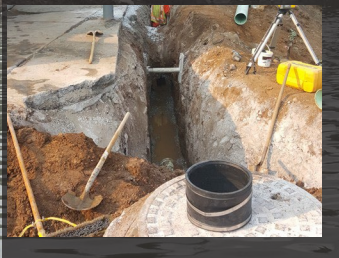


Murphys Sanitary District 10-Year Capital Improvement Plan



August 2024

Murphys Sanitary District
15 Ernest Street, Suite A
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Prepared by:



Murphys Sanitary District 10-Year Capital Improvement Plan

FINAL

AUGUST 2024

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APPENDICES

Appendix A – 10-Year CIP Collection System Improvement Figures

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1 Introduction

The 10-year Capital Improvement Plan (CIP) was prepared for the Murphys Sanitary District (MSD/District) to provide a document for wastewater projects and overall District improvements over a 10-year planning horizon. As part of this CIP Report (Report), the 2022 10-Year Capital Improvement Project Brochure [1] and historical information were reviewed, and input from MSD staff was received.

1.1 Background

The CIP addresses renewing and replacing District assets and existing deficiencies within the wastewater system to provide a functioning and efficient system that meets regulatory requirements and to improve overall operation and maintenance (O&M). The CIP evaluated components of the existing sanitary sewer collection system, wastewater treatment plant (WWTP), District equipment, and the existing buildings located at the WWTP. The CIP will assist MSD in prioritizing and completing future projects with the existing District revenue, implementing and justifying rate increases, and planning for grant applications, as needed.

1.2 Scope of Work

The CIP report included the completion of the following tasks:

1. A review of historical reports and data related to the existing facilities.
2. A review of the 2022 10-Year Capital Improvement Project Brochure [1].
3. Evaluation of the condition of the existing collection system, wastewater treatment plant, equipment, and buildings through discussions with District staff.
4. Identification of recommended improvements to existing facilities.
5. Evaluation of MSD revenues based on the existing rate structure.
6. Assign improvement priorities based on available funds and project importance.
7. Development of the 10-year CIP.

2 Proposed Improvement Projects

This chapter presents the updated and recommended improvement projects for MSD to continue efficiently maintaining and operating the wastewater collection and treatment systems over the next 10 years. For the purposes of this report, the proposed improvement projects were separated into four distinct categories: the sanitary sewer collection system, WWTP, O&M equipment, and WWTP buildings. The improvements identified are conceptual and will require preliminary and final evaluation, planning, and/or design as they are implemented.

2.1 Sanitary Sewer Collection System Improvements

2.1.1 Existing Infrastructure

2.1.1.1 Gravity Sewers

The District owns, operates, and maintains a standard gravity sanitary sewer collection system, which consists of approximately 64,590 linear feet of sewer pipelines ranging in size from 4 to 15 inches in diameter. The most common pipe diameter is 6 inches. The collection system flows to an influent pump station adjacent to Angels Creek prior to being pumped via two force main pipelines to the WWTP. The pipe material throughout much of the sanitary sewer collection system is vitrified clay pipe, with the oldest sections located in the downtown area, which were installed in the early 1960s.

Table 2-1 provides an overview of the components of the MSD sanitary gravity collection system.

Table 2-1 – Existing Wastewater Collection System Overview

Components	Parameter	Value
Existing Gravity Collection System	Length	64,590 linear feet
	Diameter	4-inch to 15-inch
	Material	Vitrified Clay Polyvinyl Chloride (PVC)
Manhole	Quantity	253

2.1.1.2 Influent Pump Station

The influent pump station is located approximately one-mile northwest of the WWTP on the south side of Angels Creek/Murphys Grade Road, immediately adjacent to Angels Creek. As part of the MSD WWTP Upgrades Project (Part I), completed in 2021, the existing headworks, screening facilities, and influent pump station building were abandoned.

The MSD WWTP Upgrades Project (Part I) redirected sewer flow from the abandoned facilities to a new wet well equipped with a wall-mounted channel grinder, odor control, and access hatches. Two independent pump skids housed in fiberglass enclosures pump sewage to the headworks located at the WWTP. The pumps are equipped with variable frequency drives (VFDs) and are controlled based on the level in the wet well. The pumps operate in series with the capability for both pumps to operate based on wet well levels. Power is supplied by PG&E utility services, and an on-site generator provides an emergency backup power supply. Electrical components include a motor control center (MCC) equipped with PLC and HMI and space for additional components.

In general, no major issues have been encountered regarding the operation of the pump station since the MSD WWTP Upgrades Project (Part I) was completed.

2.1.1.3 Influent Force Main

Wastewater is pumped from the influent pump station located along Murphys Grade Road to the WWTP in one of the two parallel 8-inch diameter force mains. Each force main is approximately 4,200 linear feet. The two force mains converge into one 8-inch gravity pipe, approximately 2,200 linear feet long, to convey wastewater to the treatment facility.

Table 2-2 provides an overview of the components of the influent force main system.

Table 2-2 – Influent Force Main Summary Information

Description	Force Main #1	Force Main #2	Gravity Pipe
Upstream pipe elevation, ft amsl	2,100	2,100	2,280
Pipe high-point elevation, ft amsl	2,310	2,310	2,280
Pipe discharge elevation, ft amsl	2,280	2,280	2,276
Pipe diameter, in	8	8	8
Year installed	1962	1984	1984
Alignment length, ft	4,200	4,200	2,200
Pipe alignment	Extends from Influent Pump Station to the Gravity Pipe	Extends from Influent Pump Station to the Gravity Pipe	Extends from Force Main to the WWTP
Pipe material	Asbestos Clay Pipe (ACP)	PVC	PVC

2.1.2 Condition, Risks of Failure, and Need for Improvements

The material and age of the pipelines are two primary causes for concern and contributors to issues within the collection system. Rainwater and shallow groundwater intrusion into the collection system are a concern with clay pipes, as cracks develop over time. Replacing the collection system with PVC pipelines would decrease the inflow and infiltration risks and significantly increase the overall useful life of the collection system.

The current collection system capacity is exceeded with the existing wastewater flows, per the SSMP (2014). Upsizing the diameter of the pipelines is required to prevent system surcharging and sewer overflows. All gravity sewer pipelines within the MSD collection system are inspected using closed-circuit television (CCTV) and evaluated annually by MSD operation and maintenance staff. The annual evaluations of the collection system have identified areas that contribute to issues within the collection system, primarily caused by the material and age of pipe.

The 8-inch diameter asbestos clay force main was installed in 1962 and is antiquated and in disrepair. The 8-inch diameter PVC pipe was installed in 1984. These force mains convey the entirety of MSD’s wastewater flows, and the age, condition, and location make the infrastructure a significant liability for MSD.

2.1.3 Recommended Improvements

Based on the annual evaluations performed by MSD staff, 23 collection system improvement projects were identified as necessary to improve the system deficiencies. Table 2-3 provides an overview of the 10-year CIP projects for the collection system. Figures 1– 7, which are included as Appendix A, show the locations for the sanitary sewer collection system improvement projects. Appendix B provides the project description, project priority, reason for the proposed repair/replacement, construction year, and project cost for each collection system improvement project.

Table 2-3 – Collection System Improvements

Project No.	Project Name / Description	Priority	Construction Year	Estimated Construction Cost, \$	Estimated Project Cost, \$
CS-1	Sewer Line Replacement, MH 96-101	Long-Term	31-32	813,750	1,302,000
CS-2	Sewer Line Replacement, MH 9-11, replace MH 204, add new MH between MH 203-204	Long-Term	31-32	293,250	469,200
CS-3	Sewer Line Replacement, MH 64-65 76A-77	Short-Term	28-29	350,250	560,400
CS-4	Sewer Line Replacement, MH 53-57-LP	Short-Term	29-30	450,250	720,400
CS-5	Sewer Line Replacement, MH 43-45	Short-Term	28-29	358,750	574,000
CS-6	Sewer Line Replacement, MH 31-29	Short-Term	29-30	156,500	250,400
CS-7	Sewer Line Replacement, MH 40-41	Short-Term	29-30	176,250	282,000
CS-8	New Manhole Between MH 94-95	Long-Term	32-33	90,000	144,000
CS-9	Sewer Line Replacement, MH 175-179	Urgent	24-25	299,500	479,200
CS-10	Clay Pipe Replacement, MH 18-14	Long-Term	32-33	235,000	376,000
CS-11	Clay Pipe Replacement, MH 18 to clean out	Long-Term	32-33	60,000	96,000
CS-12	Clay Pipe Replacement, MH 82-84	Short-Term	30-31	255,000	408,000
CS-13	Clay Pipe Replacement, MH 49-50	Long-Term	32-33	180,000	288,000
CS-14	Clay Pipe Replacement, MH 51-52	Long-Term	32-33	130,000	208,000
CS-15	Clay Pipe Replacement, MH 35-31	Long-Term	32-33	583,000	932,800
CS-16	Clay Pipe Replacement, MH 131-136	Short-Term	30-31	79,250	126,800
CS-17	Clay Pipe Replacement, MH 123-124 Add new MH	Short-Term	30-31	220,000	352,000
CS-18	Clay Pipe Replacement, MH 103-105	Long-Term	33-34	185,000	296,000
CS-19	Clay Pipe Replacement, MH 105-135	Long-Term	33-34	366,000	585,600
CS-20	Clay Pipe Replacement, MH 172-23	Short-Term	29-30	133,000	212,800
CS-21	Clay Pipe Replacement, Clean Out to MH 16-14	Long-Term	33-34	297,000	475,200
CS-22	Clay Pipe Replacement, MH 14-10	Long-Term	33-34	78,000	124,800
CS-23	Influent Force Main	Immediate	25-26	2,355,000	3,768,000
			TOTAL:	5,789,750	9,263,600

2.2 Wastewater Treatment Plant Improvements

2.2.1 Existing Infrastructure

WWTP components include headworks, screening facilities, three treatment ponds (Pond 1-3), an effluent storage pond (Pond 4), sand filtration system, disinfection system, and a lined detention basin (finishing/polishing basin) [4]. There is no provision for backup power at the WWTP. The WWTP produces disinfected secondary 2.2 recycled effluent. Treated effluent is disinfected using chlorine and discharged to Pond 4. Effluent is reclaimed from Pond 4 by Kautz Ironstone Vineyards for use as an agricultural irrigation water supply, as permitted under the RWQCB WDR Order No. R5-2007-0050.

2.2.2 Condition, Risks of Failure, and Need for Improvements

Upgrade of components of the equipment and treatment system within the existing WWTP is needed due to the degraded condition and age. The sand filtration system is the oldest mechanical unit of the treatment train and is necessary to remove particulate matter and fine particles from the effluent. Replacement of the sand filtration system will allow MSD to meet Title 22 water standards and improve operation, maintenance, and performance at the WWTP. The piping between the existing filtration system and contact chamber, which includes chemical addition appurtenances, is antiquated and has resulted in a decrease in operation and maintenance efficiency.

A backup generator is needed to improve reliability and redundancy. Site fencing around Pond 4 and the WWTP perimeter is needed for security and safety.

Pond 3 has significant sludge accumulation, which reduces the overall treatment capacity as sludge accumulates on the pond floor. Sludge removal from Pond 3 is recommended to improve the treatment capacity and operational efficiency.

2.2.3 Recommended Improvements

The improvements to the WWTP include replacing the sand filtration system, improving the disinfection system, installing a backup generator, installing a fence around Pond 4, installing a WWTP perimeter fence for overall site security, and removing biosolids (sludge) from Pond 3.

A backup generator is needed to improve reliability and redundancy. Site fencing around Pond 4 and the WWTP perimeter is needed for security and safety. Pond 3 has significant sludge accumulation, and as sludge accumulates on the pond floor, the overall treatment capacity is reduced. Sludge removal from Pond 3 is recommended to improve the treatment capacity and operational efficiency.

Table 2-4 provides an overview of the 10-year CIP projects for the WWTP. **Appendix B** provides the project description, project priority level, reason for the proposed repair/replacement, construction year, and project cost for each WWTP improvement project.

Table 2-4 – Wastewater Treatment Plant Improvement

Project No.	Description	Priority	Construction Year	Estimated Construction Cost, \$	Estimated Project Cost, \$
WWTP-1	Sand Filtration System	Immediate	26-27	400,000	640,000
WWTP-2	Disinfection System	Immediate	27-28	50,000	80,000
WWTP-3	Backup Generator	Short-Term	26-27	225,000	360,000
WWTP-4	Site Fencing	Short-Term	33-34	300,000	423,000
WWTP-5	Pond 3 Sludge Removal	Immediate	26-27	552,500	552,500
			TOTAL:	1,527,500	2,055,500

2.3 O&M Equipment Improvements

2.3.1 Existing Infrastructure

MSD owns, operates, and maintains various equipment essential to its operations. As the equipment ages, its reliability declines as maintenance and operation costs increase. The MSD staff uses vehicles to access sites through the collection system and WWTP for routine maintenance activities and to respond to system emergencies.

2.3.2 Condition, Risks of Failure, and Need for Improvements

Productivity, efficiency, and operation and maintenance of existing facilities would greatly improve with new equipment. Due to the age of existing infrastructure and the need for reliable and practical equipment, vehicles, sewer pipeline, and inspection equipment, facility security cameras, and technology components need replacement.

2.3.3 Recommended Improvements

Replacing the vehicles will provide staff with reliable means of transportation required to service the system and reduce maintenance costs associated with the aging vehicles. A new Hydro Flusher and sewer camera will improve the overall ability to maintain the system, clear debris and prevent blockages within the collection system, and contribute to increased performance. Installing sewer and security cameras will allow the district to monitor the system's condition and improve safety and security.

Table 2-5 provides an overview of the 10-year CIP projects for the equipment. **Appendix B** provides the project description, project priority, reason for the proposed repair/replacement, construction year, and project cost for each equipment improvement project.

