected and the report has been submitted to the DDW. The District has a plan to maintain the inspection schedule every five years.


3. On April 10, 2024, EPA announced the final National Primary Drinking Water Regulation (NPDWR), establishing MCLs for PFOA, PFOS, PFHxS, PFNA, and HFPO-DA as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS using a Hazard Index MCL. DDW recommends OCSD stay current on State regulations regarding PFAS.

The first round of PFAS has been completed. The next scheduled test through the EPA is in 2025 and is part of the UCMAR (Unregulated Contaminant Monitoring Rule) which comes out every five years. OCSD will look into potential 2024 testing for PFAS, if possible, this will occur.

OCSD's assistance provided during the preparation of this sanitary survey report is greatly appreciated. If you have any questions, please contact Laureen Tan at (805) 566-1317 (laureen.tan@waterboards.ca.gov) or me at (805) 566-1326 (jason.cunningham@waterboards.ca.gov).

Oceano Community Services District
July 3, 2024

Sincerely,



Date:
2024.07.03
11:49:10
-07'00'

Water Boards
Jason Cunningham, P.E., District Engineer
Santa Barbara District
Division of Drinking Water
State Water Resources Control Board

Enclosure 1: Sanitary Survey Report

cc: San Luis Obispo County Environmental Health Services



State Water Resources Control Board
Division of Drinking Water

Sanitary Survey Inspection Report
For
Oceano Community Services District
San Luis Obispo County
CA4010005

State Water Resources Control Board
Division of Drinking Water
Central California Field Operations Branch
Laureen Tan, P.E., Water Resource Control Engineer
July 3, 2024

I. Introduction

On June 7, 2024, Laureen Tan, P.E., Water Resource Control Engineer of the Santa Barbara District, Division of Drinking Water (hereinafter known as DDW) of the State Water Resources Control Board (SWRCB) inspected the Oceano Community Services District (hereinafter OCSD) water system. Tony Marraccino, Utilities Systems Manager, and his staff were in attendance. The last inspection was conducted on June 3, 2021.

The purpose of this sanitary survey inspection report is to document the inspection of OCSD's water system, to describe the facilities and operational practices as they exist today, and to describe any deficiencies needing follow-up.

1.1 Sources of Information

Information for this sanitary survey inspection report was obtained from OCSD personnel, DDW files, and a field inspection of the water system.

1.2 Brief Description of System

OCSD is classified as a community water system located in San Luis Obispo County, and operates under the authority of Domestic Water Permit listed below:

Table with 3 columns: Permit Number, Date Issued, Purpose. Rows include permit 04-06-17P-002 (Full Permit) and 4010005PA-001 (Permit amendment to inactivate Well 04).

According to the 2023 Electronic Annual Report (EAR), OCSD reported that there are approximately 7,601 permanent residents served through 2,207 service connections. OCSD's water system consists of two active wells, one interconnection (turnout) with the Lopez Project water system for receiving water, and a distribution system with approximately 1.3 million gallons (MG) of finished water storage. OCSD also has an emergency interconnection with the City of Grover Beach. Sewer services and wastewater treatment for its service area are provided by the South San Luis Obispo County Sanitation District, which is located in the community of Oceano.

II. INVESTIGATION FINDINGS

2.2 Sources

OCSD maintains two active groundwater wells and imports treated surface water from San Luis Obispo County (County) through the Lopez Project water system. Collectively, OCSD’s wells can provide up to about 1,300 gallons per minute (gpm). The Lopez Project can provide OCSD treated surface water at flows up to 600 gpm. OCSD has a contractual water supply entitlement with the County for a total of 750 acre feet (244 MG) per year, which is subject to Lopez Lake (also called Lopez Reservoir) water levels. Because OCSD does not utilize its full surface water allotment, OCSD sells a portion of its allotment to Canyon Crest Mutual Benefit Water Company and two mobile home parks, which receive water through the City of Arroyo Grande’s distribution system. OCSD has also restricted groundwater production to 225 AF per year to maintain stability in groundwater levels.

OCSD primarily uses Lopez Project water and supplements the water supply with well water when needed.

Incorrect above. Correct: CCWA = 750 AF / Lopez = 303 AF

2.2.1 Adequacy of Supply

The table below provides the population, number of service connections, active sources of supply in OCSD, as well as the total annual supplies. OCSD’s population and number of service connections have been mostly stable since 2013.

Year	Reported Population	No. Service Conn.	Annual Production Totals			Percent Surface Water	Gallons per Capita-Day (GPCD)
			Ground Water (MG)	Imported Surface Water (MG)	Total Supply (MG)		
2013	7,289	2,168	29.3	270	299	90.2%	112.40
2014	7,673	2,177	85.5	175	259	67.4%	89.75
2015	8,125	2,168	40.7	186	227	82.0%	74.21
2016	8,118	2,184	1.6	219	221	99.3%	72.35
2017	7,530	2,184	6.7	228	234	97.1%	83.07
2018	7,533	2,188	77.3	152	229	66.2%	81.07
2019	7,560	2,195	48.0	164	212	77.3%	74.88
2020	7,487	2,203	6.3	236	242	97.4%	86.53
2021	7,487	2,217	27.6	206	234	88.2%	83.27
2022	7,601	2,228	58.7	151	210	72.1%	73.86
2023	7,601	2,207	17.4	205	222	92.2%	78.41

Source: EARs, 2013 – 2022. SAFER Clearinghouse Portal, 2023.

Per the California Waterworks Standards all public water systems are required to record the production from their sources on a monthly basis. The Maximum Day Demand (MDD) was provided by OCSD in the EAR reports. The Peak Hour Demand (PHD) was estimated using the reported maximum day demand and a peaking factor of 1.5. OCSD’s maximum monthly demand, MDDs, and PHDs during the last 11 years are below.

Year	Average Flow (GPM)	Maximum Daily Demand (MGD)	Maximum Daily Demand (GPM)	Peak Hourly Demand (GPM)
2013	569	1.14	792	1,188
2014	494	0.92	640	961
2015	432	0.97	672	1,008
2016	420	1.08*	750*	1,126*
2017	446	1.20*	831*	1,246*

Year	Average Flow (GPM)	Maximum Daily Demand (MGD)	Maximum Daily Demand (GPM)	Peak Hourly Demand (GPM)
2018	436	1.15*	798*	1,197*
2019	403	1.30	905	1,358
2020	461	0.92	636	954
2021	445	0.87	604	906
2022	400	1.40	973	1,460
2023	423	0.79	547	821

Source: EARs, 2013 – 2022. SAFER Clearinghouse Portal, 2023.

*The 2016-2018 values were estimated using peaking factors, as shown below.

$$\text{Max Day Demand (MDD)} = \frac{\text{Max Month (MG)}}{\frac{\text{days}}{31 \text{ month}}} * (1.5)$$

$$\text{Peak Hour Demand (PHD)} = \text{Max Day Demand (GPM)} * (1.5)$$

According to the California Waterworks Standards, public water systems are required to have water sources that have the capacity to meet the MDD at all times, and a public water system serving more than 1,000 service connections are required to be able to meet four hours of PHD. Currently, the combined capacities of OCSD’s wells (1,300 gpm), Lopez Project interconnection (600 gpm), and finished water storage (1.3 MG) meet the estimated MDD and PHD values.

Drought Impact and Preparedness

The State will continue to update water conservation measures depending on current weather conditions. Therefore, the States measures continue to change based on current conditions. DDW recommends that OCSD stay informed by visiting the State’s Water Conservation Portal at https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/.

2.2.2 Source of Supply – Purchased Surface Water

OCSD purchases treated surface water from the Lopez Project, which obtains its water supply from the Lopez Reservoir and State Project Water (SPW) from the Central Coast Water Authority (CCWA). The amount of water OCSD can receive (entitlement) from the Lopez Project is determined by the County.

The Lopez Project consists of a reservoir formed by a dam constructed on the Arroyo Grande Creek in 1969 and receives surface water from a 43,000-acre area of the upper portion of the Arroyo Grande Creek Watershed. The Lopez Reservoir has a total storage capacity of 49,388 acre feet and provides recreational activities, including boating, fishing, picnicking, and overnight camping, which are inspected regularly. Swimming and water contact areas are located in designated areas down-stream of the intake structure and at the opposite end of the Reservoir. Water from the Reservoir is initially released and stored at the 844-acre foot Terminal Reservoir for approximately 30 to 40 days before treatment in the Lopez Project Water Treatment Plant (LPWTP). The LPWTP provides conventional treatment consisting of coagulation, flocculation, dissolved air floatation system, membrane filtration, chlorination, and chloramination in accordance with Surface Water Treatment Rule (SWTR) requirements. The LPWTP receives a 4-log Giardia removal and a 0.5-log virus and *Cryptosporidium* inactivation credit to meet SWTR requirements. The treated water from the LPWTP is then blended with SPW from CCWA to meet SPW allocation requirements for other water systems.

