MURPHYS SANITARY DISTRICT

"Dedicated to providing a safe wastewater collection and treatment service at fair and reasonable rates for the community of Murphys, preserving and protecting our environment for future generations."

Finance Committee Meeting
Monday, June 17, 2024
10:00 a.m.

MSD District Office
15 Ernest Street, Suite A
Murphys, CA 95247

AGENDA

Finance meetings are open to the public and the following alternative is available for those who wish to participate in the meeting virtually:

Microsoft Teams Need help?

Join the meeting now

Meeting ID: 235 393 420 074
Passcode: zWuYMR

Dial in by phone

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Find a local number
Phone conference ID: 627 084 450#

CALL MEETING TO ORDER/PLEDGE OF ALLEGIANCE

1. **Roll Call**

2. **Public Comment-***(Limit 5 minutes per person) on items not appearing on agenda. At this time, members of the public may address the Board on any non-agendized item. The public is encouraged to work through staff to place items on the agenda for Board consideration. No action can be taken on matters not listed on the agenda.*

3. **New Business**

The Committee may consider the items below for recommendation to the Board of Directors in a public meeting. Public comment is allowed on each individual agenda item listed below.

a) Review/Discuss Rate Study with HEC
b) Review/Discuss Draft Capital Improvement Plan prepared by Blackwater

4. **Director/Staff Comments**

5. **Next Finance Committee Meeting: July 24, 2024 at 10am**

2023/2024 BOARD OF DIRECTORS
Paige McMath-Jue, President | Steve Gonzales, Vice President | Marty Mellera, Secretary
Joseph Fontana, Treasurer |Bruce Miller, Parliamentarian
www.murphyssd.org

HEC Key Tables for Murphys Sanitary District used to generate rate study slides presented to the Board May 9, 2024

Table 1 – Projected Revenue Requirement

Table 2 – Historical and Budgeted FY2024 Income and Expenses

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Table 9 -Projected District Cash Flow

Table 10 – Cash and Cash Equivalents Starting FY 2024

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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.

Table 2 – Historical and Budgeted FY2024 Income and Expenses

Income and Expenses	Actual				Estimated	Budgeted
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Income						
Miscellaneous Income	$169,500	$198,956	$215,990	$467,426	$197,000	$240,700
Monthly Billing	$867,586	$866,608	$865,202	$879,944	$896,108	$894,954
Total Income	**$1,037,086**	**$1,065,565**	**$1,081,193**	**$1,347,371**	**$1,093,108**	**$1,135,654**
Operating Expense						
Personnel						
Wages	$284,613	$305,395	$327,561	$341,781	$371,573	$364,040
Employee Benefits	$124,267	$137,633	$148,371	$111,590	$174,186	$192,607
Workers' Compensation	$559	$28,805	$19,853	$28,359	$16,125	$16,723
Payroll Taxes	$25,516	$27,105	$28,925	$37,268	$33,600	$38,500
Administrative						
Advertising	$0	$1,834	$0	$396	$950	$1,250
Utilities	$3,864	$4,155	$4,178	$5,899	$8,800	$8,700
Engineering	$7,777	$1,485	$855	$12,573	$5,000	$5,000
Rents - Leases	$7,860	$8,520	$8,520	$5,487	$720	$720
Supplies	$9,111	$7,964	$15,637	$11,932	$12,567	$11,100
Insurance	$0	$19,610	$54,123	$639	$29,812	$35,000
Other	$14,415	$17,201	$15,452	$28,512	$24,427	$21,940
Professional	$17,801	$18,841	$18,394	$20,822	$22,868	$29,700
Licenses & Permits	$25,508	$29,525	$30,385	$34,820	$37,267	$41,300
Operating						
Maintenance & Repairs (minor)	$9,927	$34,590	($634)	$9,412	$11,000	$13,500
Other	$25,401	$41,820	$25,799	$29,851	$34,273	$34,250
Supplies	$29,182	$40,105	$36,214	$35,086	$51,621	$56,350
Utilities	$35,348	$30,517	$39,740	$44,986	$72,208	$79,500
Total Expense	**$621,148**	**$755,103**	**$773,374**	**$759,411**	**$906,997**	**$950,180**
Capital						
Debt Service	$0	$0	$0	$0	$43,670	$43,670
Net Revenues	**$415,938**	**$310,462**	**$307,819**	**$587,959**	**$142,441**	**$141,804**

Source: District financial records.