Table 2-5 – Equipment Improvements

Project No.	Description	Priority	Construction Year	Estimated Construction Cost, \$	Estimated Project Cost, \$
EQ-1	Repair/Replacement of trucks/vehicles	Short-Term	27-28	100,000	100,000
EQ-2	Hydro Flusher	Short-Term	27-28	70,000	70,000
EQ-3	Sewer Camera	Short-Term	26-27	20,000	20,000
EQ-4	Security Camera	Long-Term	33-34	8,000	8,000
EQ-5	Technology	Immediate	26-27	22,000	22,000
			TOTAL:	220,000	220,000

2.4 WWTP Building Improvements

2.4.1 Existing Infrastructure

The WWTP site's maintenance/operations facilities and buildings are antiquated and present workplace safety concerns. Building A (office) and Building B (maintenance facility) are the two existing structures constructed in the 1980s.

2.4.2 Condition, Risks of Failure, and Need for Improvements

The office building has multiple roof leaks. The maintenance facility is also used as a garage, storage, uniform closet, lab, and wash area. It is inadequately sized and utilized for these uses. Both structures are in a state of disrepair and beyond their useful life.

2.4.3 Recommended Improvements

Removal and replacement of both buildings are recommended. **Table 2-6** provides an overview of the 10-year CIP projects for the building and facility improvements. **Appendix B** provides the project description, project priority, reason for the proposed repair/replacement, construction year, and project cost for each building and facility improvement project.

Table 2-6 – Building and Facility Improvements

Project No.	Description	Priority	Construction Year	Estimated Construction Cost, \$	Estimated Project Cost, \$
BF-1	Office Building	Long-Term	33-34	450,000	720,000
BF-2	Maintenance Facility	Long-Term	33-34	450,000	720,000
			TOTAL:	900,000	1,440,000

2.5 MSD Budget and Grant Funding Availability

2.5.1 Budget

As of June 2024, the monthly MSD rate for residential sewer services is \$60.00. Commercial sewer rates are determined on the basis of use. In addition to the sewer service fee, MSD charges a one-time fee of \$10,000 per connection to the sewer system.

MSD revenues to fund the proposed CIP improvement projects were evaluated based on the MSD Fiscal Year 24/25 Adopted Budget (24/25 Budget) and the Projected Revenue Requirement Table presented at the May 2024 MSD Board Meeting (MSD Revenue Requirement), both of which highlight the District’s income, expenses, balance, and reserve funds. The values from the 24/25 Budget and MSD Revenue Requirement will be used to project revenues, expenditures, and reserve fund amounts into the future to determine approximate funding amounts for the proposed CIP projects.

Table 2-7 summarizes the annual MSD fiscal revenue, expenditures, balance, and reserve fund amount for the present and future planning period and presents an average reserve fund value that can be used to fund capital improvement plan projects each year based on these projections. The MSD 24/25 Budget and Revenue Requirement is included in **Appendix C**.

Based on **Table 2-7** and taking into consideration the 10-year CIP period and project funding horizon, the District will have approximately \$900,000 to spend on proposed CIP projects within the 10-year period. The total cost for the proposed CIP projects is estimated at \$16,387,100 without inflation added and approximately \$19,318,524 with inflation added.

Table 2-7 – CIP Revenue, Expenditures, and Projected Balance

Fiscal Year	Expenses	Debt	Costs	Credits	Rate Revenue	Income	Balance	Reserve Fund
FY 24-25	\$950,180	\$43,670	\$993,850	\$250,000	\$915,404	\$1,165,404	\$171,554	\$2,561,410
FY 33-34	\$1,692,427	\$43,670	\$1,736,097	\$281,215	\$915,404	\$1,196,619	(\$539,478)	\$879,068
Average Annual Reserve Fund Amount:								\$87,907

2.5.2 Grant Funding Availability

MSD has completed State and federal funding applications for approved projects. Funds received through the State Water Resources Control Board (SWRCB) Clean Water State Revolving Fund (CWSRF) may be used to finance certain projects as they become available. For the purposes of this CIP Report, it was assumed that MSD would be financing as many projects as possible through revenues and the reserve fund, as grant funds are not guaranteed at this time.

3 Improvement Priorities Summary

This section summarizes the improvement priorities for the collection system, wastewater treatment plant, equipment, and buildings. The improvements were prioritized based on assessment of the operation and maintenance records, existing conditions, likelihood of failure, life-cycle expectancy, repair history, project costs, associated risks and outcomes of equipment failure, and input from MSD staff. **Table 3-1** provides a summary of the improvement priorities.

Table 3-1 – Project Priorities - Summary

Priority	Project Name	Project No.
Urgent	Sewer Line Replacement, MH 179-175	CS-9
Immediate	Influent Force Main	CS-23
	Sand Filtration System	WWTP-1
	Disinfection System	WWTP-2
	Pond 3 Sludge Removal	WWTP-5
	Sewer Camera	EQ-3
	Technology	EQ-5
Short-Term	Sewer Line Replacement, MH 45-43	CS-5
	Repair/Replacement of Trucks/Vehicles	EQ-1
	Hydro Flusher	EQ-2
	Site Fencing	WWTP-4
	Backup Generator	WWTP-3
	Sewer Line Replacement, MH 64-65 and MH 76A-77	CS-3
	Sewer Line Replacement, Lamp Hole to MH 57-53	CS-4
	Sewer Line Replacement, MH 45-43	CS-5
	Sewer Line Replacement, MH 31-29	CS-6
	Sewer Line Replacement, MH 41-40	CS-7
	Clay Pipe Replacement, MH 84-82	CS-12
	Clay Pipe Replacement, MH 131-136	CS-16
	Clay Pipe Replacement, MH 172-23	CS-20
	Clay Pipe Replacement, MH 123-124, Add New MH	CS-17
Long-Term	Sewer Line Replacement, MH 101-96	CS-1
	Sewer Line Replacement, MH 11-9, Replace MH 204, Add New MH Between MH 203-204	CS-2
	Add New Manhole Between MH 94-95	CS-8
	Clay Pipe Replacement, Clean Out to MH 18, MH 18-14	CS-10
	Clay Pipe Replacement, Clean Out to MH 18	CS-11
	Clay Pipe Replacement, MH 49-50	CS-13
	Clay Pipe Replacement, MH 51-52	CS-14
	Clay Pipe Replacement, MH 35-31	CS-15
	Clay Pipe Replacement, MH 103-105	CS-18
	Clay Pipe Replacement, MH 105-135	CS-19
	Clay Pipe Replacement, CO to MH 16-14	CS-21
	Clay Pipe Replacement, MH 14-10	CS-22
	Security Camera	EQ-4
	Office Building	BF-1
	Maintenance Facility	BF-2

4 Capital Improvement Plan – Cost Estimation

Preliminary cost estimates have been prepared for each project in the CIP. These planning level estimates will be refined as each project is initiated and progresses. 15% of the budget is estimated for expenses related to engineering design and administration (EDA) and compliance with the California Environmental Quality Act (CEQA). 10% of the budget is allocated for engineering services during construction and construction management (ESDC/CM). These are considered soft costs and may include the work a consultant and MSD staff perform and are shown for budgetary purposes. CIP contingencies of 35% have also been added to the project costs based on the preliminary status and the potential for project scope uncertainties. The soft costs and contingencies for each project were evaluated individually, and these costs were not applied to all the proposed improvement projects.

As part of developing the cost estimates, the following qualifications were provided:

1. The duration of construction is unknown at this time.
2. Phasing and/or phase planning has not been completed, and no allowances are included in the estimate.
3. It is assumed that all work will be performed by qualified, bonded, and insured general contractors, and as such, all general contractor mark-ups are included in the unit pricing.
4. It is assumed all individual estimates represent one project. Some cost savings can be realized by combining projects to make a larger project with a better economy of scale. Cost savings have not yet been determined.
5. Premiums for small work around existing facilities, structures, and site appurtenances versus large unincumbered production work were included.
6. Premiums for working in a remote area were included. A remote area is defined as an area outside of a 15-mile radius of a major metropolitan area.

Design and construction costs were developed for the current year (Denoted as Year 0) and then escalated for the fiscal year based on an estimated rate of inflation. An average annual escalation rate of 4% was used.

5 Capital Improvement Plan – Project Organization and Scheduling

Recommended MSD CIP projects were organized and broken down by implementation year based on priority. Timing and priorities of the projects were based on discussions with MSD staff, staff condition assessments and life expectancies of infrastructure, and operation and maintenance benefits. The proposed improvement projects are designated to fit within urgent, immediate, short-term, and long-term periods, meaning that they will fall within one of the following time periods:

- Urgent = Year 24-25
- Immediate Projects = Year 25-26 through Year 26-27
- Short-Term Projects = Year 27-28 through Year 30-31
- Long-Term Projects = Year 31-32 through 33-34

The 10-year recommended MSD CIP projects were organized in two ways. The first way is a summary of the projects by category without inflation. The second way summarizes the projects by category with

inflation included. As discussed, the identified CIP projects will assist MSD in developing annual budgets over the next 10-year planning horizon. All CIP projects include information on the project priority, anticipated construction year, construction costs, soft costs, estimated project costs, and potential funding source. As discussed in Section 2.5, the District has approximately \$900,000 to spend on proposed CIP projects based on projected revenues, expenses, and reserve funds. The total cost for the proposed CIP projects is estimated at \$16,387,100 without inflation added and approximately \$19,318,524 with inflation added. Additional detailed information on each project is provided in **Appendix B**.

Table 5-1 provides an overview of the CIP projects by category, with no inflation included. **Table 5-2** provides an overview of the CIP projects by category, with inflation included. The average cost escalation percentage provided in the previous section was used to calculate projected inflation.

Table 5-1 -Master CIP Project List (without Cost Inflation)

Project	Description	Priority	Construction Fiscal Year	Funding Source	Estimated Construction Cost	CIP Contingency	Eng / Design/ Admin	ESDC / CM	Estimated Project Cost	10-Year CIP											
										24-25 Year 1	25-26 Year 2	26-27 Year 3	27-28 Year 4	28-29 Year 5	29-30 Year 6	30-31 Year 7	31-32 Year 8	32-33 Year 9	33-34 Year 10		
COLLECTION SYSTEM																					
CS-1	Sewer Line Replacement, MH 96-101	Long-Term	31-32	Unknown	\$813,750	\$284,813	\$122,063	\$81,375	\$1,302,000								\$1,302,000				
CS-2	Sewer Line Replacement, MH 9-11, replace MH 204, add new MH between MH 203-204	Long-Term	31-32	Unknown	\$293,250	\$102,638	\$43,988	\$29,325	\$469,200								\$469,200				
CS-3	Sewer Line Replacement, MH 64-65 and MH 76A-77	Short-Term	28-29	Unknown	\$350,250	\$122,588	\$52,538	\$35,025	\$560,400					\$560,400							
CS-4	Sewer Line Replacement, MH 53-57-LP	Short-Term	29-30	Unknown	\$450,250	\$157,588	\$67,538	\$45,025	\$720,400												
CS-5	Sewer Line Replacement, MH 43-45	Short-Term	28-29	Unknown	\$358,750	\$125,563	\$53,813	\$35,875	\$574,000					\$574,000							
CS-6	Sewer Line Replacement, MH 31-29	Short-Term	29-30	Unknown	\$156,500	\$54,775	\$23,475	\$15,650	\$250,400						\$250,400						
CS-7	Sewer Line Replacement, MH 40-41	Short-Term	29-30	Unknown	\$176,250	\$61,688	\$26,438	\$17,625	\$282,000						\$282,000						
CS-8	New Manhole Between MH 94-95	Long-Term	32-33	Unknown	\$90,000	\$31,500	\$13,500	\$9,000	\$144,000									\$144,000			
CS-9	Sewer Line Replacement, MH 175-179	Urgent	24-25	MSD Funds	\$299,500	\$104,825	\$44,925	\$29,950	\$479,200	\$479,200											
CS-10	Clay Pipe Replacement, MH 18 - 14	Long-Term	32-33	Unknown	\$235,000	\$82,250	\$35,250	\$23,500	\$376,000									\$376,000			
CS-11	Clay Pipe Replacement, MH 18 to clean out	Long-Term	32-33	Unknown	\$60,000	\$21,000	\$9,000	\$6,000	\$96,000									\$96,000			
CS-12	Clay Pipe Replacement, MH 82-84	Short-Term	30-31	Unknown	\$255,000	\$89,250	\$38,250	\$25,500	\$408,000							\$408,000					
CS-13	Clay Pipe Replacement, MH 49-50	Long-Term	32-33	Unknown	\$180,000	\$63,000	\$27,000	\$18,000	\$288,000									\$288,000			
CS-14	Clay Pipe Replacement, MH 51-52	Long-Term	32-33	Unknown	\$130,000	\$45,500	\$19,500	\$13,000	\$208,000									\$208,000			
CS-15	Clay Pipe Replacement, MH 35-31	Long-Term	32-33	Unknown	\$583,000	\$204,050	\$87,450	\$58,300	\$932,800									\$932,800			
CS-16	Clay Pipe Replacement, MH 131-136	Short-Term	30-31	MSD Funds	\$79,250	\$27,738	\$11,888	\$7,925	\$126,800							\$126,800					
CS-17	Clay Pipe Replacement, MH 123-124 Add new MH	Short-Term	30-31	Unknown	\$220,000	\$77,000	\$33,000	\$22,000	\$352,000							\$352,000					
CS-18	Clay Pipe Replacement, MH 103-105	Long-Term	33-34	Unknown	\$185,000	\$64,750	\$27,750	\$18,500	\$296,000										\$296,000		
CS-19	Clay Pipe Replacement, MH 105-135	Long-Term	33-34	Unknown	\$366,000	\$128,100	\$54,900	\$36,600	\$585,600										\$585,600		
CS-20	Clay Pipe Replacement, MH 172-23	Short-Term	29-30	Unknown	\$133,000	\$46,550	\$19,950	\$13,300	\$212,800						\$212,800						
CS-21	Clay Pipe Replacement, MH 14 to 16	Long-Term	33-34	Unknown	\$297,000	\$103,950	\$44,550	\$29,700	\$475,200										\$475,200		
CS-22	Clay Pipe Replacement, MH 14-10	Long-Term	33-34	Unknown	\$78,000	\$27,300	\$11,700	\$7,800	\$124,800										\$124,800		
CS-23	Influent Force Main	Immediate	25-26	Unknown	\$2,130,000	\$745,500	\$319,500	\$213,000	\$3,408,000		\$3,408,000										
COLLECTION SYSTEM SUBTOTAL:									\$12,671,600	\$479,200	\$3,408,000	\$0	\$0	\$1,134,400	\$745,200	\$886,800	\$1,771,200	\$2,044,800	\$1,481,600		
WASTEWATER TREATMENT PLANT																					
WWTP-1	Sand Filtration System	Immediate	26-27	Unknown	\$400,000	\$140,000	\$60,000	\$40,000	\$640,000				\$640,000								
WWTP-2	Disinfection System	Immediate	26-27	MSD Funds	\$50,000	\$17,500	\$7,500	\$5,000	\$80,000				\$80,000								
WWTP-3	Backup Generator	Short-Term	27-28	Unknown	\$225,000	\$78,750	\$33,750	\$22,500	\$360,000					\$360,000							
WWTP-4	Site Fencing	Short-Term	27-28	Unknown	\$300,000	\$105,000	\$9,000	\$9,000	\$423,000					\$423,000							
WWTP-5	Pond 3 Sludge Removal	Immediate	26-27	Unknown	\$552,500	\$0	\$0	\$0	\$552,500			\$552,500									
WASTEWATER TREATMENT PLANT SUBTOTAL:									\$2,055,500	\$0	\$0	\$1,272,500	\$783,000	\$0	\$0	\$0	\$0	\$0	\$0		
EQUIPMENT																					
EQ-1	Repair/Replacement of Trucks/Vehicles	Short-Term	27-28	MSD Funds	\$100,000	\$0	\$0	\$0	\$100,000					\$100,000							
EQ-2	Hydro Flusher	Short-Term	27-28	MSD Funds	\$70,000	\$0	\$0	\$0	\$70,000					\$70,000							
EQ-3	Sewer Camera	Short-Term	26-27	MSD Funds	\$20,000	\$0	\$0	\$0	\$20,000				\$20,000								
EQ-4	Security Camera	Long-Term	33-34	MSD Funds	\$8,000	\$0	\$0	\$0	\$8,000										\$8,000		
EQ-5	Technology	Immediate	26-27	MSD Funds	\$22,000	\$0	\$0	\$0	\$22,000				\$22,000								
EQUIPMENT SUBTOTAL:									\$220,000	\$0	\$0	\$42,000	\$170,000	\$0	\$0	\$0	\$0	\$0	\$8,000		
BUILDING																					
BF-1	Office Building	Short-Term	34-35	Unknown	\$450,000	\$157,500	\$67,500	\$45,000	\$720,000						\$720,000						
BF-2	Maintenance Building	Short-Term	34-35	Unknown	\$450,000	\$157,500	\$67,500	\$45,000	\$720,000						\$720,000						
BUILDING SUBTOTAL:									\$1,440,000	\$0	\$0	\$0	\$0	\$0	\$720,000	\$720,000	\$0	\$0	\$0		
TOTAL									\$16,387,100	\$479,200	\$3,408,000	\$1,314,500	\$953,000	\$1,134,400	\$1,465,200	\$1,606,800	\$1,771,200	\$2,044,800	\$1,489,600		