CCWA operates and maintains a conventional treatment plant, Polonio Pass Treatment Plant (PPTP), which can produce 43 MGD. The treatment processes include pre-chlorination (standby), coagulation, flocculation, sedimentation, filtration, chlorination and chloramination. PPTP receives

a 2.5-log Giardia removal and a 2-log virus and *Cryptosporidium* inactivation credit to meet SWTR requirements. Water is delivered through 131 miles of treated water transmission lines operated and maintained by CCWA.

Purchased surface water is delivered to OCSD’s tanks via the Brisco turnout located in Arroyo Grande. The Brisco turnout is owned, operated, and maintained by the County. The Brisco turnout is also metered, which is monitored and reported to OCSD by the County. OCSD maintains regular correspondence with County staff for supply delivery. OCSD can adjust surface water flow from a valve located at their maintenance yard. The flow control valve for surface water from the Lopez Project is located in an uncovered below-grade vault. **OCSD is required to monitor and inspect the vault on a routine basis to ensure adequate drainage is occurring and prevent standing water from accumulating in the vault.**

OCSD has a submersible pump for when standing water accumulates in the vault.

2.2.3 Source of Supply – Groundwater

OCSD’s Wells 06 and 08 pump groundwater from the Santa Maria Valley Groundwater Basin (SMV Basin), which is adjudicated and managed by the Northern Cities Management Agency (NCMA). OCSD has a **SMV Basin water allocation of 750 AFY**. The SMV Basin groundwater is mostly unconfined except in the coastal portion where it is confined. OCSD has reduced groundwater production to reduce the decline of the groundwater levels and avoid seawater intrusion into the SMV Basin. Groundwater levels are regularly monitored by the County on a quarterly basis as part of the NCMA’s monitoring program. The primary threat for the SMV Basin groundwater supply is water quality degradation due to seawater intrusion.

Incorrect above. Correct: SMV allocation to OCSD is 900 AFY. Recent typical usage amid NCMA cities is 25% of allocation (225 AF), OCSD recent usage has been 50 AF or less.

OCSD primarily uses Well 08 for groundwater supply. OCSD has a spare pump motor available for Well 08. Well 06 can only produce flows up to 300 gpm and serves as a backup to Well 08 which can produce approximately 1,000 gpm. Each well is located within a locked fenced area. Air vacuum releases on each of the wells are properly screened. The wells can discharge into stormwater containment basins or the storm drain.

Per SB 552, OCSD is required to report monthly production volumes on a quarterly basis (due by the 30th of the following month) through the State’s SAFER Clearinghouse website,

<https://wbappsrv.waterboards.ca.gov/safer/>.

Other Well characteristics are summarized in the table below.

Well ID	Year Drilled	Total Depth (ft bgs)	Casing Type and Size (in)	Annular Seal Depth (ft bgs)	Depth to Screen (ft bgs)	Pump Type	Approx. Flow Rate (gpm)
Well 06	1979	606	12-inch steel	73	305	75-HP Vertical Turbine	300
Well 08	1984	540	12-inch steel	50	380	25-HP Vertical Turbine	1,000

Incorrect above, not 25 HP. Correct - Well 08 pump type is 125-HP Vertical Turbine

Well 04 was inactivated as a supply source in December 2021. Well 04 was inoperable due to sediment issues and has been physically disconnected from the water system. Well 07 was previously inactivated due to poor production flow and has been physically disconnected from the water system.

2.3 Source of Supply – Emergency Interconnections

OCSD maintains a permanent one-way interconnection with the City of Grover Beach for emergency supply. OCSD plans to add a permanent interconnection with the City of Arroyo Grande.

2.4 Treatment

Groundwater treatment includes disinfection with chlorine. OCSD blends its disinfected well water with imported surface water supplies at its storage tanks.

2.4.1 Disinfection

Disinfection treatment is provided by the injection of 12.5% sodium hypochlorite and the well discharge line for Wells 06 and 08. Chemical storage facilities are located near the wells and include double wall polyethylene tanks for sodium hypochlorite and dedicated chemical feed pumps. All chemicals are NSF/ANSI 60 certified. Chemical injection is set with a target total chlorine residual of 0.5 to 1.0 mg/L. **Because OCSD blends chloraminated surface water with free-chlorinated groundwater at its storage tanks, DDW strongly recommends OCSD monitor for total and free chlorine and total ammonia at its storage tanks weekly to ensure an adequate chlorine to ammonia ratio is maintained.** The ideal chlorine to ammonia ratios should not exceed 5:1 in the tanks and distribution system, unless the water system is converting to a free-chlorinated supply. An excess of free chlorine in the presence of chloramines can result in loss of effective chlorine residual.

The necessary equipment to meet this requirement was previously purchased and is currently being utilized with no concerns.

OCSD also indicated Lopez Project switches from chloramines to free chlorine once a year for maintenance. OCSD should adjust its tank volumes and chemical dosing processes accordingly when this disinfection switchover occurs to prevent chlorine residual losses in the distribution system.

2.4.2 Groundwater Blending

Well 06 has iron levels that exceed the secondary MCL. OCSD is required to blend Well 06 with imported surface water to reduce the levels of iron. OCSD is required to provide a monthly blending report to DDW. The blending report must include production numbers from Well 06 and the Lopez Project turnout, and weekly iron results taken from the Tank 2.

OCSD is no longer required to submit a monthly blending report for nitrate and selenium, as these constituents are non-detect in Wells 06 and 08.

2.5 Storage Facilities

OCSD's finished water storage consists of two treated water storage tanks, providing a total storage capacity of approximately 1.3 MG. Tanks 1 and 2 receive water from OCSD's wells and surface water from the Lopez Project and the tanks float together. OCSD maintains a 5-year inspection/cleaning schedule for the reservoirs.

The tank site is located at OCSD's maintenance yard, which is fenced and secured. Tank 1 is undergoing rehabilitation, which consisted of an interior and exterior recoat and the addition of a staircase and roof guardrails. OCSD anticipates the rehabilitation to be completed in July 2024. **OCSD must perform a 5-day soak test and VOC and coliform sampling and submit results to DDW prior to releasing water to the distribution system.**

All requirements have been met with the exception of VOC results.

Tank 2 was inspected by Advantage Technical Services, Inc. (ATS), in November 2022. ATS indicated the interior of Tank 2 was in good condition and minimal sediment was observed. During this inspection, Tank 2 has obvious exterior corrosion on the roof, vent, and sides of the tank near the roof. Exterior corrosion issues were noted on the access ladder and roof guardrails. **Within 60 days of this report, OCSD is required to submit a plan and time schedule for an exterior recoat at Tank 1. OCSD is also required to provide adequate and safe access of the roof and roof hatch for tank inspection and maintenance.**

The tank was recently inspected and there is a plan in place to address OSHA compliance.

Tank characteristics are shown in the table below.

Storage Facility Name	Capacity (MG)	Year Installed	Construction	Date of last inspection	Inlet/Outlet
Tank 1	0.3	1991	Welded Steel	7/22/2020	Separate
Tank 2	1	1979	Welded Steel	11/17/2022	Separate

2.6 Distribution System

OCSD’s distribution system consists of one pressure zone. The distribution system consists of mains made of asbestos cement, cast iron, PVC, and steel ranging in diameter from 2 to 12 inches. Distribution system pressures range from 45 to 85 pounds per square inch (psi), which is maintained by the storage tanks and booster pump station. OCSD maintains 24 dead ends and 460 valves. Dead ends are flushed annually and as needed. Valves are exercised annually and as needed.

OCSD shall continue to maintain ten feet horizontal and one-foot vertical separation between water and sewer lines, in accordance with Title 22 Section 64572 Water Main Separation. Maps of the distribution system shall be maintained and kept current.

Problems encountered in the distribution system are shown below. OCSD investigated and corrected problems accordingly. OCSD noted water outages in 2021, 2022, and 2023 due to water main breaks. DDW recommends OCSD notify DDW immediately when an unplanned event causes the distribution system to drop below 5 psi, as this would require the issuance of a Boil Water Notice or other public notification. **OCSD is required to maintain a minimum operating pressure of 20 psi at all times.**

The District is currently in compliance and has an established protocol for notifications.