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Table 3 – Historical Average Annual Cost Increase by Category

Operating Cost	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	2019 - 2023 Change	Avg. Annual %
Personnel	$434,955	$498,937	$524,711	$518,997	$595,484	$160,529	8.2%
Utilities	$35,348	$30,517	$39,740	$44,986	$72,208	$36,860	19.6%
Operations & Repairs	$64,510	$116,514	$61,379	$74,349	$96,894	$32,384	10.7%
Licenses & Permits	$25,508	$29,525	$30,385	$34,820	$37,267	$11,759	9.9%
Insurance	$0	$19,610	$54,123	$639	$29,812	$29,812	n.a.
Professional Services	$17,801	$18,841	$18,394	$20,822	$22,868	$5,067	6.5%
Administrative Costs	$43,027	$41,158	$44,642	$64,798	$52,464	$9,437	5.1%
Total Operating Expenses	**$621,148**	**$755,103**	**$773,374**	**$759,411**	**$906,997**	**$285,849**	**9.9%**
			June Index				
San Francisco ENR CCI	12,354	13,023	13,459	15,356	15,367	3,013	5.6%
West Region CPI	271	274	288	313	324	53	4.6%

Source: Bureau of Labor Statistics, Engineering News Record, and District financial records.

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Table 4 – Historical Financial Audits Information

Revenues and Expenses	Fiscal Year Ending				
	2019	2020	2021	2022	2023
Revenue					
Service Charges	$867,586	$866,608	$865,202	$879,944	$898,922
Connection Fees	$0	$0	$0	$309,500	$60,000
Property Taxes	$119,536	$128,856	$131,370	$135,026	$149,306
Investment Income	$38,070	$47,238	$1,536	$10,181	$57,249
Interest Expense	$0	$0	($2,103)	($18,029)	($17,561)
Other Income	$11,893	$37,733	$68,910	$12,720	$16,585
Total Revenue	**$1,037,085**	**$1,080,435**	**$1,064,915**	**$1,329,342**	**$1,164,501**
Expense					
Salaries & Wages	$309,754	$332,500	$356,486	$379,049	$409,500
Employee Benefits	$124,267	$166,438	$168,225	$139,949	$324,122
Professional Services	$25,578	$20,426	$19,249	$33,480	$25,462
Operating Supplies	$21,923	$37,595	$34,405	$33,078	$34,947
Permits	$25,508	$29,525	$30,385	$34,820	$38,206
Repairs & Maintenance	$18,762	$46,663	$1,911	$11,262	$123,708
Monitoring	$19,129	$35,342	$23,210	$29,851	$38,365
Office	$24,008	$21,322	$30,233	$20,237	$17,701
Utilities	$31,291	$26,647	$34,787	$40,078	$84,926
Insurance	$559	$19,610	$54,123	$639	$29,812
Transportation	$6,331	$8,357	$0	$0	$0
Communications	$9,988	$10,314	$11,719	$11,889	$14,410
Memberships & Publications	$12,509	$12,535	$10,579	$8,993	$13,461
Total Expense	**$629,607**	**$767,274**	**$775,312**	**$743,325**	**$1,154,620**
Net Revenues (excl. capital activity)	**$407,478**	**$313,161**	**$289,603**	**$586,017**	**$9,881**
Depreciation	$138,619	$150,940	$136,818	$268,159	$278,905
Change in Net Position	**$268,859**	**$162,221**	**$152,785**	**$317,858**	**($269,024)**
Net Revenues	**$407,478**	**$313,161**	**$289,603**	**$586,017**	**$9,881**
Adjustments to Reconcile Op. Income (Loss)	$32,857	$11,915	($586,327)	($232,086)	$168,972
Remove Interest	($38,070)	($47,238)	$567	$7,848	($39,688)
Net Revenues with Adjustments	**$402,265**	**$277,838**	**($296,157)**	**$361,779**	**$139,165**
Capital					
Capital Grants	$250,622	$160,009	$4,481,345	$134,963	$0
Acquisition of Assets	($743,713)	($747,767)	($3,416,429)	($426,021)	($39,196)
Debt Service	($8,875)	$0	$0	($43,671)	($43,670)
Capital Costs (Income)	**($501,966)**	**($587,758)**	**$1,064,916**	**($334,729)**	**($82,866)**
Investing Activities	**$36,612**	**$47,238**	**$8,536**	**$7,677**	**$60,865**
Net Income	**($63,089)**	**($262,682)**	**$777,295**	**$34,727**	**$117,164**
Cash & Investments					
Beginning of Year	$1,895,206	$1,832,117	$1,569,435	$2,346,730	$2,381,457
End of Year	$1,832,117	$1,569,435	$2,346,730	$2,381,457	$2,498,620
Change in Cash	**($63,089)**	**($262,682)**	**$777,295**	**$34,727**	**$117,163**