- Notes:
- 1 Urgent Term Projects = Year 24-25
 - 2 Immediate Term Projects = Year 25-26 through Year 26-27
 - 3 Short Term Projects = Year Year 27-28 through Year 30-31
 - 4 Long Term Projects = Year 31-32 through 33-34
 - 5 Construction Costs given are for Year 1 (no inflation included).

Table 5-2 -Master CIP Project List (with Cost Inflation)

Project	Description	Priority	Construction Fiscal Year	Funding Source	Estimated Construction Cost	CIP Contingency	Eng / Design/ Admin	ESDC / CM	Estimated Project Cost	10-Year CIP											
										24-25 Year 1 0%	25-26 Year 2 4%	26-27 Year 3 8%	27-28 Year 4 12%	28-29 Year 5 16%	29-30 Year 6 20%	30-31 Year 7 24%	31-32 Year 8 28%	32-33 Year 9 32%	33-34 Year 10 36%		
COLLECTION SYSTEM																					
CS-1	Sewer Line Replacement, MH 96-101	Long-Term	31-32	Unknown	\$813,750	\$284,813	\$122,063	\$81,375	\$1,302,000									\$1,666,560			
CS-2	Sewer Line Replacement, MH 9-11, replace MH 204, add new MH between MH 203-204	Long-Term	31-32	Unknown	\$293,250	\$102,638	\$43,988	\$29,325	\$469,200									\$600,576			
CS-3	Sewer Line Replacement, MH 64-65 and MH 76A-77	Short-Term	28-29	Unknown	\$350,250	\$122,588	\$52,538	\$35,025	\$560,400					\$650,064							
CS-4	Sewer Line Replacement, MH 53-57-LP	Short-Term	29-30	Unknown	\$450,250	\$157,588	\$67,538	\$45,025	\$720,400						\$864,480						
CS-5	Sewer Line Replacement, MH 43-45	Short-Term	28-29	Unknown	\$358,750	\$125,563	\$53,813	\$35,875	\$574,000					\$665,840							
CS-6	Sewer Line Replacement, MH 31-29	Short-Term	29-30	Unknown	\$156,500	\$54,775	\$23,475	\$15,650	\$250,400						\$300,480						
CS-7	Sewer Line Replacement, MH 40-41	Short-Term	29-30	Unknown	\$176,250	\$61,688	\$26,438	\$17,625	\$282,000						\$338,400						
CS-8	New Manhole Between MH 94-95	Long-Term	32-33	Unknown	\$90,000	\$31,500	\$13,500	\$9,000	\$144,000										\$190,080		
CS-9	Sewer Line Replacement, MH 175-179	Urgent	24-25	MSD Funds	\$299,500	\$104,825	\$44,925	\$29,950	\$479,200	\$479,200											
CS-10	Clay Pipe Replacement, MH 18 - 14	Long-Term	32-33	Unknown	\$235,000	\$82,250	\$35,250	\$23,500	\$376,000										\$496,320		
CS-11	Clay Pipe Replacement, MH 18 to clean out	Long-Term	32-33	Unknown	\$60,000	\$21,000	\$9,000	\$6,000	\$96,000										\$126,720		
CS-12	Clay Pipe Replacement, MH 82-84	Short-Term	30-31	Unknown	\$255,000	\$89,250	\$38,250	\$25,500	\$408,000							\$505,920					
CS-13	Clay Pipe Replacement, MH 49-50	Long-Term	32-33	Unknown	\$180,000	\$63,000	\$27,000	\$18,000	\$288,000										\$380,160		
CS-14	Clay Pipe Replacement, MH 51-52	Long-Term	32-33	Unknown	\$130,000	\$45,500	\$19,500	\$13,000	\$208,000										\$274,560		
CS-15	Clay Pipe Replacement, MH 35-31	Long-Term	32-33	Unknown	\$583,000	\$204,050	\$87,450	\$58,300	\$932,800										\$1,231,296		
CS-16	Clay Pipe Replacement, MH 131-136	Short-Term	30-31	MSD Funds	\$79,250	\$27,738	\$11,888	\$7,925	\$126,800							\$157,232					
CS-17	Clay Pipe Replacement, MH 123-124 Add new MH	Short-Term	30-31	Unknown	\$220,000	\$77,000	\$33,000	\$22,000	\$352,000							\$436,480					
CS-18	Clay Pipe Replacement, MH 103-105	Long-Term	33-34	Unknown	\$185,000	\$64,750	\$27,750	\$18,500	\$296,000											\$402,560	
CS-19	Clay Pipe Replacement, MH 105-135	Long-Term	33-34	Unknown	\$366,000	\$128,100	\$54,900	\$36,600	\$585,600											\$796,416	
CS-20	Clay Pipe Replacement, MH 172-23	Short-Term	29-30	Unknown	\$133,000	\$46,550	\$19,950	\$13,300	\$212,800						\$255,360						
CS-21	Clay Pipe Replacement, MH 14 to 16	Long-Term	33-34	Unknown	\$297,000	\$103,950	\$44,550	\$29,700	\$475,200											\$646,272	
CS-22	Clay Pipe Replacement, MH 14-10	Long-Term	33-34	Unknown	\$78,000	\$27,300	\$11,700	\$7,800	\$124,800											\$169,728	
CS-23	Influent Force Main	Immediate	25-26	Unknown	\$2,130,000	\$745,500	\$319,500	\$213,000	\$3,408,000			\$3,544,320									
COLLECTION SYSTEM SUBTOTAL:									\$12,671,600	\$479,200	\$3,544,320	\$0	\$0	\$1,315,904	\$1,758,720	\$1,099,632	\$2,267,136	\$2,699,136	\$2,014,976		
WASTEWATER TREATMENT PLANT																					
WWTP-1	Sand Filtration System	Immediate	26-27	Unknown	\$400,000	\$140,000	\$60,000	\$40,000	\$640,000			\$691,200									
WWTP-2	Disinfection System	Immediate	26-27	Unknown	\$50,000	\$17,500	\$7,500	\$5,000	\$80,000			\$86,400									
WWTP-3	Backup Generator	Short-Term	27-28	Unknown	\$225,000	\$78,750	\$33,750	\$22,500	\$360,000				\$403,200								
WWTP-4	Site Fencing	Short-Term	27-28	Unknown	\$300,000	\$105,000	\$9,000	\$9,000	\$423,000				\$473,760								
WWTP-5	Pond 3 Sludge Removal	Immediate	26-27	Unknown	\$552,500	\$0	\$0	\$0	\$552,500			\$596,700									
WASTEWATER TREATMENT PLANT SUBTOTAL:									\$2,055,500	\$0	\$0	\$1,374,300	\$876,960	\$0	\$0	\$0	\$0	\$0	\$0		
EQUIPMENT																					
EQ-1	Repair/Replacement of Trucks/Vehicles	Short-Term	27-28	MSD Funds	\$100,000	\$0	\$0	\$0	\$100,000				\$112,000								
EQ-2	Hydro Flusher	Short-Term	27-28	MSD Funds	\$70,000	\$0	\$0	\$0	\$70,000				\$78,400								
EQ-3	Sewer Camera	Short-Term	26-27	MSD Funds	\$20,000	\$0	\$0	\$0	\$20,000			\$21,600									
EQ-4	Security Camera	Long-Term	33-34	MSD Funds	\$8,000	\$0	\$0	\$0	\$8,000											\$10,880	
EQ-5	Technology	Immediate	26-27	MSD Funds	\$22,000	\$0	\$0	\$0	\$22,000			\$23,760									
EQUIPMENT SUBTOTAL:									\$220,000	\$0	\$0	\$45,360	\$190,400	\$0	\$0	\$0	\$0	\$0	\$10,880		
BUILDING																					
BF-1	Office Building	Short-Term	34-35	Unknown	\$450,000	\$157,500	\$67,500	\$45,000	\$720,000				\$806,400								
BF-2	Maintenance Building	Short-Term	34-35	Unknown	\$450,000	\$157,500	\$67,500	\$45,000	\$720,000					\$835,200							
BUILDING SUBTOTAL:									\$1,440,000	\$0	\$0	\$0	\$806,400	\$835,200	\$0	\$0	\$0	\$0	\$0		
TOTAL									\$16,387,100	\$479,200	\$3,544,320	\$1,419,660	\$1,873,760	\$2,151,104	\$1,758,720	\$1,099,632	\$2,267,136	\$2,699,136	\$2,025,856		

Notes:

- 1 Urgent Term Projects = Year 24-25
- 2 Immediate Term Projects = Year 25-26 through Year 26-27
- 3 Short Term Projects = Year Year 27-28 through Year 30-31
- 4 Long Term Projects = Year 31-32 through 33-34
- 5 Construction Costs given are for Year 1 (no inflation included). Costs assigned under the year columns have inflation added at an average 4% per year.
- 6 Inflation percentages provided are given from Year 1

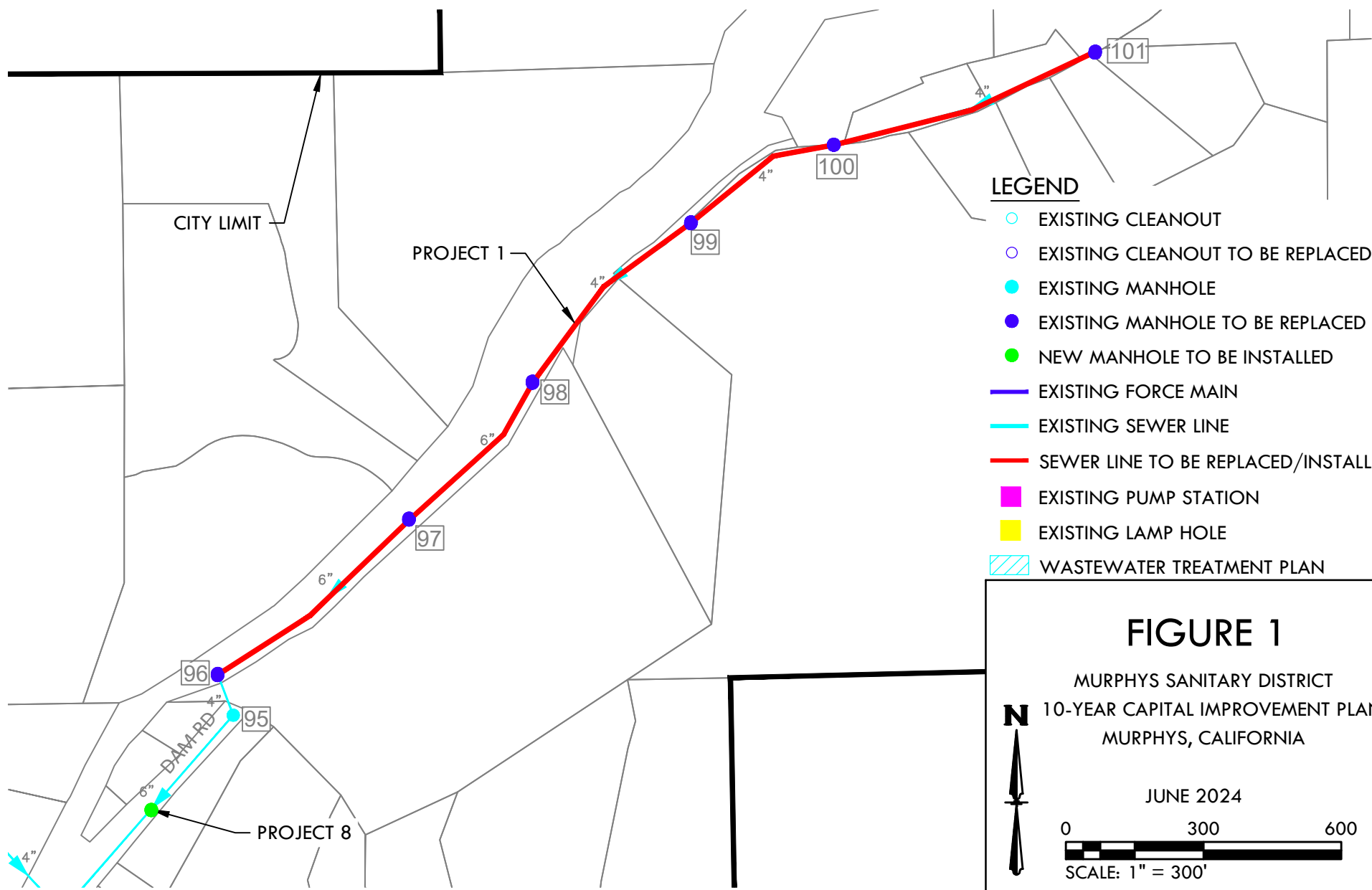
6 References

- [1] 10-Year Capital Improvement Projects, Black Water Consulting Engineers, Inc., September 2022.