Distribution System Problem	2021	2022	2023
Service Connection Breaks/Leaks	6	7	10
Main Breaks/Leaks	0	3	2
Water Outage	4	5	1
Boil Water Orders	0	0	0
Total	10	15	13

OCSD is in the process of incorporating two small nearby water systems (Halcyon Water Company and Ken Mar Gardens) into its service area as part of a SAFER consolidation project. OCSD indicated the addition of these water systems will improve water quality issues near the Halcyon area in its distribution system.

2.6.1 Booster Pump Stations

OCSD operates one booster pump station located at its maintenance yard, which is used to transfer water to the distribution system from the storage tanks. The pump station consists of four pumps with individual pumping capacities that range from 275 to 450 gpm and a 5,466-gallon hydropneumatic tank. DDW recommends the hydropneumatic tank be inspected every 5 years.

See attached report. The District is on pace for inspections every 5 years.

The primary pump is equipped with a variable frequency drive (VFD). The three electrical pumps are equipped with a backup power generator. The fire pump is powered using a natural gas motor that is routinely checked.

# of Pumps	Pump Sizes and Capacities	Delivers Water from	Delivers Water to
4	15 HP - 275 gpm 20 HP - 375 gpm 20 HP - 375 gpm - VFD (lead) unknown size (fire) - 450 gpm	Tanks 1 and 2	Distribution System

2.6.2 Lead Service Line Inventory Requirement

OCSD certified in 2018 that service lines within its distribution system consist of plastic (PVC, polyethylene, and polybutylene), copper, and galvanized steel material. OCSD has not reported any lead service lines within its service area.

On January 15, 2021, the US EPA issued revisions to the federal Lead and Copper Rule (LCR). US EPA’s new Lead and Copper Rule Revisions (LCRR) aim to strengthen the LCR to better

protect communities and children in elementary schools and childcare facilities from the impacts of lead exposure. The US EPA also maintains a compliance date of October 16, 2024, for updated lead service line inventories. **OCSD is required to submit an updated lead service line inventory to DDW by October 16, 2024.** More information can be found by visiting:

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/leadandcopperrule.html.

The District is currently in the process of identifying all lines, which will be completed by the deadline.

2.7 Cross-Connection Control Program

The State Water Board has developed a Cross-Connection Control Policy Handbook (CCCPH) that was adopted on December 19, 2023, and will be effective July 1, 2024. Standards described in the CCCPH will be applicable to all California Public Water Systems, as defined in California’s Health and Safety Code (CHSC, Section 116275(h)) and compliance with the CCCPH is mandatory. Public water systems are required to submit a Cross Connection Control Plan to DDW within one year after the effective date of the CCCPH. **In accordance with the CCCPH, OCSD is required to submit a Cross Connection Control Plan to DDW by July 1, 2025.** Other cross connection control requirements include having authority to enforce cross connection control regulations, conducting an initial hazard assessment and routinely updating the hazard assessment, and annual testing of all backflow prevention devices in the water system in accordance with the CCCPH. More information and the final CCCPH can be found by visiting:

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/cccp.html

OCSD has a cross-connection control program in place, and contracted a cross-connection control specialist, Matt Giuffrida, who is certified with AWWA. OCSD has incorporated cross connection control requirements in Chapter 6.12.100 of its Code of Ordinances. OCSD is required to regularly survey its service area for new potential hazards and cross connections.

The District will be working with the County of San Luis Obispo Public Health (Cross Connection) to submit the Cross Connection Plan to DDW by the deadline.

Below is a summary of backflow prevention testing from 2021 to 2023.

Year	Service Connection Devices			
	Total Number	Number Devices Tested	Number Replaced	% Tested/ Replaced
2021	164	159	7	97%
2022	164	164	6	100%
2023	167	160	12	96%

*As reported in Annual Reports provided by OCSD

From 2021 to 2023, over 96% of the total backflow devices were tested each year. OCSD is required to ensure that all of the necessary backflow prevention devices are tested annually and if any of the backflow prevention devices fail, they are required to be repaired or replaced and then tested again. OCSD shall continue to implement and enforce its cross-connection control program.

2.8 Emergency Notification Plan

OCSD has an Emergency Notification Plan (ENP) on file with DDW dated June 18, 2024. The ENP shall be updated whenever necessary, although DDW recommends submitting the ENP on an annual basis to ensure that the information remains current.

2.9 Emergency Response Plan

OCSD has an Emergency Response Plan (ERP) on file with DDW dated June 2021. The ERP should list the actions OCSD would undertake in the event of emergencies, disasters, or other system problems (bacteriological, etc.).

2.10 Bacteriological Sample Siting Plan (BSSP)

The State’s Revised Total Coliform Rule (rTCR) became effective on July 1, 2021. Per the rTCR and based on the population reported in the 2023 EAR (7,601), OCSD is now required to collect a minimum of 9 samples per month. Due to its use of a surface water source, OCSD is required to collect bacteriological samples throughout its distribution system on a weekly basis. OCSD has an updated Bacteriological Sample Siting Plan (BSSP) on file with DDW dated June 17, 2024, and entails the collection of approximately 12 to 15 samples per month or 3 samples per week at 12 locations throughout the distribution system.

2.11 Complaints

OCSD maintains records of all complaints received and actions taken to correct the problems related to complaints. Below is a summary of the types of complaints received by OCSD. OCSD addressed the complaints received.

Type of Complaint	2021	2022	2023
Taste & Odor	3	4	1
Color	5	2	0
Pressure Issues	4	7	0
Total No. Complaints	12	13	1

2.12 Consumer Confidence Report (CCR)

OCSD is required to distribute a CCR to each customer in their service area by July 1st of each year and certify CCR distribution by October 1st of each year. From 2021 to 2023, OCSD mailed and publicly posted online its CCRs to its customers and submitted its CCRs to DDW by the deadline each year.

2.13 Electronic Annual Report (EAR)

The California Health and Safety Code Section 116530 states that all public water systems shall submit a technical report as required by DDW on an annual basis. DDW requires all water systems to submit the Electronic Annual Report (EAR), summarizing population served and number of service connections, water produced and used status of various monitoring requirements and operator certification, system improvements and other information. OCSD submitted its EARs by the deadline each year.

2.14 Monthly Compliance Reporting

Required monthly reports are to be submitted to DDW via email (dwpdist06@waterboards.ca.gov) using the document links shown below. Monitoring and reporting requirements are further discussed below.

Document Link	Report Item
TCR	Monthly TCR Report
LCR	Lead and Copper Tap Sampling Form. Lab results should be submitted electronically by the lab using Lab-to-State or CLIP portal
PN	Any Public Notification Documents
SWTR	Surface Water Treatment Rule Monitoring Summary
MRDL	Quarterly MRDL Form
DBP	Disinfection By-Product Report. Laboratory must also submit data electronically via CLIP portal.

Document Link	Report Item
CCR	Annual CCR – use email if unable to upload CCR onto EAR portal website
WTP	Monthly Treatment Plant (Blending) Reports.
NO2	Monthly Nitrification monitoring reports.
Lab Reports	<i>Laboratories must upload chemical results using the CLIP portal. Submit bacteriological data as TCR (distribution system).</i>

III. WATER QUALITY MONITORING

3.1 Surface Water Treatment Rule (SWTR) Monitoring

Because OCSD purchases treated surface water, OCSD is required to comply with SWTR disinfectant residual maintenance and monitoring requirements in the distribution system. From 2021 to 2023, OCSD monitored chlorine residuals in two sampling sites within its distribution system weekly. OCSD also analyzes HPCs at each location on a weekly basis.

From January 2023 to May 2024, one sampling location, 1649 Helena, has total chlorine residuals that have ranged from 0.2 to 0.61 mg/L. OCSD indicated this location is located near a dead end in the distribution system with low water usage and is flushed every quarter. Total chlorine residuals throughout the distribution system have ranged from 0.2 to 2.6 mg/L. HPCs have ranged from non-detect to 109 cfu/mL. One location, 1990 Henderson, had HPC result of greater than 5,700 cfu/mL. OCSD subsequently flushed the waterline and recollected a sample, which was non-detect for HPC.

OCSD submits monthly summaries and complies with the SWTR requirements.

3.2 Iron/Manganese Treatment Monitoring

Well 06 exceeds the secondary MCLs for iron. To reduce iron levels, groundwater from Well 06 must be blended with imported surface water at the storage tanks. **OCSD is required to sample Well 06 monthly for iron and the resulting blend for iron weekly when Well 06 is in operation.**

OCSD is required to provide a monthly blending report to DDW. The blending report must include production numbers from Well 06 and the Lopez Project turnout, monthly iron results from Well 06, and weekly iron results taken from the Tank 2.