Source: District audited comprehensive financial records.

audits

Table 5 – Capital Improvements Plan

Project	FY 2024	FY 2025 Yr 1	FY 2026 Yr 2	FY 2027 Yr 3	FY 2028 Yr 4	FY 2029 Yr 5	FY 2030 Yr 6
General Components	$153,500	$39,700	$30,000	$50,000	$35,000	$40,000	$40,000
Pipe Replacement Projects	$215,000	$276,000	$220,000	$265,000	$239,450	$250,000	$250,000
WWTP Upgrade II-Planning	$390,000						
Total CIP	**$758,500**	**$315,700**	**$250,000**	**$315,000**	**$274,450**	**$290,000**	**$290,000**
Inflation Factor --->		*4.0%*	*4.0%*	*4.0%*	*4.0%*	*4.0%*	*4.0%*
General Components	$153,500	$41,300	$32,500	$56,300	$41,000	$48,700	$50,700
Pipe Replacement Projects	$215,000	$287,100	$238,000	$298,100	$280,200	$304,200	$316,400
WWTP Upgrade II-Planning	$390,000	$0	$0	$0	$0	$0	$0
Total CIP (Inflated $'s)	**$758,500**	**$328,400**	**$270,500**	**$354,400**	**$321,200**	**$352,900**	**$367,100**

Source: District staff April 2024.

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Notes:

- The green background in this table donates numbers not provided by District staff. These numbers were assumed by HEC for the model.

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Table 6 – System Rehabilitation Costs

Item	Avg. Life	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Current Depreciation		**$279,000**	**$279,000**	**$279,000**	**$279,000**	**$279,000**	**$279,000**	**$279,000**
New Assets	years							
General Components	20	$8,000	$10,000	$12,000	$15,000	$17,000	$19,000	$22,000
Pipe Replacement Projects	80	$3,000	$7,000	$10,000	$14,000	$18,000	$22,000	$26,000
WWTP Upgrade II-Planning	5	$78,000	$78,000	$78,000	$78,000	$78,000	$78,000	$78,000
Total New Assets		**$89,000**	**$95,000**	**$100,000**	**$107,000**	**$113,000**	**$119,000**	**$126,000**
Total Depreciation		**$368,000**	**$374,000**	**$379,000**	**$386,000**	**$392,000**	**$398,000**	**$405,000**
Depreciation in Rates		50%	50%	50%	50%	50%	50%	50%
System Rehabilitation Collection		**$184,000**	**$187,000**	**$189,500**	**$193,000**	**$196,000**	**$199,000**	**$202,500**

Source: District depreciation records for FY2023, and District CIP.

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Notes:

- 50% of estimated depreciation is included in the rates model.

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Table 7 – Existing Debt Information

Description	Item
Loan Amount	**$1,005,504**
Annual Debt Service [1]	**$43,670**
Interest	$304,610
Total Payments	**$1,310,114**
Terms:	
Interest Rate	1.80%
Repayment (years)	30

Source: State Water Resources Control Board. srf1

[1] Last payment April 30, 2051.

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Table 8 – Estimated WWTP Phase 2 Improvements Debt

Description	Item
Estimated Project Cost	**$5,100,000**
Annual Debt Service	**$240,429**
Interest	$2,112,861
Total Payments	**$7,212,861**
Terms:	
Interest Rate	2.40%
Repayment (years)	30

Source: Murphys SD project cost estimate, and HEC May 2024.