APPENDIX A

10-Year CIP Collection System Improvement Figures

10/22288 ASD DISTRICT ENGINEER (CA) TASK 01_22A_2021 BROCHURE (SHPHITS) (ROCHURES) 888_10 YR CPD W/ G PLOT 3/14/2023 3:55:06 PM BY KEVIN WILLIAMS



LEGEND

- EXISTING CLEANOUT
- EXISTING CLEANOUT TO BE REPLACED
- EXISTING MANHOLE
- EXISTING MANHOLE TO BE REPLACED
- NEW MANHOLE TO BE INSTALLED
- EXISTING FORCE MAIN
- EXISTING SEWER LINE
- SEWER LINE TO BE REPLACED/INSTALLED
- EXISTING PUMP STATION
- EXISTING LAMP HOLE
- WASTEWATER TREATMENT PLAN

FIGURE 1

MURPHYS SANITARY DISTRICT
10-YEAR CAPITAL IMPROVEMENT PLAN
MURPHYS, CALIFORNIA



JUNE 2024

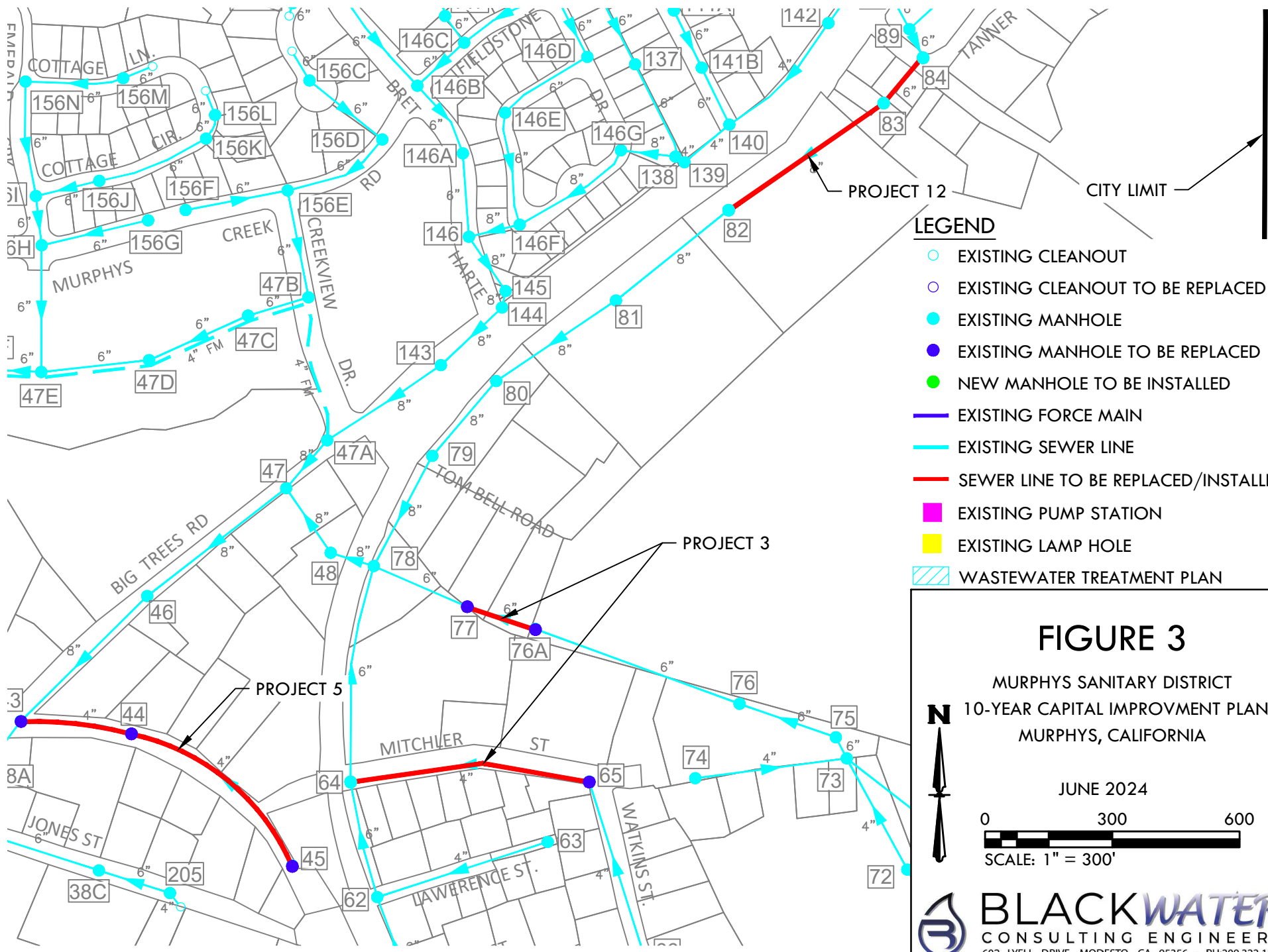


SCALE: 1" = 300'



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CONSULTING ENGINEERS
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10/22288 ASD DISTRICT ENGINEER/CAO/TASK-01_22A - 2021 BROCHURE (S/H/IB/IS/RO/CLURES)888_10 YR CPD/DWG PLOT_3/14/2023 4:17:39 PM BY KEVIN WILLIAMS



LEGEND

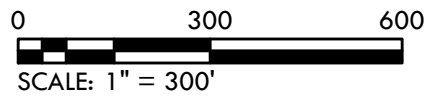
- EXISTING CLEANOUT
- EXISTING CLEANOUT TO BE REPLACED
- EXISTING MANHOLE
- EXISTING MANHOLE TO BE REPLACED
- NEW MANHOLE TO BE INSTALLED
- EXISTING FORCE MAIN
- EXISTING SEWER LINE
- SEWER LINE TO BE REPLACED/INSTALLED
- EXISTING PUMP STATION
- EXISTING LAMP HOLE
- WASTEWATER TREATMENT PLAN

FIGURE 3

MURPHYS SANITARY DISTRICT
 10-YEAR CAPITAL IMPROVEMENT PLAN
 MURPHYS, CALIFORNIA



JUNE 2024



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10/22288 ASD DISTRICT ENGINEER (CAO) TASK 01_22A - 2021 BROCHURE (SHPHITS) (ROCHURES) 888_10 YR CPD DWG PLOT 3/14/2023 4:33:07 PM BY KEVIN WILLIAMS

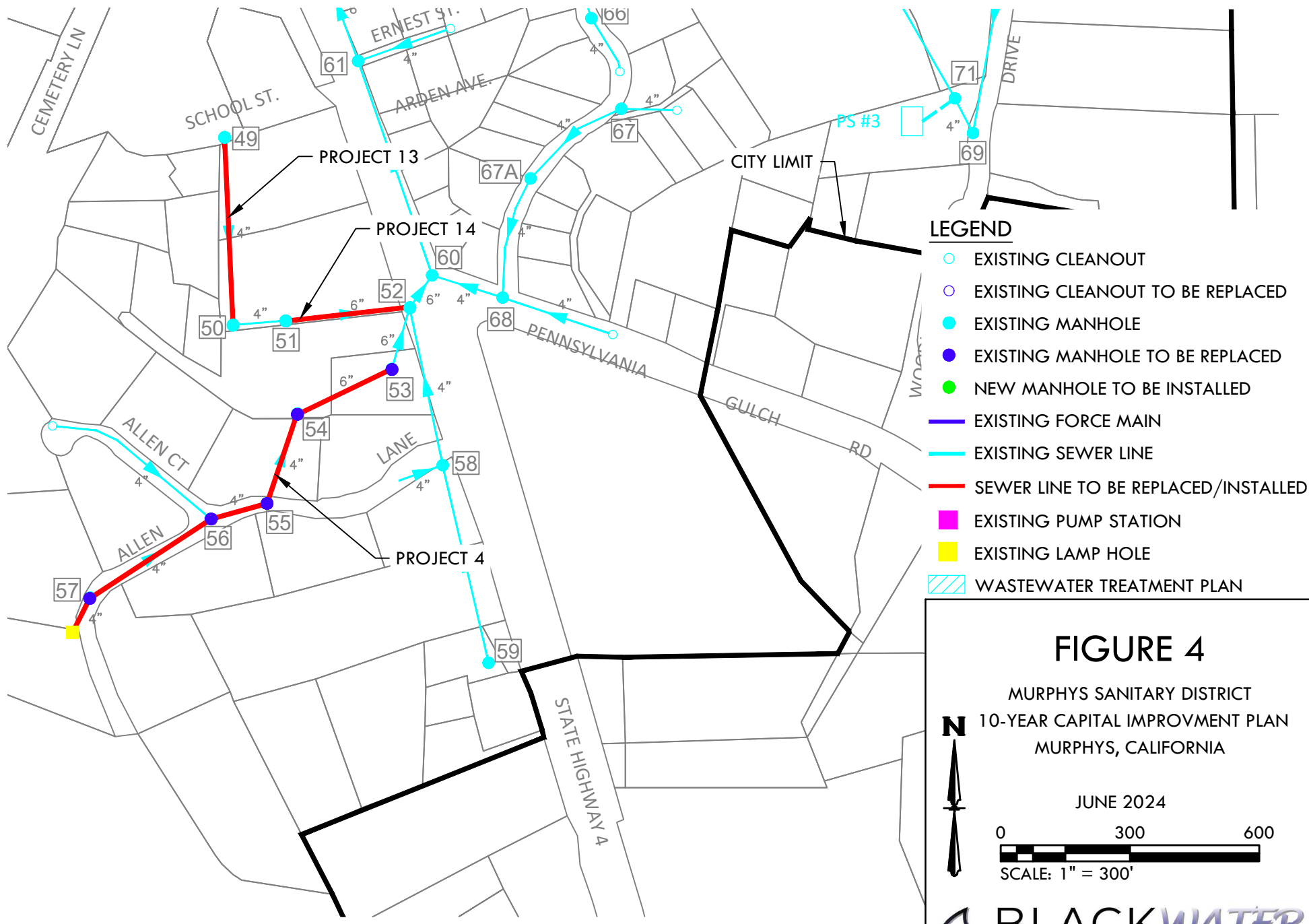
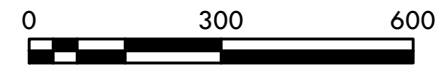


FIGURE 4

MURPHYS SANITARY DISTRICT
10-YEAR CAPITAL IMPROVMENT PLAN
MURPHYS, CALIFORNIA



JUNE 2024



SCALE: 1" = 300'














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10/22288 ASD DISTRICT ENGINEER(CAD)/TASK-01_22A_2021 BROCHURE (MURPHYS) (ROUCHES) 888_10 YR CPD DWG PLOT_3/14/2023 4:34:48 PM BY KEVIN WILLIAMS

CITY LIMIT

LEGEND

-  EXISTING CLEANOUT
-  EXISTING CLEANOUT TO BE REPLACED
-  EXISTING MANHOLE
-  EXISTING MANHOLE TO BE REPLACED
-  NEW MANHOLE TO BE INSTALLED
-  EXISTING FORCE MAIN
-  EXISTING SEWER LINE
-  SEWER LINE TO BE REPLACED/INSTALLED
-  EXISTING PUMP STATION
-  EXISTING LAMP HOLE
-  WASTEWATER TREATMENT PLAN