OCSD is no longer required to submit a monthly blending report for nitrate and selenium, as these constituents are non-detect in Wells 06 and 08.

3.3 Sources – Chemical Monitoring Schedule and Results

All source water quality monitoring compliance is based on DDW’s Drinking Water Watch database (<https://sdwis.waterboards.ca.gov/PDWW/>). All chemical water quality monitoring from the sources must be submitted to DDW via electronic data transfer into the California Laboratory Intake Portal (CLIP).

OCSD is required to routinely monitor its groundwater sources for general physical parameters, general minerals, inorganic chemicals, radiological chemicals, volatile organic compounds (VOCs), synthetic organic compounds (SOCs), and coliform bacteria. Below is a summary of constituents detected in OCSD’s groundwater sources.

Source Chemical Monitoring Summary - Detected Constituents, Primary Drinking Water Standards
Most recent result shown below. Source - SDWIS Database

Source Name	Arsenic (ug/L)	Fluoride (mg/L)
	MCL: 10	MCL: 2
Well 06	2.1	0.29
Well 08	2.1	0.15

Source Chemical Monitoring Summary - Detected Regulated Constituents
Most recent result shown below. Source - SDWIS Database

Source Name	Chloride (mg/L)	Sp. Cond (uS/cm)	Iron (mg/L)	Manganese (ug/L)	Sulfate (mg/)	TDS (mg/L)
	sMCL: 500	sMCL: 1600	sMCL: 300	sMCL:50	sMCL: 500	sMCL: 1000
Well 06	22	1,000	650	38	140	630
Well 08	37	1,100	160	32	170	680

Source Chemical Monitoring Summary - General Physical Constituents
Most recent result shown below. Source - SDWIS Database

Source Name	Color (units)	Turbidity (ntu)	Odor
	sMCL: 15	sMCL: 5	sMCL:3
Well 06	Non-detect (ND)	0.90	3
Well 08	Non-detect (ND)	0.95	1

3.3.1 Inorganic Chemicals, General Mineral and General Physical

In general, groundwater from each active source must be sampled for inorganic chemicals, general mineral (GM) and general physical (GP) at least once every three years.

Well 06 exceeds the secondary MCLs for iron and is required to be sampled on a monthly basis when in operation for treatment (blending) monitoring.

3.3.2 Nitrate

Wells 06 and 08 are non-detect for nitrate. Nitrate is required to be monitored annually at OCSD's groundwater sources.

3.3.3 Volatile Organic Chemicals (VOC)

Monitoring for VOCs is required once every three years. All VOCs were non-detect for all of OCSD's active sources in the most recent samples.

3.3.4 Synthetic Organic Chemicals (SOC) and 1,2,3-Trichloropropane

OCSD is required to sample for SOCs (atrazine and simazine) once every compliance cycle (every 9 years). OCSD is required to sample for 1,2,3-trichloropropane every three years. All non-vulnerable SOCs and 1,2,3-trichloropropane were non-detect for OCSD's groundwater wells during sampling done in the most recent compliance period. DDW has waived monitoring for all other non-vulnerable SOC constituents for the next compliance cycle.

3.3.5 PFAS

DDW issued PFAS Monitoring Order No. 2022-0001-DDW to OCSD, dated November 3, 2022, requiring quarterly sampling for PFAS at Well 08 beginning in first quarter 2023. DDW issued PFAS Monitoring Order No. DW 2024-0002-DDW, dated March 4, 2024, requiring PFAS testing at Wells 06 and 08.

Well 08 was sampled for four consecutive quarters in 2023, and all PFAS compounds were non-detect.

On April 10, 2024, EPA announced the final National Primary Drinking Water Regulation (NPDWR), establishing MCLs for PFOA, PFOS, PFHxS, PFNA, and HFPO-DA as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS using a Hazard Index MCL. DDW recommends OCSD stay current on State regulations regarding PFAS. More information can be found by visiting the following website:

<https://www.waterboards.ca.gov/pfas/>.

3.3.6 Radiological Monitoring

The monitoring frequency for radionuclides (gross alpha, uranium, and radium) at each source is determined by the gross alpha (GA) monitoring result from the most recent compliance period. Based on these results, OCSD is required to monitor for GA and/or uranium at the groundwater sources at the frequencies listed below.

Source	Previous Sample Date	GA Result (pCi/L)	Last Uranium (U) Result	Monitoring Required	Frequency	Next Sample Due
Well 06	6/8/2021	ND	Not sampled	GA	9 YR	Jun-30
Well 08	11/16/2023	6.4	7.1	GA + U	6 YR	Nov-29

GA + U - Gross Alpha and Uranium

3.4 Bacteriological Monitoring – Raw Source Water

The bacteriological samples from the well sources must be collected at a location prior to treatment and chlorination and shall be analyzed for total coliform (TC) and *E. coli* (EC) bacteria on a quarterly basis. OCSD did not sample its raw groundwater sources from July 2021 to March 2024. Quarterly sampling was initiated in June 2024. Monthly sampling is required if a well source tests positive for TC. OCSD is required to turn off the well source and notify DDW if a well source tests positive for EC. If no coliforms are detected for a minimum of three consecutive months, OCSD can submit a request to DDW to return to quarterly monitoring.

See attached public notice – The District is currently in compliance.

3.5 Bacteriological Monitoring – Distribution System

In accordance with the RTCR, OCSD is required to collect 9 samples per month throughout the distribution system. Beginning in July 2024, OCSD is required to collect 9 samples per month. OCSD indicated that staff will collect 3 samples per week, or 12 to 15 samples per month. Routine sample locations will be revised to increase spatial distribution of the samples throughout the distribution system.

All samples collected from the distribution system from January 2021 to May 2024 were negative for TC and EC.

3.6 Lead and Copper Rule Monitoring

For compliance with the Lead and Copper Rule, OCSD is required to monitor a minimum of 20 samples collected from customers' taps every three years. OCSD completed the last triennial lead and copper sample tap monitoring in August 2023 and collected 20 samples. The 90th percentile lead and copper concentrations were below the respective Action Levels. The next triennial monitoring for lead and copper is required to be collected between the summer months of June 1st and September 30th of 2026.

3.7 Stage 2 Disinfection Byproduct Monitoring

Since continuous disinfection (chloramination and chlorination) treatment is provided, OCSD is required to comply with the Disinfection Byproduct (DBP) Rule. To comply with the Stage 2 DBP Rule monitoring requirements, OCSD is required to collect two samples each quarter for trihalomethanes (TTHM) and haloacetic acids (HAA5s). The respective Operational Evaluation

Levels (OEL) and Locational Running Annual Average are below the respective MCLs for TTHMs and HAA5s. OCSD is compliant with the DBP Rule.

3.8 Nitrification Monitoring

OCSD monitors its tanks weekly for total chlorine and has an active nitrification monitoring program for the tanks. OCSD targets a total chlorine residual above 1 mg/L in the tanks, and the tanks are sampled for nitrite when total chlorine levels drop below 1 mg/L. OCSD will be submitting monthly nitrification reports to DDW beginning in July 2024.

3.9 Maximum Residual Disinfectant Level (MRDL)

OCSD is required to measure residual disinfectant (chlorine) at the bacteriological sample locations in the distribution system concurrently with bacteriological sample collection and collects between 8 and 10 samples per month. OCSD monitors residual chlorine levels on a weekly basis and is compliant with the MRDL.

IV. OPERATOR COMPLIANCE WITH STATE REQUIREMENTS

Water suppliers are required to designate at least one chief operator and at least one shift operator for the operation of its water treatment facility, distribution system, or both. These operators must meet certification requirements based on the water system's treatment facility and distribution system classifications. A chief operator has overall responsibility for the day-to-day, hands-on, operation of a water treatment facility or a distribution system. A shift operator is in direct charge of the operation of a water treatment facility or distribution system for a specified period of the day.

OCSD's distribution system is classified as a D2 distribution system, which requires a chief operator with at least a D2 certification and shift operators with at least a D1 certification. OCSD's highest classified treatment facility is now classified as a T1, which requires a chief operator with at least a T1 certification, and shift operators with at least a T1 certification. Based on the 2023 EAR, OCSD's chief distribution and treatment operator (Anthony Marraccino) holds current D3 and T3 certifications. OCSD's shift operators also hold current D2/D3 and T2 certifications.