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Table 9 -Projected District Cash Flow

Revenues & Expenses	FY 2024	FY 2025 Yr 1	FY 2026 Yr 2	FY 2027 Yr 3	FY 2028 Yr 4	FY 2029 Yr 5	FY 2030 Yr 6
Revenues							
Monthly Billing	$894,950	$1,450,000	$1,510,000	$1,570,000	$1,630,000	$1,690,000	$1,750,000
Property Taxes	$150,000	$153,000	$156,060	$159,180	$162,360	$165,610	$168,920
Investment Income	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000
Miscellaneous	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
Total Revenues	**$1,099,950**	**$1,658,000**	**$1,721,060**	**$1,784,180**	**$1,847,360**	**$1,910,610**	**$1,973,920**
Operating Expenses	**$950,180**	**$1,012,220**	**$1,078,560**	**$1,149,490**	**$1,225,350**	**$1,306,510**	**$1,393,360**
Net Revenues	**$149,770**	**$645,780**	**$642,500**	**$634,690**	**$622,010**	**$604,100**	**$580,560**
Debt Service	$43,670	$43,670	$43,670	$43,670	$284,100	$284,100	$284,100
Debt Coverage [1]	*3.43*	*14.79*	*14.71*	*14.53*	*2.19*	*2.13*	*2.04*
Net Income	**$106,100**	**$602,110**	**$598,830**	**$591,020**	**$337,910**	**$320,000**	**$296,460**
Beginning Balance	2,498,620	$1,866,220	$2,159,930	$2,108,260	$2,764,880	$2,801,590	$2,788,690
Net Income	$106,100	$602,110	$598,830	$591,020	$337,910	$320,000	$296,460
Connection Fees [2]	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
Cash-Funded CIP	($758,500)	($328,400)	($270,500)	($354,400)	($321,200)	($352,900)	($367,100)
WWTP Phase 2	$0	$0	($2,000,000)	($3,100,000)	$0	$0	$0
SRF Proceeds for WWTP Ph2	$0	$0	$1,600,000	$3,500,000	$0	$0	$0
Ending Balance	**$1,866,220**	**$2,159,930**	**$2,108,260**	**$2,764,880**	**$2,801,590**	**$2,788,690**	**$2,738,050**
Restricted	$43,670	$43,670	$43,670	$284,100	$284,100	$284,100	$284,100
Unrestricted Balance	**$1,822,549**	**$2,116,260**	**$2,064,590**	**$2,480,780**	**$2,517,490**	**$2,504,590**	**$2,453,950**
Operating Reserves	$237,550	$253,060	$269,640	$287,380	$306,340	$326,630	$348,340
Capital & Equip. Reserves	$1,500,000	$1,537,000	$1,566,500	$1,589,500	$1,605,500	$1,614,500	$1,617,000
Emergency Reserves		$150,000	$160,000	$170,000	$180,000	$190,000	$200,000
Minimum Reserves	**$1,737,550**	**$1,940,060**	**$1,996,140**	**$2,046,880**	**$2,091,840**	**$2,131,130**	**$2,165,340**

Source: Murphys SD Financials, and HEC May 2024.

flow

[1] SRF - Net revenues must be at least 110% of the maximum annual debt service of all outstanding system obligations so long as obligations other than the SRF obligation are outstanding.

[2] Assumes two new homes each year.

Table 10 – Cash and Cash Equivalents Starting FY 2024

Current Assets	FY Ending 2023
Checking/Savings	
Operating Fund	$117,279
Cash Drawer	$170
District Investments	
Mark to mkt adjustment	$17,105
CA Class Discretionary	$629,000
CA Class Equip R&R	$419,000
LAIF 2.71%	$48,066
UBS T-Bill #1 11/09/2023 4.98%	$200,000
UBS T-Bill #2 12/21/2023 5.29%	$200,000
UBS T-Bill #3 07/13/2023 4.67%	$200,000
UBS T-Bill #4 08/17/2023 4.849%	$200,000
UBS T-Bill #5 09/23/2023 5.20%	$200,000
UBS CD 06/21/2024 5.36%	$44,000
UBS CD 05/30/2024 5.25%	$224,000
Total Cash & Cash Equivalents for Cash Flow	**$2,498,621**