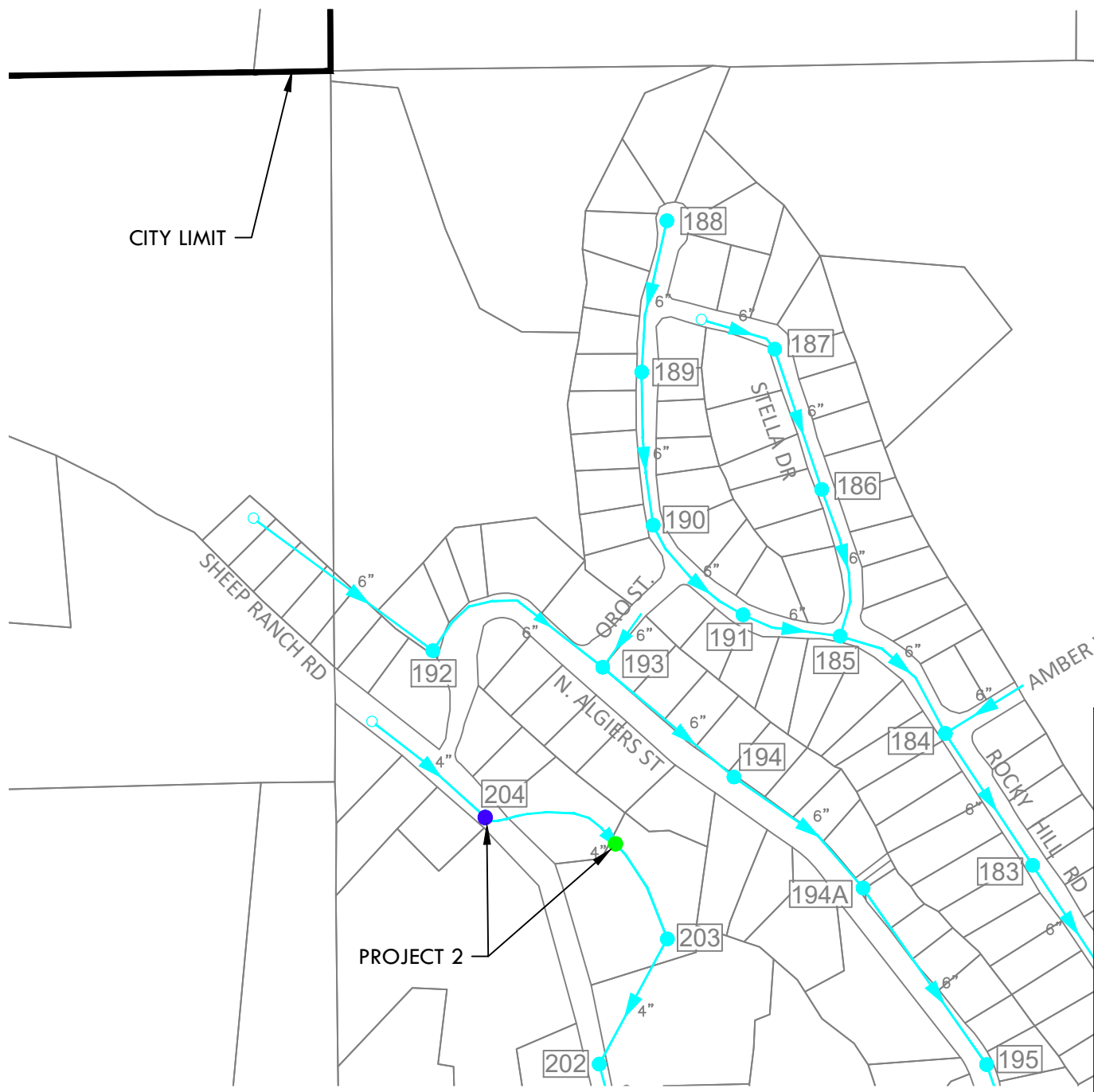


FIGURE 5

MURPHYS SANITARY DISTRICT
 10-YEAR CAPITAL IMPROVMENT PLAN
 MURPHYS, CALIFORNIA

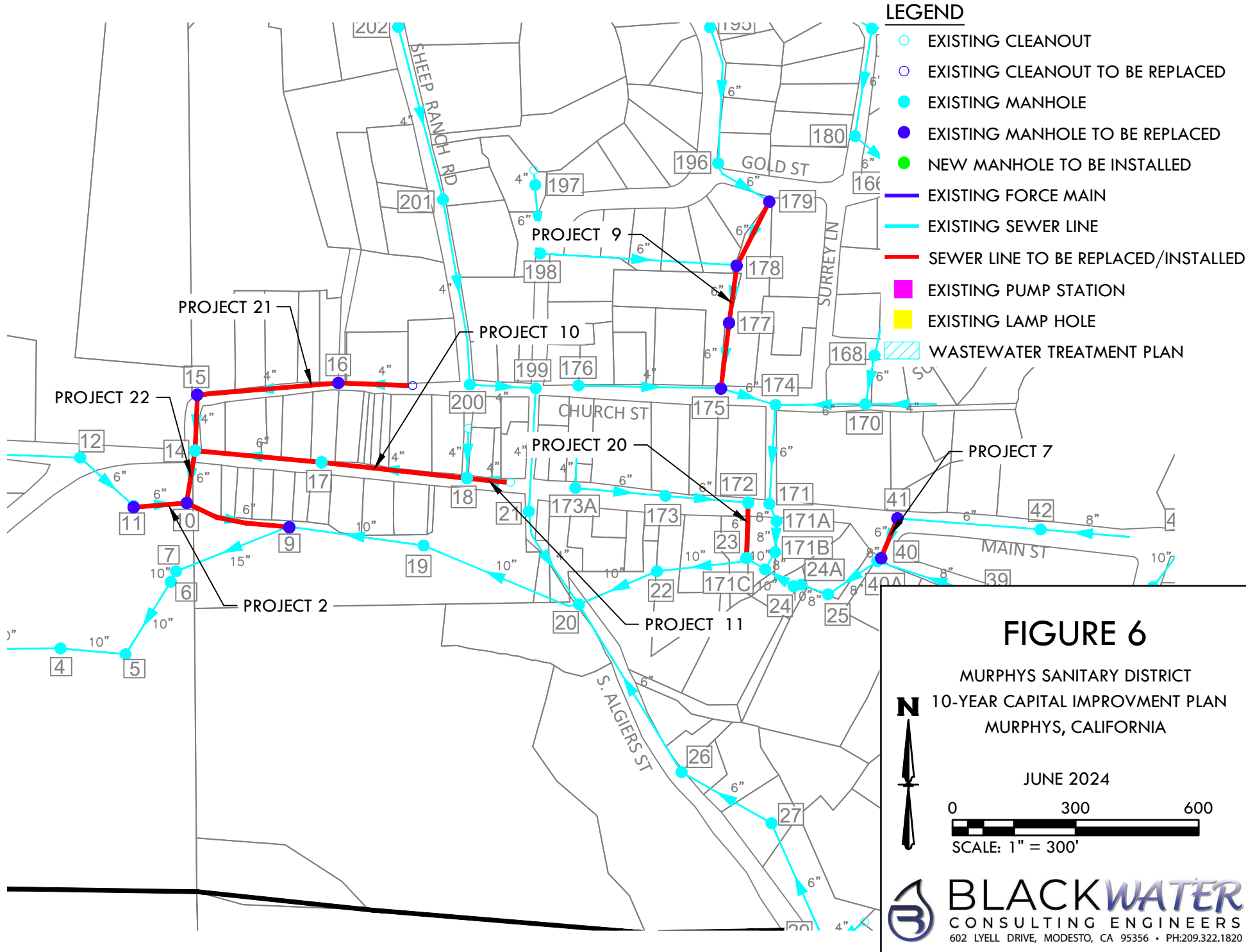


JUNE 2024

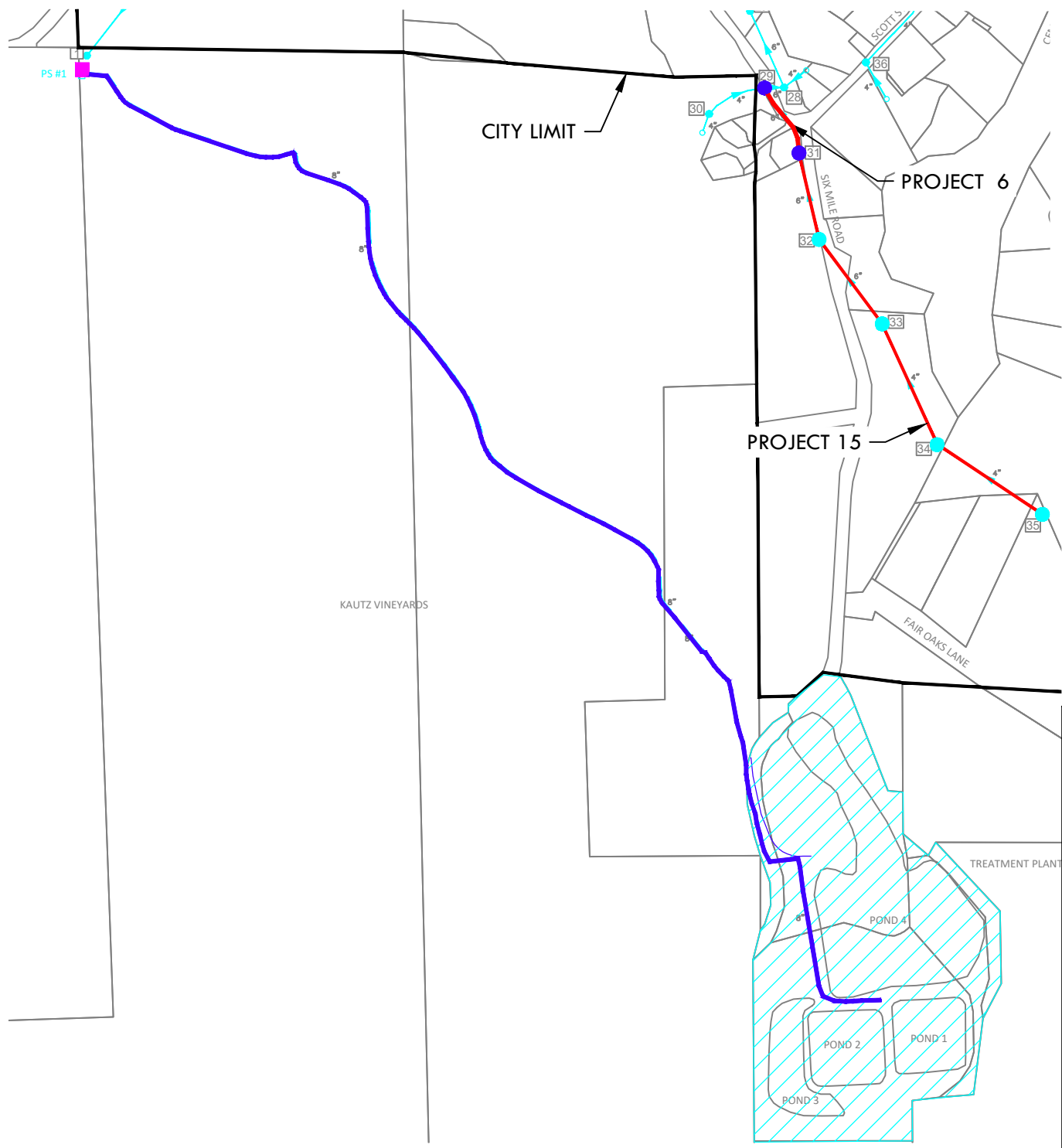


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10/22288 ASD DISTRICT ENGINEER(CAD)/TASK 01_22A - 2021 BROCHURE (SHPHITS) (ROCHURES) 888_10 YR CPDWDG PLOT_3/15/2023 11:31:16 AM BY KEVIN WILLIAMS



11/22288 ASD DISTRICT ENGINEER(CAD)/TASK-01_22A - 2021 BROCHURE (EXHIBITS) (ROOCHURES) 888_10 YR CIP DWG PLOT_3/15/2023 11:11:54:47 AM BY KEVIN WILLIAMS



LEGEND

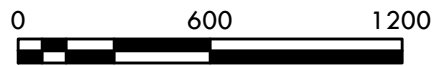
- EXISTING CLEANOUT
- EXISTING CLEANOUT TO BE REPLACED
- EXISTING MANHOLE
- EXISTING MANHOLE TO BE REPLACED
- NEW MANHOLE TO BE INSTALLED
- EXISTING FORCE MAIN
- EXISTING SEWER LINE
- SEWER LINE TO BE REPLACED/INSTALLED
- EXISTING PUMP STATION
- EXISTING LAMP HOLE
- ▨ WASTEWATER TREATMENT PLAN

FIGURE 7

MURPHYS SANITARY DISTRICT
10-YEAR CAPITAL IMPROVMENT PLAN
MURPHYS, CALIFORNIA



JUNE 2024



SCALE: 1" = 600'



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APPENDIX B

Project Details and Cost Estimates



Sewer Line Replacement, MH 96-101		CS-1
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks. Located near a waterway, this line is a significant contributor to inflow and infiltration (I/I).	
Project Description:	This project consists of the replacement and installation of approximately 2,415 linear feet of 8" diameter sewer pipeline and 6 manholes.	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years, close to waterway, significant source of I/I	
General Location:	Dam Road	
Existing Pipe Material:	Clay	
Project Priority:	Long-Term	
Construction Year (Fiscal):	31-32	
Expenditures	Budget	
CON-Construction Subtotal	\$813,750	
CTGY-CIP Contingency (35%)	\$284,813	
EDA-Eng/Design/Admin (15%)	\$122,063	
ESDC/CM - Cons. Mgmt (10%)	\$81,375	
Expenditure Totals:	\$1,302,000	
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$1,302,000	



Sewer Line Replacement, MH 9-11, replace MH 204, add new MH between MH 203-204		CS-2
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks. Manhole 204 is in a state of disrepair and is failing. Distance between manholes 204 and 203 exceeds 300' making maintenance and inspection difficult.	
Project Description:	This project consists of the replacement and installation of approximately 393 linear feet of 8" diameter sewer pipeline and 5 manholes. Manhole 204 will be replaced and a new manhole will be placed directly in between manholes 203 and 204 (see FIGURE 5 and FIGURE 6).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years, failing MH 204, necessary access due to the distance between 204 and 203 exceeding 300'.	
General Location:	Behind DEA	
Existing Pipe Material:	Clay	
Project Priority:	Long-Term	
Construction Year (Fiscal):	31-32	
Expenditures		Budget
CON-Construction Subtotal		\$293,250
CTGY-CIP Contingency (35%)		\$102,638
EDA-Eng/Design/Admin (15%)		\$43,988
ESDC/CM - Cons. Mgmt (10%)		\$29,325
Expenditure Totals:		\$469,200
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$469,200	