V. SYSTEM MANAGEMENT AND OPERATIONS

OCSD is responsible for operating, repairing, and maintaining all of its water facilities except for the Lopez Project (Brisco) turnout, which are owned and maintained by the County. Drinking water operations are under the management of the Utility Systems Manager (Anthony Marraccino).

OCSD staff indicated general manager turnover in 2023 and 2024. OCSD recently installed a new general manager in June 2024.

VI. SYSTEM APPRAISAL

Overall, OCSD's water supply facilities are in good sanitary condition and appear to be operating satisfactorily under competent supervision of the Utilities System Manager. Tank 2 requires some exterior rehabilitation. A review of OCSD's reports and routine water quality monitoring results indicates OCSD meets drinking water standards.

APPENDIX B

Capital Improvement Plan (2019)

CHAPTER 9 (Updated December 2019)

CAPITAL IMPROVEMENT PROGRAM

This chapter summarizes the District's recommended Capital Improvement Program (CIP) to meet existing and future needs, and to assist the District in the financial planning aspects of implementing the recommended improvements. The improvements are described as first, second, and third priorities. The costs for these improvements are summarized in Table 9.1 and illustrated in Figure 9.1. The 5-year Capital Improvement Program is comprised of all First priority projects, and subsequent projects can be addressed in future CIP planning.

BASIS OF CAPITAL IMPROVEMENT PROJECT COSTS

The CIP costs were developed based on engineering judgment, confirmed bid prices for similar work in the Central Coast area, consultation with vendors and contractors, established budgetary unit prices for the work, and other reliable sources. Hard construction costs are multiplied by a factor of 1.4 to budget and allow for preliminary engineering, engineering, administration, construction management, construction contingency, and inspection costs. **All CIP costs are expressed in Year 2019 (October) dollars, using an ENR Construction Cost Index of 11,326, and will need to be escalated to the year during which the midpoint of construction occurs.**

SUMMARY OF RECOMMENDATIONS AND CAPITAL IMPROVEMENT PROJECTS

The projects are listed in order of necessity.

First priority projects are those considered necessary for correcting existing health and safety deficiencies, such as fire flow and low water service pressures, and are generally recommended to be completed within five years. As part of this Report and recommendations, first priority projects were listed for areas that are significantly deficient in fire flow requirements at the minimum residual pressure of 20 psi.

Second priority projects are those needed to correct lower priority system deficiencies, and anticipated future deficiencies (depending on growth and development) within 1 to 10 years. Given the number of fire flow deficiencies, and understanding the limitations of completing all fire flow related improvements within 5 years, second priority projects also included those areas that have deficient fire flow requirements at the minimum residual pressure of 20 psi, but are operating closer to the required minimums. These projects may also include undersized mains that are nearing the end of their useful life. These older, smaller diameter pipe sizes are more apt to leak or break, which could cause serious consequences if not replaced in a timely manner.

Third priority projects are generally those that do not present immediate deficiencies, but should be corrected in the future as budgets allow, such as looping dead-end mains, increasing water main sizes when a pipeline's useful life is nearing the end, increasing undersized pipelines to the District's 8-inch minimum, valve replacements or additions, and other such improvements. The costs of these improvements were estimated as described in the above section, Basis of Capital Improvement Project Costs. While the following proposed projects address system deficiencies, each project and comparable alternatives should be considered prior to design.

In addition to the operational deficiencies noted above, ranking of projects also considered

future County of San Luis Obispo and Caltrans street improvement projects. Higher priority projects that are in areas where development or street improvements projects are planned have been elevated on the priority list in order to minimize excavation in recently repaved streets, or provide service to new developments.

RECOMMENDATIONS

The following is a list of general recommendations to the District:

Un-accounted for Water

The District's un-accounted for water is considered within industry standards, and acceptable. It is recommended, however, that the District document incidental uses such as water used for line flushing, metered construction water, fire flow events, fire department training, and other incidences. This will help further refine the estimates of unaccounted for water that may be the result of inaccurate meters or unauthorized use.

To help reduce un-accounted for water, the District has implemented a meter replacement program to replace all the meters in the system. To this date, over half of the meters have been replaced, and the District is on track to complete the replacements in the next few years. It is recommended that this program continue until all meters have been replaced.

Water Conservation Programs

The District does an excellent job in conserving water, as is portrayed by the relatively low per capita water demands. The District is encouraged to continue promoting water conservation through education and outreach programs, and tiered water rates.

Water Supply

The District previously participated in the State Water Drought Buffer Program to enhance water supply reliability. Reliable delivery of State Water Project water varies from year to year, and the State is currently evaluating options to make delivery more reliable in future years. One such proposal is the Delta Conveyance Project. It is recommended that the District participate in the preliminary efforts in support of this project to ensure future reliability and delivery.

Tank Lining and Coating

Over time the linings and coatings on steel tanks breaks down and needs replacement. Regular inspections of the tank and its coatings should be performed by a qualified coating specialist either by diving, or at the next scheduled tank cleaning, to assess the condition of both tanks. The 0.3 MG water storage tank is likely in need of re-coating and re-lining. The Division of Drinking Water (DDW) performed an inspection of both tanks in 2017 for their Sanitary Survey Report, and noted both tanks needed spot-repairs to address external corrosion, particularly on the tank roofs. This should be completed soon to avoid holes forming in the tank due to lack of maintenance.

Tank coatings last 15-20 years or more, and the life can be extended by performing spot-repair work on the tank periodically. Budgeting for tank lining and coating of the 0.3 MG water tank should be anticipated for some time within the next 5-10 years. This therefore has been included as a Priority 1 CIP. Tank lining and coating of the 1.0 MG tank can be deferred with minor spot repairs now, but should be budgeted for in the next 10-15 years or so.

Capital Improvement Projects

This section presents a brief description of recommended first priority capital improvements. The G&T 2004 WMP and the Wallace 2009 WMP Update provided an extensive list of CIPs to address many conditions. Some of these projects have been completed and others were beyond the needs of the District. Table 9.1 summarizes the projects required to meet pressure and fire flow requirements throughout the system, as well as improve the functionality of the operation of the overall system.

Priority 1 Improvements (Orange Figure 9.1)

First priority projects are those considered necessary for correcting existing health and safety deficiencies, such as fire flow and low water service pressures, and are generally recommended to be completed within five years. As part of this Report and recommendations, first priority projects were listed for areas that are deficient in fire flow capacity at the minimum residual pressure of 20 psi. These projects are summarized in Table 9.1 and illustrated in Figure 9.1. The Priority 1 projects listed in table 9.1 are also considered to be the 5-year CIP.

1-1 Cabrillo Hwy (Hwy 1 at 21st St.)

Cabrillo Highway between 19th and 21st St is served by a 2-inch line. This is one of several undersized and dead-end lines that result in fire flows as low as 120 gpm (3,500 gpm required). To provide sufficient fire flow to this area, an 8-inch water line will be required. It will connect to the new water line in 21st Street and extend west to Front Street. This line should be upgraded to the district 8-inch minimum, and connect to the existing fire hydrant near 19th St that is currently fed from the alleyway to the north.

1-2 Cabrillo Hwy and Front Street

A fire hydrant on Front St between Cabrillo Hwy and Nipomo Street is fed by a dead-end line and has low fire flow capacity. To increase the fire flow to this hydrant, the existing dead-end water main in Front street should be extended to the northwest and connect to the proposed Cabrillo Hwy water main described in Project 1-1. An 8-inch looping water main would increase fire flow and eliminate the dead end main in this location.

1-3 22nd Street at Paso Robles Street

There is a gap in the piping network in 22nd Street between Warner St. and Paso Robles St. Approximately 225 feet should be installed in this location to loop the system to allow the District the flexibility to isolate the system more effectively in the event of an outage. An 8-inch looping water main would increase fire flow and eliminate the dead end main in this location. Timing is of the essence since the County of SLO has planned to do a street overlay in the next fiscal year, and installation of the main prior to this project would maintain the integrity of the freshly paved roadway. If this project is not completed in a timely manner, it may need to be re-prioritized to a later date to avoid trenching in a freshly paved street.

1-4 Truman Drive

Fire flows in this area are as low as 500 gpm (2,500 gpm required). Replacing the existing 4-in ACP line in Truman Drive between Norswing Dr and Railroad St will increase the fire flow in this area. There is also a slow leak at the intersection of Truman Drive and Norswing Drive that needs to be addressed along with this project. This is another project that needs to be addressed soon so that it can be completed before the County of SLO street overlay project passes through this area.