Source: District financial records.

cash

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Murphys Sanitary District

10-Year Capital Improvement Plan

June 2024

Murphys Sanitary District

15 Earnest Street, Suite A

Murphys, CA 95247

Prepared by:

BLACKWATER CONSULTING ENGINEERS

Murphys Sanitary District
10-Year Capital Improvement Plan

DRAFT

JUNE 2024

Prepared for:
MURPHYS SANITARY DISTRICT
15 Ernest Street, Suite A
Murphys, CA 95247
(209) 728-3094

Prepared by:
BLACK WATER CONSULTING ENGINEERS, INC.
602 Lyell Drive
Modesto, CA 95356
(209) 322-1820

BLACK WATER
CONSULTING ENGINEERS

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1 Introduction

Black Water Consulting Engineers (Black Water) prepared this 10-year Capital Improvement Plan (CIP) for the Murphys Sanitary District (MSD) to update the recommended wastewater CIP projects for the next ten years. As part of this CIP Report (Report), the 2022 10-Year Capital Improvement Project Brochure [1], historical information, and input from MSD staff were reviewed.

1.1 Background

The CIP addresses renewing and replacing assets and existing deficiencies to provide a functioning and efficient system that meets regulatory requirements. As part of this CIP, the evaluated components include the MSD collection system and wastewater treatment plant (WWTP), MSD equipment, and the MSD buildings. The CIP will assist MSD in prioritizing and completing future requirements by evaluating the existing condition and importance factors of the existing facilities and equipment.

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. A review of the current, proposed, and potential future regulatory requirements for the facilities.
4. Evaluation of the condition of the existing collection system, wastewater treatment plant, equipment, and buildings.
5. Identification of recommended improvements to existing facilities.
6. Evaluation of MSD revenues based on service fees.
7. Assign improvement priorities based on available funds and project importance.
8. Development of a 10-year CIP.

2 Capital Improvement Plan

This chapter presents the updated and recommended CIP for MSD to support the collection system, WWTP, MSD equipment, and MSD facility buildings over the next ten years. The improvements identified are conceptual and will require preliminary and final evaluation, planning, and/or design as they are implemented.

2.1 Collection System Improvements

2.1.1 Existing Infrastructure, Condition, and Risks of Failure

MSD owns, operates, and maintains a sanitary sewer collection system consisting of approximately 64,590 linear feet of sewer pipelines ranging in size from 4 to 15 inches in diameter and 4,200 linear feet of 8-inch diameter influent force main.

The gravity pipe material throughout the sanitary sewer collection system is vitrified clay pipe. The oldest sections are in the downtown area and were installed in the early 1960s. The force mains consist of an 8-inch asbestos clay pipe installed in 1962 and an 8-inch polyvinyl chloride (PVC) pipe installed in 1984.

Wastewater is pumped from the Murphys Grade Road pump station to the WWTP in one of the two parallel 8-inch force mains, both pipelines being approximately 4,200 linear feet. They converge into one 8-inch gravity pipe approximately 2,200 linear feet long and deliver flows to the WWTP. The 8-inch asbestos clay force main was installed in 1962 and is antiquated and in disrepair. The 8-inch PVC pipe was installed in 1984. As these force mains convey the entirety of MSD's wastewater flows, their age, condition, and location make them a significant liability for MSD.

Table 1 provides an overview of the components of the MSD sanitary sewer collection system.

Table 1 – Existing Wastewater Collection System Overview

Components	Parameter	Value
Gravity Sewer	Length	64,590 linear feet
	Diameter	4-inch to 15-inch
Force Main	Length	4,200 linear feet
	Diameter	8-inch
Existing Pipes	Material	Vitrified Clay Polyvinyl Chloride (PVC)
Manhole	Quantity	253

2.1.2 Recommended Improvements

Replacing the dated pipes and manholes is necessary to improve the collection system's operation and maintenance, improve capacity-constrained areas, and prevent sanitary sewer overflows (SSOs). The MSD staff evaluates the collection system annually. All sewer pipelines within MSD sewer system are inspected using closed-circuit television (CCTV) and evaluated on an annual basis by MSD operation and maintenance staff.