Sewer Line Replacement, MH 64-65 and MH 76A-77		CS-3
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks and is thus a significant contributor to inflow and infiltration (I/I). The existing line is also undersized to meet demand.	
Project Description:	This project consists of the replacement and installation of approximately 741 linear feet of 8" diameter sewer pipeline and only 3 manholes due to previous replacement of manhole 64 (see FIGURE 3).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years and is undersized. Source of repeated SSO's.	
General Location:	Mitchler @ Diggins	
Existing Pipe Material:	Clay	
Project Priority:	Short-Term	
Construction Year (Fiscal):	28-29	
Expenditures		Budget
CON-Construction Subtotal		\$350,250
CTGY-CIP Contingency (35%)		\$122,588
EDA-Eng/Design/Admin (15%)		\$52,538
ESDC/CM - Cons. Mgmt (10%)		\$35,025
Expenditure Totals:		\$560,400
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$560,400	



Sewer Line Replacement, MH 53-57-LP (Light Pole)		CS-4
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks and is thus a significant contributor to inflow and infiltration (I/I). The existing line is also undersized to meet demand.	
Project Description:	This project consists of the replacement and installation of approximately 1,021 linear feet of 8" diameter sewer pipeline and 5 manholes, beginning at the light pole located approximately 90 feet south west of manhole 57 (see FIGURE 4).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years and is undersized. Source of repeated SSO's.	
General Location:	Allen Lane Red Store	
Existing Pipe Material:	Clay	
Project Priority:	Short-Term	
Construction Year (Fiscal):	29-30	
Expenditures		Budget
CON-Construction Subtotal		\$450,250
CTGY-CIP Contingency (35%)		\$157,588
EDA-Eng/Design/Admin (15%)		\$67,538
ESDC/CM - Cons. Mgmt (10%)		\$45,025
Expenditure Totals:		\$720,400
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$720,400	



Sewer Line Replacement, MH 43-45		CS-5
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks and is thus a significant contributor to inflow and infiltration (I/I). The existing line is also undersized to meet demand.	
Project Description:	This project consists of the replacement and installation of approximately 775 linear feet of 8" diameter sewer pipeline and 3 manholes (see FIGURE 3).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years and is undersized. Source of repeated SSO's.	
General Location:	Main Street	
Existing Pipe Material:	Clay	
Project Priority:	Short-Term	
Construction Year (Fiscal):	28-29	
Expenditures		Budget
CON-Construction Subtotal		\$358,750
CTGY-CIP Contingency (35%)		\$125,563
EDA-Eng/Design/Admin (15%)		\$53,813
ESDC/CM - Cons. Mgmt (10%)		\$35,875
Expenditure Totals:		\$574,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$574,000	



Sewer Line Replacement, MH 31-29		CS-6
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks. The line traverses natural drainage and is a significant contributor to inflow and infiltration (I/I).	
Project Description:	This project consists of the replacement and installation of approximately 306 linear feet of 8" diameter sewer pipeline and 2 manholes (see FIGURE 7).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years, traverses natural drainages, and significant sources of I/I.	
General Location:	6 Mile Road @ Scott Street	
Existing Pipe Material:	Clay	
Project Priority:	Short-Term	
Construction Year (Fiscal):	29-30	
Expenditures		Budget
CON-Construction Subtotal		\$156,500
CTGY-CIP Contingency (35%)		\$54,775
EDA-Eng/Design/Admin (15%)		\$23,475
ESDC/CM - Cons. Mgmt (10%)		\$15,650
Expenditure Totals:		\$250,400
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$250,400	



Sewer Line Replacement, MH 40-41		CS-7
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks and is thus a significant contributor to inflow and infiltration (I/I). The existing line is also undersized to meet demand.	
Project Description:	This project consists of the replacement and installation of approximately 105 linear feet of 8" diameter sewer pipeline and 2 manholes (see FIGURE 6).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years and is undersized. Source of repeated SSO's.	
General Location:	Jones Street @ Main	
Existing Pipe Material:	Clay	
Project Priority:	Short-Term	
Construction Year (Fiscal):	29-30	
Expenditures		Budget
CON-Construction Subtotal		\$176,250
CTGY-CIP Contingency (35%)		\$61,688
EDA-Eng/Design/Admin (15%)		\$26,438
ESDC/CM - Cons. Mgmt (10%)		\$17,625
Expenditure Totals:		\$282,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$282,000	

Add New Manhole Between MH 94-95		CS-8
Existing Condition and Risk of Failure:	Distance between manholes 94 and 95 exceeds 300' making maintenance and inspection difficult and becoming a frequent source of Sanitary Sewer Overflows (SSO's).	
Project Description:	Additional manhole will be placed directly in between manhole 94 and 95 (see FIGURE 1).	
Reasons for Repair or Replacement:	Improve access- distance between MHs exceeds 300', source of SSOs, close to waterway	
General Location:	Dam Road	
Existing Pipe Material:	Clay	
Project Priority:	Long-Term	
Construction Year (Fiscal):	32-33	
Expenditures		Budget
CON-Construction Subtotal		\$90,000
CTGY-CIP Contingency (35%)		\$31,500
EDA-Eng/Design/Admin (15%)		\$13,500
ESDC/CM - Cons. Mgmt (10%)		\$9,000
Expenditure Totals:		\$144,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$144,000	



Sewer Line Replacement, MH 175-179		CS-9
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks and is thus a significant contributor to inflow and infiltration (I/I). The existing line is also undersized to meet demand.	
Project Description:	This project consists of the replacement and installation of approximately 478 linear feet of 8" diameter sewer pipeline and 4 manholes (see FIGURE 2, 3, and 6).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years and is undersized. Source of repeated SSO's.	
General Location:	Church Street by pool	
Existing Pipe Material:	Clay	
Project Priority:	Urgent	
Construction Year (Fiscal):	24-25	
Expenditures		Budget
CON-Construction Subtotal		\$299,500
CTGY-CIP Contingency (35%)		\$104,825
EDA-Eng/Design/Admin (15%)		\$44,925
EDA-Eng/Design/Admin (10%)		\$29,950
Expenditure Totals:		\$479,200
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$479,200	

Clay Pipe Replacement, MH 18 - 14		CS-10
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks and is thus a significant contributor to inflow and infiltration (I/I). The existing line is also undersized to meet demand.	
Project Description:	This project consists of the replacement and installation of approximately 675 linear feet of 6" diameter sewer pipeline. (see FIGURE 6).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years and is undersized. Source of repeated SSO's.	
General Location:	Main Street	
Existing Pipe Material:	Clay	
Project Priority:	Long-Term	
Construction Year (Fiscal):	32-33	
Expenditures		Budget
CON-Construction Subtotal		\$235,000
CTGY-CIP Contingency (35%)		\$82,250
EDA-Eng/Design/Admin (15%)		\$35,250
EDA-Eng/Design/Admin (10%)		\$23,500
Expenditure Totals:		\$376,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$376,000	



Clay Pipe Replacement, MH 18 to clean out		CS-11
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks and is thus a significant contributor to inflow and infiltration (I/I). The existing line is also undersized to meet demand.	
Project Description:	This project consists of the replacement and installation of approximately 125 linear feet of 6" diameter sewer pipeline (see FIGURE 6).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years and is undersized. Source of repeated SSO's.	
General Location:	Sheep Ranch	
Existing Pipe Material:	Clay	
Project Priority:	Long-Term	
Construction Year (Fiscal):	32-33	
Expenditures		Budget
CON-Construction Subtotal		\$60,000
CTGY-CIP Contingency (35%)		\$21,000
EDA-Eng/Design/Admin (15%)		\$9,000
ESDC/CM - Cons. Mgmt (10%)		\$6,000
Expenditure Totals:		\$96,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$96,000	



Clay Pipe Replacement, MH 82-84		CS-12
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks. Located near a waterway, this line is a significant contributor to inflow and infiltration (I/I).	
Project Description:	This project consists of the replacement and installation of approximately 540 linear feet of 8" diameter sewer pipeline (see FIGURE 3).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years and is undersized, close to waterway, and significant source of I/I.	
General Location:	Tanner Court	
Existing Pipe Material:	Clay	
Project Priority:	Short-Term	
Construction Year (Fiscal):	30-31	
Expenditures		Budget
CON-Construction Subtotal		\$255,000
CTGY-CIP Contingency (35%)		\$89,250
EDA-Eng/Design/Admin (15%)		\$38,250
ESDC/CM - Cons. Mgmt (10%)		\$25,500
Expenditure Totals:		\$408,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$408,000	



Clay Pipe Replacement, MH 49-50		CS-13
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks and is thus a significant contributor to inflow and infiltration (I/I). The existing line is also undersized to meet demand.	
Project Description:	This project consists of the replacement and installation of approximately 450 linear feet of 6" diameter sewer pipeline (see FIGURE 4).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years and is undersized. Source of repeated SSO's.	
General Location:	School Street	
Existing Pipe Material:	Clay	
Project Priority:	Long-Term	
Construction Year (Fiscal):	32-33	
Expenditures		Budget
CON-Construction Subtotal		\$180,000
CTGY-CIP Contingency (35%)		\$63,000
EDA-Eng/Design/Admin (15%)		\$27,000
ESDC/CM - Cons. Mgmt (10%)		\$18,000
Expenditure Totals:		\$288,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$288,000	



Clay Pipe Replacement, MH 51-52		CS-14
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks and is thus a significant contributor to inflow and infiltration (I/I). The existing line is also undersized to meet demand.	
Project Description:	This project consists of the replacement and installation of approximately 300 linear feet of 6" diameter sewer pipeline (see FIGURE 4).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years and is undersized. Source of repeated SSO's.	
General Location:	Behind Chevron	
Existing Pipe Material:	Clay	
Project Priority:	Long-Term	
Construction Year (Fiscal):	32-33	
Expenditures		Budget
CON-Construction Subtotal		\$130,000
CTGY-CIP Contingency (35%)		\$45,500
EDA-Eng/Design/Admin (15%)		\$19,500
ESDC/CM - Cons. Mgmt (10%)		\$13,000
Expenditure Totals:		\$208,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$208,000	



Clay Pipe Replacement, MH 35-29		CS-15
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks. The line traverses natural drainage and is a significant contributor to inflow and infiltration (I/I).	
Project Description:	This project consists of the replacement and installation of approximately 2,040 linear feet of 6" diameter sewer pipeline (see FIGURE 7).	
Reasons for Repair or Replacement:	Traverses natural drainages and small creek, sources of I/I, some old clay construction	
General Location:	Six Mile, Davie & Bottomly Property	
Existing Pipe Material:	Clay	
Project Priority:	Long-Term	
Construction Year (Fiscal):	32-33	
Expenditures		Budget
CON-Construction Subtotal		\$583,000
CTGY-CIP Contingency (35%)		\$204,050
EDA-Eng/Design/Admin (15%)		\$87,450
ESDC/CM - Cons. Mgmt (10%)		\$58,300
Expenditure Totals:		\$932,800
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$932,800	



Clay Pipe Replacement, MH 131-136		CS-16
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks. The line has seen an increase in demand and has resulted in accelerated wear on the pipe.	
Project Description:	This project consists of the replacement and installation of approximately 125 linear feet of 6" diameter sewer pipeline (see FIGURE 2).	
Reasons for Repair or Replacement:	Clay construction over 50 years, increased use and impact, source of repeated SSOs	
General Location:	Williams Street	
Existing Pipe Material:	Clay	
Project Priority:	Short-Term	
Construction Year (Fiscal):	30-31	
Expenditures		Budget
CON-Construction Subtotal		\$79,250
CTGY-CIP Contingency (35%)		\$27,738
EDA-Eng/Design/Admin (15%)		\$11,888
ESDC/CM - Cons. Mgmt (10%)		\$7,925
Expenditure Totals:		\$126,800
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$126,800	



Clay Pipe Replacement, MH 123-124, Add New MH		CS-17
Existing Condition and Risk of Failure:	Distance between manholes 123 and 124 exceeds 300' making maintenance and inspection difficult and becoming a frequent source of Sanitary Sewer Overflows (SSO's).	
Project Description:	This project consists of the replacement and installation of approximately 140 linear feet of 6" diameter sewer pipeline (see FIGURE 2).	
Reasons for Repair or Replacement:	Improve access- distance between MHs exceeds 300', source of SSOs	
General Location:	Apple Blossom	
Existing Pipe Material:	Clay	
Project Priority:	Short-Term	
Construction Year (Fiscal):	30-31	
Expenditures		Budget
CON-Construction Subtotal		\$220,000
CTGY-CIP Contingency (35%)		\$77,000
EDA-Eng/Design/Admin (15%)		\$33,000
ESDC/CM - Cons. Mgmt (10%)		\$22,000
Expenditure Totals:		\$352,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$352,000	



Clay Pipe Replacement, MH 103-105		CS-18
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks. The line has seen an increase in demand and has resulted in accelerated wear on the pipe and significant source of Inflow and Infiltration (I/I).	
Project Description:	This project consists of the replacement and installation of approximately 550 linear feet of 6" diameter sewer pipeline (see FIGURE 2).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years. Increased impact and use, source of I/I.	
General Location:	Apple Blossom	
Existing Pipe Material:	Clay	
Project Priority:	Long-Term	
Construction Year (Fiscal):	33-34	
Expenditures		Budget
CON-Construction Subtotal		\$185,000
CTGY-CIP Contingency (35%)		\$64,750
EDA-Eng/Design/Admin (15%)		\$27,750
ESDC/CM - Cons. Mgmt (10%)		\$18,500
Expenditure Totals:		\$296,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$296,000	