- 1-5 Railroad Street Alley (Truman to Airpark)
Fire flows to The Strand (beach area) were as low as 1,150 gpm at one point (2,500 gpm required), but improvements to the water mains in Air Park Drive and the new 10-inch lagoon crossing at Maui Circle have helped increase these flows. There are still undersized water mains that need to be replaced to allow The Strand area to achieve the full fire flows required. To help remedy these deficiencies, the existing 4-inch and 6-inch lines in the Railroad Street Alley should be upgraded to a 10-inch pipe from Air Park Drive to Truman Street. The portion between Truman Dr. and Pier Ave has already been upgraded to a 10-inch pipe, and upsizing the pipe in this area will allow additional flow to reach Pier Ave, and ultimately increase the fire flow to The Strand area.
- 1-6 Norswing Drive and Pershing Drive
Fire flows in this area are as low as 500 gpm (2,500 gpm required). Replacing the existing 2-in steel lines in Norswing Drive from Pier Ave to Pershing Drive, and in Pershing Drive from Norswing Drive to Railroad St. will increase the fire flow in this area. This is another project that needs to be addressed soon so that it can be completed before the County of SLO street overlay project passes through this area.
- 1-7 Strand Way (South of Utah)
South of Utah Avenue the fire flow is as low as 1,600 gpm (2,500 gpm required). Replacing the existing 4-inch lines south of Utah Ave with 8-inch mains will provide sufficient fire flow to this area of the system.
- 1-8 Laguna Dr Alley (South of Utah)
South of Utah Avenue the fire flow is as low as 1,600 gpm (2,500 gpm required). Replacing the existing 4-inch lines south of Utah Ave with 8-inch mains will provide sufficient fire flow to this area of the system.
- 1-9 Cabrillo Hwy Alley (at 19th Street)
In this area there are several undersized and dead-end lines that result in fire flows as low as 120 gpm (3,500 gpm required). To provide sufficient fire flow to these areas an 8-inch and 12-inch water main will be required. It will connect the Front St Alley water main to the existing 12-inch main between 19th St and 21st St.
- 1-10 Utah Ave Alley (between Strand Way and Utah)
The alley between Strand Way and Laguna Drive Alley connects the two water mains with a 3-inch AC pipe. The fire flow in this area is as low as 1,600 gpm (2,500 gpm required). To increase the fire hydrant's capacity and loop the system this main should be upgraded to the district 8-inch minimum along with Projects 1-7 and 1-8.
- 1-11 Pershing Drive across Hwy 1
From Pershing Dr South 700 feet along Cabrillo Hwy the existing 6-inch dead end line provides only 1100 gpm fire flow (2,500 gpm required) and is a long dead end main. Both of these deficiencies can be solved by connecting the dead-end line to the proposed 10-inch main (Project 1-5) at intersection of Railroad St Alley and Pershing Dr. This will require crossing Caltrans right of way with a steel casing pipe.
- 1-12 Tank Inspection
The storage capacity at the District's Corp Yard includes a 0.3 MG and a 1.0 MG water storage tank. The District should provide coatings inspection by a qualified diver/coatings inspector, either while tanks are in service, or at the next scheduled

cleaning. The inspection of both tanks should be conducted to assess the need for re-lining and re-coating of the tanks, and recommendations for rust/corrosion repairs to the tank exteriors. This assessment should be done at the following intervals after re-coating and re-lining is completed:

- Year 5: First inspection
- Years 5-15: Every 2-3 years
- Years 15+: Annually

1-13 Tank Re-line and Re-coat

The recommendations from the tank inspection reports should be followed. If spot repairs are needed to extend the life of the tank, those should be addressed immediately. If deferred maintenance is noted, or corrosion is too severe and the tanks need to be re-lined and re-coated, they should be done at separate intervals so both tanks are not out of service at the same time. Spot repairs on both tanks should be done right away, and relining and recoating of the tanks should be completed as funding becomes available.

Priority 2 Projects (Green Figure 9.1)

Second priority projects are those needed to correct lower priority system deficiencies, and anticipated future deficiencies (depending on growth and development) within 1 to 10 years. Given the number of fire flow deficiencies, and understanding the limitations of completing all fire flow related improvements within 5 years, some fire flow improvement projects are included as Priority 2 projects instead of Priority 1 projects. Completion of these projects should take place as soon as funding becomes available. These projects are summarized in Table 9.1 and illustrated in Figure 9.1.

2-1 Pier Avenue

Fire flows to The Strand (beach area) were as low as 1,150 gpm at one point (2,500 gpm required), but improvements to the water mains in Air Park Drive and the new 10-inch lagoon crossing at Maui Circle have helped increase these flows. There are still undersized 6-inch water mains in Pier Avenue that need to be replaced to allow The Strand area to achieve the fire flows required. To help remedy these deficiencies, the existing 6-inch lines in Pier Avenue from Air Park Dr to Railroad Street Alley should be upgraded to a 10-inch pipe. The portion in the existing 80-foot bridge crossing has already been upgraded to a 10-inch pipe.

2-2 Norswing Drive Loop (North of Pier)

The Norswing alley main that provides service to the area north of Pier Ave is a 1,050-foot long dead-end main. Fire flow at the north end of the Norswing Drive Alley is approximately 740 gpm (2,500 gpm required). Replacing the existing 4-inch line from Coolidge Dr to Harding Dr with an 8-inch main will provide sufficient fire flow, while water quality and reliability of service to this area can be improved by installing a new 8-inch line looping the main back to Pier Ave in Norswing Dr.

2-3 Railroad Street (Creek Rd. to 17th St.)

Fire flow provided by the existing waterline at Sand Dollar Ave and Creek Rd is 2,200 gpm (3,500 gpm required) and it is a dead-end line. To increase the fire flow in this area, the only way to address the issue is to connect the system on the west side of the railroad tracks to the system on the east side of the tracks. Currently the only connections across the railroad tracks are at Air Park Drive. If the crossings in this location were ever compromised, there would be no way to get water to the western

portions of the distribution system. Installing another water main across the railroad tracks on the southern end of the system would provide an added measure of security to the operational functionality of the system. To address this deficiency, a new 8-inch water main should be installed in a new steel casing pipe under the UPRR right of way in Railroad Street.

2-4 Creek Road (Sand Dollar to Railroad St)

Fire flow provided by the existing waterline at Sand Dollar Ave and Creek Rd is 2,200 gpm (3,500 gpm required) and it is a dead-end line. To increase the fire flow in this area, the only way to address the issue is to connect the system on the west side of the railroad tracks to the system on the east side of the tracks. Once the connection in Railroad St is completed (Project 2-3), a new water main can be installed in Creek Rd from Sand Dollar to Railroad St to address the fire flow deficiencies and provide a benefit to the entire system by looping the piping network.

2-5 16th Street and Warner Street

Existing fire flows in this area are as low as 1000 gpm (2,500 gpm required). Replacing the existing 2-inch, 4-inch, and 6-inch lines in the area with 8-inch mains will provide sufficient fire flow to the area.

2-6 14th Street at Wilmar Ave

The existing waterline between Wilmar Ave and Rice St is only a 2-inch line limiting the fire flow to 1650 gpm (2,500 gpm required). Upgrading the existing 2-inch line to an 8-inch main will provide sufficient fire flow to the area.

2-7 Vista Street (19th St to 21st St)

Vista St is provided service by a 2-inch line between 19th St. and 21st St. This line should be upgraded to the district 8-inch minimum to provide additional fire flow.

2-8 Warner Street (19th to 21st)

Warner St is provided service by a 2-inch line between 19th St. and 21st St. This line should be upgraded to the district 8-inch minimum to provide additional fire flow.

2-9 South 4th Street Upgrade

There is a 200-foot 2-inch dead end line located in S 4th St, just past the UPRR and Highway 1 crossing at Air Park Drive. This line should be upgraded to the district 8-inch minimum to eliminate the old undersized steel main, and prevent a future leak or break in the main.

2-10 Temple St and Halcyon Rd

There is currently a 2,300 lf long dead-end reach of pipe on the eastern end of the District's system that serves several homes near Halcyon Rd. The pipe is sized properly for fire flow, but it is a dead end main in the system. Extending this pipe to the intersection of Halcyon Rd and The Pike would allow the District to serve new and existing developments along Halcyon Rd, and could also provide an interconnect with the City of Arroyo Grande for emergency conditions if ever needed. Although there is not an immediate need for this main, the long term returns for the District are beneficial.

2-11 Jetty Ave Alley (Palace Ave. to Fountain Ave.)