Based on these evaluations, 23 collection system improvement projects were identified as necessary to improve the identified deficiencies.

Table 2 summarizes the pipeline segments and the reasons for the proposed repair or replacement.

Table 2 – Collection System Improvements

Project No.	Description	Reasons for Repair or Replacement
1	Sewer Line Replacement, MH 101-96	Clay pipe, age exceeds 50 years, close to a waterway, a significant source of I/I.
2	Sewer Line Replacement, MH 11-9, Replace MH 204, Add New MH Between MH 203-204	Clay pipe, age exceeds 50 years, failing MH 204, necessary access due to the distance between 204 and 203 exceeding 300'.

Project No.	Description	Reasons for Repair or Replacement
3	Sewer Line Replacement, MH 64-65 and MH 76A-77	Clay pipe, age exceeding 50 years, and is undersized. Source of repeated SSOs.
4	Sewer Line Replacement, Lamp Hole (LH) to MH 57-53	Clay pipe, age exceeding 50 years, and is undersized. Source of repeated SSOs.
5	Sewer Line Replacement, MH 45-43	Clay pipe, age exceeding 50 years, and is undersized. Source of repeated SSOs.
6	Sewer Line Replacement, MH 31-29	Clay pipe, age exceeding 50 years, traverse's natural drainages and significant sources of I/I.
7	Sewer Line Replacement, MH 41-40	Clay pipe, age exceeding 50 years, and is undersized. Source of repeated SSOs.
8	New Manhole Between MH 94-95	Improve access- distance between MHs exceeds 300', source of SSOs, close to a waterway.
9	Sewer Line Replacement, MH 179-175	Clay pipe, age exceeding 50 years, and is undersized. Source of repeated SSOs.
10	Clay Pipe Replacement, MH 18-14, MH 18 to Clean Out	Clay pipe, age exceeding 50 years, and is undersized. Source of repeated SSOs.
11	Clay Pipe Replacement, MH 18 to Clean Out	Clay pipe, age exceeding 50 years, and is undersized. Source of repeated SSOs.
12	Clay Pipe Replacement, MH 84-82	The clay pipe is over 50 years old, undersized, close to a waterway, and a significant source of I/I.
13	Clay Pipe Replacement, MH 49-50	Clay pipe, age exceeding 50 years, and is undersized. Source of repeated SSOs.
14	Clay Pipe Replacement, MH 51-52	Clay pipe, age exceeding 50 years, and is undersized. Source of repeated SSOs.
15	Clay Pipe Replacement, MH 35-31	Traverse's natural drainages, a small creek, sources of I/I, and some old clay construction.
16	Clay Pipe Replacement, MH 131-136	Clay pipe, age exceeding 50 years, increased use and impact, source of repeated SSOs.
17	Clay Pipe Replacement, MH 123-124, Add New MH	Improve access- distance between MHs exceeds 300', source of SSOs.
18	Clay Pipe Replacement, MH 103-105	Clay pipe, age exceeding 50 years. Increased impact and use, source of I/I.
19	Clay Pipe Replacement, MH 105-135	Clay pipe, age exceeding 50 years, and is undersized. Source of repeated SSOs and I/I.
20	Clay Pipe Replacement, MH 172-23	Patrial clay construction pipe is undersized. Increased impact and use, source of SSOs.
21	Clay Pipe Replacement, LH to MH 16-14	Patrial clay construction pipe is undersized. Increased impact and use, source of SSOs.

Project No.	Description	Reasons for Repair or Replacement
22	Clay Pipe Replacement, MH 14-10	Clay pipe age exceeding 50 years. A significant source of I/I and repeated SSOs.
23	Influent Force Main	The dual-force main is constructed of asbestos clay and PVC. Age exceeds 50 years and is in disrepair.

2.1.3 Improvement Priorities

Improvements were prioritized based on assessing the operation and maintenance tasks, existing conditions and the likelihood of failure, life expectancy, repair history, project costs, the associated risks and outcomes of equipment failure, and input from MSD staff.