Clay Pipe Replacement, MH 105-135		CS-19
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks and is thus a significant contributor to inflow and infiltration (I/I). The existing line is also undersized to meet demand.	
Project Description:	This project consists of the replacement and installation of approximately 1,080 linear feet of 6" diameter sewer pipeline (see FIGURE 2).	
Reasons for Repair or Replacement:	Clay pipe, age exceeds 50 years and is undersized. Source of repeated SSO's and I/I.	
General Location:	Apple Blossom	
Existing Pipe Material:	Clay	
Project Priority:	Long-Term	
Construction Year (Fiscal):	33-34	
Expenditures		Budget
CON-Construction Subtotal		\$366,000
CTGY-CIP Contingency (35%)		\$128,100
EDA-Eng/Design/Admin (15%)		\$54,900
ESDC/CM - Cons. Mgmt (10%)		\$36,600
Expenditure Totals:		\$585,600
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$585,600	



Clay Pipe Replacement, MH 172-23		CS-20
Existing Condition and Risk of Failure:	The existing pipe is partially made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks. The line is undersized and has seen an increase in demand and has resulted in accelerated wear on the pipe.	
Project Description:	This project consists of the replacement and installation of approximately 140 linear feet of 6" diameter sewer pipeline (see FIGURE 6).	
Reasons for Repair or Replacement:	Partial clay construction pipe is undersized. Increased impact and use, source of SSOs.	
General Location:	Main Street behind UPUD	
Existing Pipe Material:	Clay	
Project Priority:	Short-Term	
Construction Year (Fiscal):	29-30	
Expenditures		Budget
CON-Construction Subtotal		\$133,000
CTGY-CIP Contingency (35%)		\$46,550
EDA-Eng/Design/Admin (15%)		\$19,950
ESDC/CM - Cons. Mgmt (10%)		\$13,300
Expenditure Totals:		\$212,800
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$212,800	

Clay Pipe Replacement, MH 14 to LH		CS-21
Existing Condition and Risk of Failure:	The existing pipe is partially made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks. The line is undersized and has seen an increase in demand and has resulted in accelerated wear on the pipe.	
Project Description:	This project consists of the replacement and installation of approximately 660 linear feet of 4" diameter sewer pipeline, 2 manhole, and 1 sewer cleanout (see FIGURE 6).	
Reasons for Repair or Replacement:	Partial clay construction pipe is undersized. Increased impact and use, source of SSOs.	
General Location:	Church Street @ Main	
Existing Pipe Material:	Clay	
Project Priority:	Long-Term	
Construction Year (Fiscal):	33-34	
Expenditures		Budget
CON-Construction Subtotal		\$297,000
CTGY-CIP Contingency (35%)		\$103,950
EDA-Eng/Design/Admin (15%)		\$44,550
ESDC/CM - Cons. Mgmt (10%)		\$29,700
Expenditure Totals:		\$475,200
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$475,200	



Clay Pipe Replacement, MH 14-10		CS-22
Existing Condition and Risk of Failure:	The existing pipe is made of clay and is over 50 years old. Due to its clay construction, it is prone to root intrusion and leaks. The line is a significant source of Inflow and Infiltration (I/I) and Sanitary Sewer Overflows (SSO's).	
Project Description:	This project consists of the replacement and installation of approximately 140 linear feet of 6" diameter sewer pipeline (see FIGURE 6).	
Reasons for Repair or Replacement:	Clay pipe age exceeds 50 years. Significant source of I/I and repeated SSO's.	
General Location:	Main Street @ Kramer	
Existing Pipe Material:	Clay	
Project Priority:	Long-Term	
Construction Year (Fiscal):	33-34	
Expenditures	Budget	
CON-Construction Subtotal	\$78,000	
CTGY-CIP Contingency (35%)	\$27,300	
EDA-Eng/Design/Admin (15%)	\$11,700	
ESDC/CM - Cons. Mgmt (10%)	\$7,800	
Expenditure Totals:	\$124,800	
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$124,800	



Influent Force Main		CS-23
Existing Condition and Risk of Failure:	The dual-force mains are constructed of asbestos clay and PVC. They are more than 50 years old and in disrepair. The force mains convey sewage from the district to the WWTP, making them an essential asset and a liability to the district.	
Project Description:	This project consists of the replacement and installation of approximately 5,500 linear feet of 8" diameter sewer pipeline.	
Reasons for Repair or Replacement:	Dual-force main constructed of asbestos clay and PVC. Age exceeds 50 years and is in disrepair.	
General Location:	Murphys Grade Road to WWTP	
Existing Pipe Material:	Clay & PVC	
Project Priority:	Immediate	
Construction Year (Fiscal):	25-26	
Expenditures		Budget
CON-Construction Subtotal		\$2,130,000
CTGY-CIP Contingency (35%)		\$745,500
EDA-Eng/Design/Admin (15%)		\$319,500
ESDC/CM - Cons. Mgmt (10%)		\$213,000
Expenditure Totals:		\$3,408,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$3,408,000	



Sand Filtration System		WWTP-1
Existing Condition and Risk of Failure:	The existing sand filtration system has not been updated since 1985 and has experienced adverse effects due to high heat and algae blooms.	
Project Description:	The project consists of providing a sand filtration system.	
Reasons for Repair or Replacement:	Project will provide a sand filtration system that will allow MSD to meet Title 22 water standards for recycling, result in improvements to operation and maintenance, and overall system performance.	
General Location:	WWTP	
Project Priority:	Immediate	
Construction Year (Fiscal):	26-27	
Expenditures	Budget	
CON-Construction Subtotal	\$400,000	
CTGY-CIP Contingency (35%)	\$140,000	
EDA-Eng/Design/Admin (15%)	\$60,000	
ESDC/CM - Cons. Mgmt (10%)	\$40,000	
Expenditure Totals:	\$640,000	
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$640,000	



Disinfection System		WWTP-2
Existing Condition and Risk of Failure:	The existing disinfection system requires frequent maintenance and has resulted in a decrease in water quality.	
Project Description:	This project consists of upgrades to the influent piping and chemical injection system.	
Reasons for Repair or Replacement:	Chemical piping and injection upgrades will improve water quality, efficiency, and system performance.	
General Location:	WWTP	
Project Priority:	Immediate	
Construction Year (Fiscal):	26-27	
Expenditures		Budget
CON-Construction Subtotal		\$50,000
CTGY-CIP Contingency (35%)		\$17,500
EDA-Eng/Design/Admin (15%)		\$7,500
ESDC/CM - Cons. Mgmt (10%)		\$5,000
Expenditure Totals:		\$80,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$80,000	



Backup Generator		WWTP-3
Existing Condition and Risk of Failure:	The existing backup generator requires frequent maintenance and has resulted in a decreased site security.	
Project Description:	The project involves replacing the existing backup generator.	
Reasons for Repair or Replacement:	Replacing the existing backup generator will improve reliability and reduce maintenance.	
General Location:	WWTP	
Project Priority:	Short-Term	
Construction Year (Fiscal):	27-28	
Expenditures		Budget
CON-Construction Subtotal		\$225,000
CTGY-CIP Contingency (35%)		\$78,750
EDA-Eng/Design/Admin (15%)		\$33,750
ESDC/CM - Cons. Mgmt (10%)		\$22,500
Expenditure Totals:		\$360,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$360,000	



Site Fencing		WWTP-4
Existing Condition and Risk of Failure:	The existing fencing is dated and offers very little site security.	
Project Description:	This project includes the installation of fencing around the WWTP.	
Reasons for Repair or Replacement:	Installing fencing around finishing pond will improve overall site safety and security.	
General Location:	WWTP	
Project Priority:	Short-Term	
Construction Year (Fiscal):	27-28	
Expenditures		Budget
CON-Construction Subtotal		\$300,000
CTGY-CIP Contingency (35%)		\$105,000
EDA-Eng/Design/Admin (3%)		\$9,000
ESDC/CM - Cons. Mgmt (3%)		\$9,000
Expenditure Totals:		\$423,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$423,000	



Pond 3 Sludge Removal		WWTP-5
Existing Condition and Risk of Failure:	Sludge accumulation due to the treatment process has reduced the effectiveness of the pond.	
Project Description:	This project consists of the sludge removal and disposal for Pond 3.	
Reasons for Repair or Replacement:	Removing sludge from Pond 3 will improve the treatment capacity and operation efficiency.	
General Location:	WWTP	
Project Priority:	Immediate	
Construction Year (Fiscal):	26-27	
Expenditures		Budget
CON-Construction Subtotal		\$552,500
CTGY-CIP Contingency (0%)		\$0
EDA-Eng/Design/Admin (0%)		\$0
ESDC/CM - Cons. Mgmt (0%)		\$0
Expenditure Totals:		\$552,500
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$552,500	



Repair/Replacement of Trucks/Vehicles		EQ-1
Existing Condition and Risk of Failure:	Existing vehicles are dated and incur significant costs to operate and maintain.	
Project Description:	This project consists of the replacement of district vehicles.	
Reasons for Repair or Replacement:	Project will improve the performance and reliability of vehicles necessary to operate and maintain system.	
Project Priority:	Short-Term	
Construction Year (Fiscal):	27-28	
Expenditures	Budget	
CON-Construction Subtotal	\$100,000	
CTGY-CIP Contingency (0%)	\$0	
EDA-Eng/Design/Admin (0%)	\$0	
ESDC/CM - Cons. Mgmt (0%)	\$0	
Expenditure Totals:	\$100,000	
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$100,000	



Hydro Flusher		EQ-2
Existing Condition and Risk of Failure:	Current hydroflusher was purchased in 2020 and has an expected useful life of 10 years.	
Project Description:	This project consists of purchasing a new Hydro Flusher	
Reasons for Repair or Replacement:	Project will improve maintenance system and overall system performance.	
Project Priority:	Short-Term	
Construction Year (Fiscal):	27-28	
Expenditures		Budget
CON-Construction Subtotal		\$70,000
CTGY-CIP Contingency (0%)		\$0
EDA-Eng/Design/Admin (0%)		\$0
ESDC/CM - Cons. Mgmt (0%)		\$0
Expenditure Totals:		\$70,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$70,000	



Sewer Camera		EQ-3
Existing Condition and Risk of Failure:	The district facilities are not monitored with cameras, making it difficult to assess the condition of the system.	
Project Description:	This project consists of installing cameras to monitor the sewer system.	
Reasons for Repair or Replacement:	Project will allow MSD to better identify condition of system.	
Project Priority:	Immediate	
Construction Year (Fiscal):	26-27	
Expenditures		Budget
CON-Construction Subtotal		\$20,000
CTGY-CIP Contingency (0%)		\$0
EDA-Eng/Design/Admin (0%)		\$0
ESDC/CM - Cons. Mgmt (0%)		\$0
Expenditure Totals:		\$20,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$20,000	



Security Camera		EQ-4
Existing Condition and Risk of Failure:	The district facilities are not monitored with cameras, creating a security risk.	
Project Description:	This project consists of installing security cameras at the district facilities.	
Reasons for Repair or Replacement:	Project will improve overall site safety and security.	
Project Priority:	Long-Term	
Construction Year (Fiscal):	33-34	
Expenditures		Budget
CON-Construction Subtotal		\$8,000
CTGY-CIP Contingency (0%)		\$0
EDA-Eng/Design/Admin (0%)		\$0
ESDC/CM - Cons. Mgmt (0%)		\$0
Expenditure Totals:		\$8,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$8,000	



Technology		EQ-5
Existing Condition and Risk of Failure:	The existing administration computers, operation computers, and District software are antiquated.	
Project Description:	Replace antiquated technology.	
Reasons for Repair or Replacement:	Improve staff efficiency and operation.	
Project Priority:	Immediate	
Construction Year (Fiscal):	26-27	
Expenditures		Budget
CON-Construction Subtotal		\$22,000
CTGY-CIP Contingency (0%)		\$0
EDA-Eng/Design/Admin (0%)		\$0
ESDC/CM - Cons. Mgmt (0%)		\$0
Expenditure Totals:		\$22,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$22,000	



Office Building		BF-1
Existing Condition and Risk of Failure:	The Office is structurally dated and has multiple leaks from the roof and interior walls.	
Project Description:	The project consists of replacing the Office building.	
Reasons for Repair or Replacement:	Leaks coming from roof and interior walls. Building is structurally dated and beyond its useful life.	
Project Priority:	Long-Term	
Construction Year (Fiscal):	34-35	
Expenditures		Budget
CON-Construction Subtotal		\$450,000
CTGY-CIP Contingency (35%)		\$157,500
EDA-Eng/Design/Admin (15%)		\$67,500
ESDC/CM - Cons. Mgmt (10%)		\$45,000
Expenditure Totals:		\$720,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$720,000	



Maintenance Facility		BF-2
Existing Condition and Risk of Failure:	The existing building is structurally dated with leaks coming from the roof over the lab area.	
Project Description:	This project consists or replacing the Maintenance facility.	
Reasons for Repair or Replacement:	Leaks are coming from the roof over the lab area. Building is structurally dated and requires a new roof.	
Project Priority:	Long-Term	
Construction Year (Fiscal):	34-35	
Expenditures		Budget
CON-Construction Subtotal		\$450,000
CTGY-CIP Contingency (35%)		\$157,500
EDA-Eng/Design/Admin (15%)		\$67,500
ESDC/CM - Cons. Mgmt (10%)		\$45,000
Expenditure Totals:		\$720,000
Method of Funding:	Unknown: MSD Reserve Funds, Grant/Loan, Developer (as available)	
Funding Amount:	\$720,000	