Currently there are dead end mains at both these streets and both have fire flow deficiencies. Connecting the two with an 8-inch line will provide a loop, allow sufficient fire flow, and greatly reduce the length of dead-end mains.

Priority 3 Projects (Blue Figure 9.1)

Priority 3 projects are generally those that do not pose any immediate concern to the operation of the system, but would benefit the longevity and life expectancy of the system as a whole. There are several un-looped water mains and dead ends in the system. If these lines can be looped it would benefit water quality and reliability of service. Also, replacing any existing 2-inch, 3-inch, and 4-inch lines with 8-inch mains would be beneficial to the fire flow capabilities of the system. Some of these projects will rely on outside parties to complete, and therefore have been placed as a lower priority on the overall list. These projects are summarized in Table 9.1 and illustrated in Figure 9.1.

- 3-1 La Verne Ave. (Between 22nd St. and 23rd St.)
La Verne Ave. service is provided by a 4-inch main. The 4-inch line should be upgraded to the District 8-inch minimum.
- 3-2 23rd Street (Between Wilmar Ave. and Tamera Dr.)
There is a short reach of 4-inch water line in 23rd St, just north of Wilmar Ave. that should be upgraded to the District 8-inch minimum size pipe.
- 3-3 18th Street at Wilmar Ave.
The water main in 18th Street is a dead-end main right near the intersection of Wilmar Avenue. The existing 4-inch piping was never connected to the water main in Wilmar Avenue. Connecting these water mains would provide a looping system in this area, providing increased pressure and fire flows to this area. Upsizing the water main from 4-inches to the District's 8-inch minimum would also provide a benefit to the system.
- 3-4 Laguna Drive Alley (from Utah Ave. to Juanita Ave.)
The Strand is fed by an 8-inch water main, with a 4-inch loop around the alley that connects back to Juanita Ave. Existing fire flows on Laguna Alley are as low as 2,200 gpm (2,500 gpm required). To provide better fire flow, looping capabilities, and to meet the District's pipe sizing minimum; an 8-inch water main should be installed to replace the old main in this location. In conjunction with Projects 1-7, 1-8, 1-10, and 3-5, this will provide a more robust system that gives operational flexibility to the District in this area.
- 3-5 Utah Ave Alley (Between York and Utah)
The alley between York Ave and Utah Ave is provided service by a 3-inch main. This pipeline should be upgraded to the District 8-inch minimum.
- 3-6 Rochelle Way Loop
Rochelle Way is provided service by a 370-foot dead-end 6-inch main. To improve water quality this main should be connected to the nearby 8-inch main if it is possible to obtain an easement.
- 3-7 Security Ct at Sunset Lane
Security Ct service is provided by a 2-inch dead end line. The 2-inch line should be upgraded to the district 8-inch minimum.
- 3-8 21st Street at River Ave
The dead-end waterline on River Ave provides fire flows of 2,680 gpm (3,500 gpm required). By looping the system with an 8-inch line running north along 21st St to Nipomo St, sufficient fire flow will be provided and the dead-end line will be eliminated.

3-9 La Vista Ct at The Pike

Existing fire flows are approximately 490 gpm (1,000 gpm required). To provide sufficient fire flow the existing 4-inch dead-end line should be upgraded to an 8-inch main. Although this area is served by the District, the homes on this street are actually in the City of Arroyo Grande. Funding for upgrading these mains may need to come from the City.

3-10 Lancaster Drive at The Pike

Existing fire flows on Lancaster Dr are as low as 750 gpm (1000 gpm required). To provide sufficient fire flow the existing 4-inch main should be upgraded to an 8-inch. Although this area is served by the District, the homes on this street are actually in the City of Arroyo Grande. Funding for upgrading these mains may need to come from the City.

3-11 Trinidad Drive at Martinique

Existing fire flows are approximately 1,700 gpm (2,500 gpm required). To provide sufficient fire flow the existing 4-inch line along Trinidad Dr should be upgraded to an 8-inch main. This main, along with others on Antigua Drive, Barbados Street, and Tobago Street are all undersized per District standards, but are actually owned by the Cienega Seabreeze development so minimum District sizing does not necessarily apply. As a good rule of practice though, these 4-inch and 6-inch ACP water mains should be upsized in the future when their service life has been reached.

Other Projects

While it is not hydraulically necessary to upgrade all of the distribution system's 4-inch lines to the District's new 8-inch standard, it is recommended that they be replaced if the budget is available, or at least upsized in the future when they reach the end of their serviceable life. Replacement of these 4-inch lines offers the further benefit of replacing old piping, improving looping, and providing better water quality and reliability.

Table 9.1 – Capital Improvement Projects List

Project No.	Description	Priority	Existing (in.)	Proposed (in.)	Length (lf)	2019 Unit Cost	2019 Construction Cost	2019 Soft Cost	2019 Total Cost
1-1	Cabrillo Hwy (Hwy 1 at 21st St.)	1	2	8	650	\$150	\$97,500	\$39,000	\$136,500
1-2	Cabrillo Hwy and Front St	1	-	8	400	\$150	\$60,000	\$24,000	\$84,000
1-3	22nd Street at Paso Robles St	1	-	8	225	\$150	\$33,750	\$13,500	\$47,250
1-4	Truman Dr	1	4	8	250	\$140	\$35,000	\$14,000	\$49,000
1-5	Railroad St Alley (Truman to Air Park)	1	4,6	10	1000	\$140	\$140,000	\$56,000	\$196,000
1-6	Norswing Dr & Pershing	1	1,2	8	900	\$140	\$126,000	\$50,400	\$176,400
1-7	Strand Way (South of Utah)	1	4	8	235	\$150	\$35,250	\$14,100	\$49,350
1-8	Laguna Dr Alley (South of Utah)	1	4	8	130	\$150	\$19,500	\$7,800	\$27,300
1-9	Cabrillo Hwy Alley (at 19th St)	1	2,4	8	700	\$140	\$98,000	\$39,200	\$137,200
1-10	Utah Ave Alley (Strand Way to Utah)	1	3	8	195	\$140	\$27,300	\$10,920	\$38,220
1-11	Pershing Dr across Hwy 1	1	-	8	200	\$150	\$30,000	\$12,000	\$42,000
1-12	Tank Inspections	1	-	-	-	-	\$6,500	\$2,600	\$9,100
1-13	Tank Re-lining and Re-coating	1	-	-	-	-	\$180,000	\$72,000	\$252,000
2-1	Pier Ave (Lakeside to Hwy 1)	2	6	10	1140	\$140	\$159,600	\$63,840	\$223,440
2-2	Norswing Dr Loop (North of Pier)	2	4,-	8	1750	\$140	\$245,000	\$98,000	\$343,000
2-3	Railroad Street (Creek to 17th)	2	-	8	650	\$250	\$162,500	\$65,000	\$227,500
2-4	Creek Road (Sand Dollar to Railroad)	2	-	8	480	\$140	\$67,200	\$26,880	\$94,080
2-5	16th St at Warner St.	2	2,4,6	8	940	\$140	\$131,600	\$52,640	\$184,240
2-6	14th St at Wilmar Ave.	2	2	8	380	\$140	\$53,200	\$21,280	\$74,480
2-7	Vista St (19th to 21st)	2	2	8	480	\$140	\$67,200	\$26,880	\$94,080
2-8	Warner St (19th to 21st)	2	2	8	480	\$140	\$67,200	\$26,880	\$94,080
2-9	South 4th St Upgrade	2	2	8	200	\$150	\$30,000	\$12,000	\$42,000
2-10	Temple St and Halcyon Rd	2	-	12	1075	\$175	\$188,125	\$75,250	\$263,375
2-11	Jetty Ave Alley (Palace to Fountain)	2	-	8	650	\$150	\$97,500	\$39,000	\$136,500
3-1	La Verne Avenue (22nd to 23rd)	3	4	8	500	\$140	\$70,000	\$28,000	\$98,000
3-2	23rd Street at Wilmar Ave.	3	4	8	300	\$150	\$45,000	\$18,000	\$63,000
3-3	18th St at Wilmar Ave.	3	4	8	40	\$250	\$10,000	\$4,000	\$14,000
3-4	Laguna Dr Alley (Utah to Juanita)	3	4	8	1195	\$150	\$179,250	\$71,700	\$250,950
3-5	Utah Ave Alley (York to Utah)	3	3	8	195	\$140	\$27,300	\$10,920	\$38,220
3-6	Rochelle Way Loop	3	-	8	200	\$200	\$40,000	\$16,000	\$56,000
3-7	Security Ct at Sunset Ln	3	2	8	280	\$140	\$39,200	\$15,680	\$54,880
3-8	21st St at River Ave.	3	-	8	690	\$130	\$89,700	\$35,880	\$125,580
3-9	La Vista Ct at The Pike	3	4	8	425	\$140	\$59,500	\$23,800	\$83,300
3-10	Lancaster Dr at The Pike	3	4	8	1150	\$140	\$161,000	\$64,400	\$225,400
3-11	Trinidad Dr at Martinique	3	4	8	300	\$130	\$39,000	\$15,600	\$54,600
Subtotal	Priority 1 (Orange)	1	-	-	4885	-	\$888,800	\$355,520	\$1,244,320
Subtotal	Priority 2 (Green)	2	-	-	8225	-	\$1,269,125	\$507,650	\$1,776,775
Subtotal	Priority 3 (Blue)	3	-	-	5275	-	\$759,950	\$303,980	\$1,063,930
Total		-	-	-	18385	-	\$2,917,875	\$1,167,150	\$4,085,025





*****THIS TABLE REFLECTS ESTIMATED COSTS AS OF DECEMBER 2019*****

CAPITAL IMPROVEMENT PROJECTS LIST

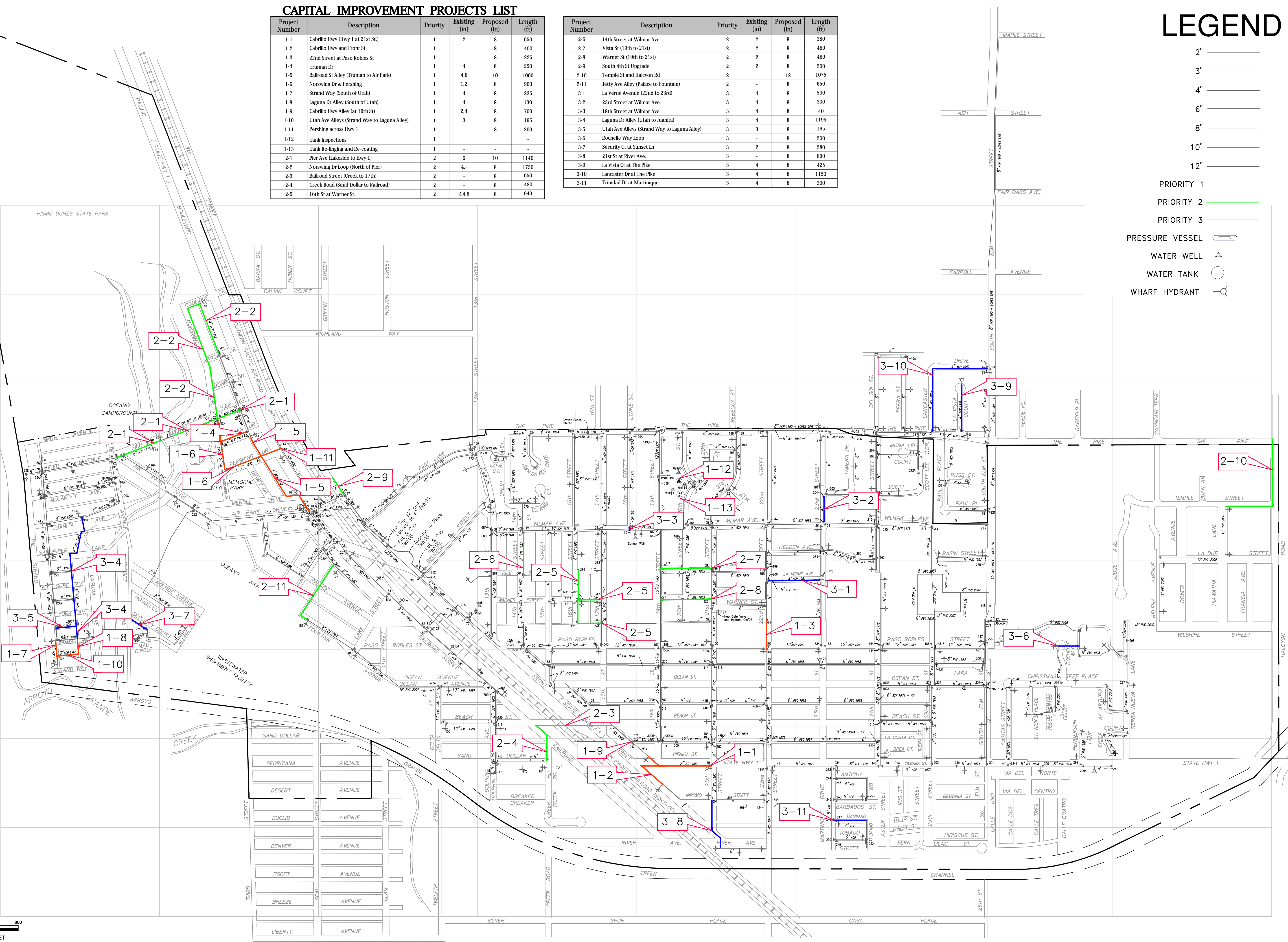
Project Number	Description	Priority	Existing (in)	Proposed (in)	Length (ft)
1-1	Cabrillo Hwy (Hwy 1 at 21st St.)	1	2	8	650
1-2	Cabrillo Hwy and Front St	1	-	8	400
1-3	22nd Street at Paso Robles St	1	-	8	225
1-4	Truman Dr	1	4	8	250
1-5	Railroad St Alley (Truman to Air Park)	1	4.6	10	1000
1-6	Norswing Dr & Pershing	1	1.2	8	900
1-7	Strand Way (South of Utah)	1	4	8	235
1-8	Laguna Dr Alley (South of Utah)	1	4	8	130
1-9	Cabrillo Hwy Alley (at 19th St)	1	2.4	8	700
1-10	Utah Ave Alleys (Strand Way to Laguna Alley)	1	3	8	195
1-11	Pershing across Hwy 1	1	-	8	200
1-12	Tank Inspections	1	-	-	-
1-13	Tank Re-lining and Re-coating	1	-	-	-
2-1	Pier Ave (Lakeside to Hwy 1)	2	6	10	1140
2-2	Norswing Dr Loop (North of Pier)	2	4	8	1750
2-3	Railroad Street (Creek to 17th)	2	-	8	650
2-4	Creek Road (Sand Dollar to Railroad)	2	-	8	480
2-5	16th St at Warner St.	2	2.4,6	8	940

Project Number	Description	Priority	Existing (in)	Proposed (in)	Length (ft)
2-6	14th Street at Wilmar Ave	2	2	8	380
2-7	Vista St (19th to 21st)	2	2	8	480
2-8	Warner St (19th to 21st)	2	2	8	480
2-9	South 4th St Upgrade	2	2	8	200
2-10	Temple St and Halcyon Rd	2	-	12	1075
2-11	Jetty Ave Alley (Palace to Fountain)	2	-	8	650
3-1	La Verne Avenue (22nd to 23rd)	3	4	8	500
3-2	23rd Street at Wilmar Ave.	3	4	8	300
3-3	18th Street at Wilmar Ave.	3	4	8	40
3-4	Laguna Dr Alley (Utah to Juanita)	3	4	8	1195
3-5	Utah Ave Alleys (Strand Way to Laguna Alley)	3	3	8	195
3-6	Rochelle Way Loop	3	-	8	200
3-7	Security Ct at Sunset Ln	3	2	8	280
3-8	21st St at River Ave.	3	-	8	680
3-9	La Vista Ct at The Pike	3	4	8	425
3-10	Lancaster Dr at The Pike	3	4	8	1150
3-11	Trinidad Dr at Martinique	3	4	8	300

LEGEND

- 2" _____
- 3" _____
- 4" _____
- 6" _____
- 8" _____
- 10" _____
- 12" _____
- PRIORITY 1 —
- PRIORITY 2 —
- PRIORITY 3 —
- PRESSURE VESSEL 
- WATER WELL 
- WATER TANK 
- WHARF HYDRANT 

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REV. NO.	DATE	REVISION	BY	CHKD. APPR. DATE



DRAWN BY	AJS	DATE	11/06/2019
CHECKED BY		SCALE	1" = 400'
		CA JOB NO.	171019

OCEANO COMMUNITY SERVICES DISTRICT
WATER DISTRIBUTION SYSTEM
CAPITAL IMPROVEMENT
PROJECT LOCATIONS

OCEANO, CALIFORNIA

FIGURE 9.1