APPENDIX C

MSD 24/25 Budget and MSD Revenue Requirement

Fiscal Year 24/25 Adopted Budget



Income	
Sewer Service Charges	915,404.00
Misc Income	252,700.00
Total	1,168,104.00
Debt Service Loan Payment-SWRCB	(43,671.00)
Operating Expense	
Wages	(421,920.00)
Benefits	(247,712.00)
Payroll Tax Liabilities	(35,000.00)
Workers Compenstation	(11,250.00)
Repairs & Maintenance-Operations	(14,500.00)
Supplies-Operations	(50,850.00)
Utilities-Operations	(99,000.00)
Other-Operations	(33,700.00)
Rent/Leases-Administration	(720.00)
Supplies-Administration	(14,160.00)
Utilites-Administration	(8,050.00)
Other-Administration	(19,100.00)
Insurance-Administration	(40,000.00)
Outside Services-Administration	(66,730.00)
Permit/Licenses-Administration	(41,000.00)
Customer Outreach-Administration	(2,500.00)
Due to Reserve	18,241.00
Reserve Funds	
Income from Operating +/-	18,241.00
Capital Reserve Fund	1,057,619.00
Equipment Reserve Fund	403,052.00
Debt Service Reserve-Restricted Fund	44,000.00
Emergency Operating Reserve Fund	224,000.00
Special Use/Designated Project Fund	661,185.00
	2,408,097.00
24/25 Capital Reserve Projects	(568,000.00)
24/25 Equipment Reserve Repair/Replacement	(18,500.00)
Reserve Fund Balance	1,821,597.00

Murphys Sanitary District
 Approved Operating Budget Revenue FY 2024/2025

2024/25 Approved Budget

4100 · Srv Chrgs - Residential	665,280.00
4102 · Srv Chrgs - Apartments	59,760.00
4104 · Srv Chrgs - Lodges/Churches	8,551.00
4106 · Srv Chrgs - School	3,552.00
4108 · Srv Chrgs - Commercial	178,261.00
Total Sewer Usage Fees	915,404.00
4999 · Rental Income	7800.00
4110 · Pln Chk & Inspection Fees	300.00
4111 · Late Fees	2000.00
4120 · Taxes	140000.00
4130 · Other Services-Autopay set up	500.00
4140 · General Reserve Interest	100000.00
4150 · Vacant lot Billing	1600.00
4160 · Refunds - Rebates	500.00
Total Misc Income	252,700.00

2024/2025 OPERATING REVENUE

1,168,104.00

Murphys Sanitary District

Operating Budget Expenditures 2024/2025

	Approved					% Change
	Jul '23 - Jan'24	Feb'24 - June'24	EOY Projection	23/24 Budget	2024/2025 Budget	
Wages/Staff and Board						
Wages - Operations	125,925.00	94,365.00	220,290.00	227,497.00	252,213.00	
Wages - Office	68,557.01	49,000.00	117,557.01	123,042.00	150,207.00	
Wages-Board					6,000.00	
Overtime - Operations	1,632.42	1,367.58	3,000.00	3,000.00	3,000.00	
On-Call Comp - Operations	6,600.00	3,900.00	10,500.00	10,500.00	10,500.00	
			-			
Total Wages	202,714.43	148,632.58	351,347.01	364,039.00	421,920.00	16%
Employee Benefits						
Health Insurance - Operations	73,894.02	49,778.78	123,672.80	120,000.00	124,800.00	
Health Insurance Administration	26,545.81	17,243.78	43,789.59	42,000.00	88,800.00	
calPERS Retirement - Operations	11,799.15	8,351.34	20,150.49	19,715.00	20,550.00	
calPERS Retirement - Admin	4,868.03	3,400.65	8,268.68	8,330.00	9,462.00	
Accured Vac-Ops	0.00	2,562.00	2,562.00	2,562.00	4,100.00	
Accurd Vac-Admin	0.00	-	-	-	-	
Total Employee Benefits	117,107.01	81,336.55	198,443.56	192,607.00	247,712.00	29%
Payroll Taxes						
FICA-Medicare-SS	17,767.21	13,300.00	31,067.21	38,500.00	35,000.00	
Total PR Taxes	17,767.21	13,300.00	31,067.21	38,500.00	35,000.00	-9%
Workers' Compensation						
Workers' Comp – Operations	9,382.18	-	9,382.18	16,000.00	9,000.00	
Workers' Comp -- Board	0.00	-	-	23.00		
Workers' Comp. – Administration	620.00	-	620.00	700.00	2,250.00	
Total Workers' Compensation	10,002.18	-	10,002.18	16,723.00	11,250.00	-33%
Operations - Maint & Repairs						
R&M - Collection	1,778.04	1,221.96	3,000.00	3,000.00	3,000.00	
R&M - Treatment	1,994.66	1,005.34	3,000.00	3,000.00	3,000.00	
R&M - Truck	993.35	1,000.00	1,993.35	4,000.00	4,000.00	
R&M - Tractor	60.31	-	500.00	500.00	500.00	
R&M-Trailer-Trash Pumps	9.69	-	500.00	500.00	500.00	
R&M - Hydro Equipment	1,391.99	35.30	1,427.29	1,500.00	2,000.00	
R&M - Sml Tools & Equipment	759.04	74.46	833.50	1,000.00	1,500.00	
Total Operations - Maint & Repairs	6,987.08	3,337.06	11,254.14	13,500.00	14,500.00	7%

Murphys Sanitary District

Operating Budget Expenditures 2024/2025

	Approved					% Change
	Jul '23 - Jan'24	Feb'24 - June'24	EOY Projection	23/24 Budget	2024/2025 Budget	
Operations - Supplies						
Equipment Rental	0.00	-	-	350.00	350.00	
Fuel	4,150.58	1,940.01	6,090.59	8,500.00	7,500.00	
Collection	166.51	561.14	727.65	1,500.00	1,500.00	
Chemicals-Treatment	18,495.34	6,000.00	24,495.34	37,000.00	30,000.00	
Office Supplies	1,070.29	900.00	1,970.29	2,000.00	2,000.00	
Safety Supplies	597.30	400.00	997.30	1,000.00	1,000.00	
Uniforms	1,871.10	1,100.00	2,971.10	4,000.00	3,000.00	
Software Updates-GIS	564.02	1,435.98	2,000.00	2,000.00	5,500.00	
Total Operations - Supplies	26,915.14	12,337.13	37,252.27	56,350.00	50,850.00	-10%
Operations - Utilities						
Collections - Electric/Water	13,899.11	15,084.70	28,983.81	30,000.00	30,000.00	
WWTP - Electric/Water	37,596.21	19,750.00	57,346.21	45,000.00	65,000.00	
Telephone - Internet	1,947.66	1,626.35	3,574.01	4,500.00	4,000.00	
Total Operations - Utilities	53,442.98	36,461.05	89,904.03	79,500.00	99,000.00	25%
Operations - Other						
Education Operations	1,209.13	1,790.87	3,000.00	3,000.00	3,000.00	
Research - Monitoring	16,563.60	6,492.50	23,056.10	24,000.00	24,000.00	
Answering Service	2,109.00	1,670.00	3,779.00	3,550.00	3,800.00	
Security-Alarm Service	3,029.85	600.00	3,629.85	3,700.00	2,900.00	
Total Operations - Other	22,911.58	10,553.37	33,464.95	34,250.00	33,700.00	-2%
Administrative - Rents - Leases						
7050.10 · Rents & Leases - Collection	720.00	-	720.00	720.00	720.00	
Total Administrative - Rents - Leases	720.00		720.00	720.00	720.00	0%
Administrative - Supplies						
Office Supplies	2,215.00	1,534.66	3,749.66	4,000.00	4,000.00	
Operating Expenses	435.83	1,300.00	1,735.83	1,500.00	1,500.00	
Postage	1,471.26	375.00	1,846.26	1,500.00	2,000.00	
Printing-Carbon Copy	203.38	107.11	310.49	300.00	360.00	
Publications	0.00	300.00	300.00	300.00	300.00	
Office Software and Updates	1,819.65	1,429.75	3,249.40	3,000.00	6,000.00	
IT Updates and Repair	145.00	180.00	325.00	500.00		
Total Administrative - Supplies	6,290.12	5,226.52	11,516.64	11,100.00	14,160.00	27%
Administrative - Utilities						
Alarm Service Office			-		1,000.00	
Electric & Water Office	1,750.26	1,791.00	3,541.26	4,500.00	3,900.00	
Telephone & Internet Access	3,171.87	981.71	4,153.58	4,200.00	3,150.00	
Total Administrative - Utilities	4,922.13	2,772.71	7,694.84	8,700.00	8,050.00	-7.5%

Murphys Sanitary District

Operating Budget Expenditures 2024/2025

	Approved					% Change
	Jul '23 - Jan'24	Feb'24 - June'24	EOY Projection	23/24 Budget	2024/2025 Budget	
Administrative - Other						
Bank Charges - Vanco Fees	939.34	587.50	1,526.84	1,440.00	1,600.00	
County Lien Costs -Mileage	105.06	101.00	206.06	500.00	500.00	
Education	1,425.01	3,074.99	4,500.00	4,500.00	4,500.00	
Memberships	10,587.77	1,007.15	11,594.92	10,000.00	7,000.00	
Grant Expenses	0.00	-	2,500.00	2,500.00	2,500.00	
15 Ernest St Building RM	1,837.58	1,000.00	2,837.58	3,000.00	3,000.00	
Total Administrative - Other	14,894.76	5,770.64	23,165.40	21,940.00	19,100.00	-13%
Administrative - Insurance						
Liability - Property Ins	36,662.64	-	36,662.64	35,000.00	40,000.00	
Total Administrative - Insurance	36,662.64		36,662.64	35,000.00	40,000.00	14%
Administrative - Outside						
Accounting Services	9,500.00	-	9,500.00	10,000.00	10,000.00	
Engineering Services	652.50	4,347.50	5,000.00	5,000.00	5,000.00	
Legal Services	4,615.80	7,000.00	11,615.80	6,000.00	20,000.00	
Consultant Services	0.00	6,370.00	6,370.00	0.00	28,630.00	
Board Expenses	6,394.53	4,252.20	10,646.73	11,000.00	2,600.00	
IT Maintenance & Repair	190.00		190.00	1,200.00	500.00	
Software Update-PQ, PR, SL	1,164.76		1,164.76	1,500.00	0.00	
Total Administrative - Outside	22,517.59	21,969.70	43,132.53	34,700.00	66,730.00	91%
Administrative - Permits						
State Permits-Reporting	30,803.00	-	30,803.00	41,000.00	41,000.00	
Plan Check Permits -	0.00	-	300.00	300.00	0.00	
Total Administrative - License-Permit	30,803.00	-	31,103.00	41,300.00	41,000.00	-1%
Administrative - Advertising						
Advertising	461.18	-	500.00	500.00	500.00	
Customer Outreach	0.00	-	750.00	750.00	2,000.00	
Total Administrative - Advertising	461.18	0.00	1,250.00	1,250.00	2,500.00	100%

Table 1 – Projected Revenue Requirement

Expenses and Revenues	Annual Increase	FY 2024 Budget	FY 2025 Yr 1	FY 2026 Yr 2	FY 2027 Yr 3	FY 2028 Yr 4	FY 2029 Yr 5	FY 2030 Yr 6
Operating Expenses								
Personnel	6.5%	\$611,870	\$651,640	\$694,000	\$739,110	\$787,150	\$838,310	\$892,800
Utilities	10.0%	\$79,500	\$87,450	\$96,200	\$105,820	\$116,400	\$128,040	\$140,840
Operations & Repairs	6.0%	\$104,100	\$110,350	\$116,970	\$123,990	\$131,430	\$139,320	\$147,680
Licenses & Permits	5.0%	\$41,300	\$43,370	\$45,540	\$47,820	\$50,210	\$52,720	\$55,360
Insurance	10.0%	\$35,000	\$38,500	\$42,350	\$46,590	\$51,250	\$56,380	\$62,020
Professional Services	3.5%	\$29,700	\$30,740	\$31,820	\$32,930	\$34,080	\$35,270	\$36,500
Administrative Costs	3.0%	\$48,710	\$50,170	\$51,680	\$53,230	\$54,830	\$56,470	\$58,160
Total Operating Expenses		\$950,180	\$1,012,220	\$1,078,560	\$1,149,490	\$1,225,350	\$1,306,510	\$1,393,360
Capital Activities								
Cash-Funded CIP		\$758,500	\$328,400	\$270,500	\$354,400	\$321,200	\$352,900	\$367,100
System Rehabilitation		\$0	\$187,000	\$189,500	\$193,000	\$196,000	\$199,000	\$202,500
Total Capital Activities		\$758,500	\$515,400	\$460,000	\$547,400	\$517,200	\$551,900	\$569,600
Debt								
Debt Service (SRF Loan)		\$43,670	\$43,670	\$43,670	\$43,670	\$43,670	\$43,670	\$43,670
Potential Debt WWTP Phase 2						\$240,430	\$240,430	\$240,430
Total Debt		\$43,670	\$43,670	\$43,670	\$43,670	\$284,100	\$284,100	\$284,100
Total Annual Costs		\$1,752,350	\$1,571,290	\$1,582,230	\$1,740,560	\$2,026,650	\$2,142,510	\$2,247,060
Credits								
Property Taxes	2.0%	\$150,000	\$153,000	\$156,060	\$159,180	\$162,360	\$165,610	\$168,920
Investment Income	0.0%	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Miscellaneous	0.0%	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Total Credits		\$205,000	\$208,000	\$211,060	\$214,180	\$217,360	\$220,610	\$223,920
Revenue Requirement		\$1,547,350	\$1,363,290	\$1,371,170	\$1,526,380	\$1,809,290	\$1,921,900	\$2,023,140
Estimated FY24 Rate Revenue		\$894,950	\$894,950	\$894,950	\$894,950	\$894,950	\$894,950	\$894,950
Funding Gap		(\$652,400)	(\$468,340)	(\$476,220)	(\$631,430)	(\$914,340)	(\$1,026,950)	(\$1,128,190)

Source: District financial records and HEC May 2024.

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Notes:

- FY 2024 budgeted expenses are shown in Table 2.
- Overall, the operating expenses are projected to increase about 6.5% each year. Historically they have increased 9.9% each year (see Table 3).
- CIP cost estimates are included in Table 5.
- System rehabilitation costs are estimated in Table 6.
- Debt tables shown in Tables 7 & 8.
- Historical other revenue sources (credits) shown in Table 4.
- Property tax increase is conservative at 2% (historical avg. is 5.7%) per year.
- Due to volatility of markets and miscellaneous revenues, the investment income and miscellaneous revenues are assumed to remain constant.