Figures 1– 7, which are included as **Appendix A**, show the collection system improvement projects.

2.2 Wastewater Treatment Plant Improvements

2.2.1 Existing Infrastructure, Condition, and Risks of Failure

The WWTP treats effluent to a secondary level by combining polishing ponds and sand filtration. After filtration, the water is chlorinated and supplied to Ironstone Vineyards for irrigation. The existing sand filtration system has not been updated since 1985 and has deteriorated due to exposure and algae blooms. Current chlorination practices are outdated and have resulted in a decrease in site efficiency. This improvement excludes the chlorine contact chamber, as it was recently replaced. The existing backup generator is undersized and unreliable for powering the site during a power outage. The site fencing is in poor condition and provides insufficient site security.

2.2.2 Recommended Improvements

The replacement of the sand filtration system will allow MSD to meet Title 22 water standards and improve operation, maintenance, and performance at the WWTP. Improving the disinfection system will also improve effluent quality and system efficiency. The backup generator will provide MSD with a reliable way to power the facilities during power outages. Site fencing around the finishing pond will improve site safety and security. Removing the sludge from Pond 3 will increase the treatment capacity and operational efficiency.

Table 3 describes the improvements in wastewater treatment plants and the reasons for the proposed repair or replacement.

Table 3 – Wastewater Treatment Plant Improvement

Project No.	Description	Reasons for Repair or Replacement
24	Sand Filtration System	The project will provide a sand filtration system that allows MSD to meet Title 22 water recycling standards, improve operation and maintenance, and improve overall system performance.

Project No.	Description	Reasons for Repair or Replacement
25	Disinfection System	Chemical piping and injection upgrades will improve water quality, efficiency, and system performance.
26	Backup Generator	Replacing the existing backup generator will improve reliability and reduce maintenance.
27	Site Fencing	Installing fencing around the finishing pond will improve overall site safety and security.
28	Pond 3 Sludge Removal	Removing sludge from Pond 3 will improve the treatment capacity and operation efficiency.

2.2.3 Improvement Priorities

Improvements have been prioritized based on assessing the operation and maintenance tasks, existing conditions and the likelihood of failure, life expectancy, repair history, project costs, the associated risks and outcomes of equipment failure, and input from MSD staff.

2.3 Equipment

2.3.1 Existing Infrastructure, Condition, and Risks of Failure

MSD owns, operates, and maintains several pieces of equipment essential to its operations. As this 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 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 will improve the overall ability to maintain the system, contributing to increased performance. Installing sewer and security cameras will allow the district to monitor the system's condition and improve safety and security.

Table 4 describes the equipment improvements and the reason for the proposed repair or replacement.

Table 4 – Equipment Improvements

Project No.	Description	Reasons for Repair or Replacement
29	Repair/Replacement of trucks/vehicles	The project will improve the performance and reliability of vehicles necessary to operate and maintain the system.
30	Hydro Flusher	The project will improve the maintenance system and overall system performance.
31	Sewer Camera	The project will allow MSD to identify the condition of the existing collection system more accurately and efficiently.

Project No.	Description	Reasons for Repair or Replacement
32	Security and Monitoring System	The project will improve overall site safety and security.
33	Technology	(PENDING)

2.3.3 Improvement Priorities

Improvements were prioritized based on assessing the operation and maintenance tasks, existing conditions and the likelihood of failure, life expectancy, repair history, project costs, the associated risks and outcomes of equipment failure, and input from MSD staff.

2.4 Building and Facility Improvements

2.4.1 Existing Infrastructure, Conditions, and Risks of Failure

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. 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.

2.4.2 Recommended Improvements

The recommended improvements are to remove and replace both buildings. **Table 5** describes the building and facility improvements and reasons for the proposed repair or replacement.

Table 5 – Building and Facility Improvements

Project No.	Description	Reasons for Repair or Replacement
34	Office Building	Leaks are coming from the roof and interior walls. The building is structurally dated and beyond its useful life.
35	Maintenance Facility	Leaks are coming from the roof over the lab area. The building is structurally dated and requires a new roof.

2.4.3 Improvement Priorities

Improvements were prioritized based on assessing the operation and maintenance tasks, existing conditions and the likelihood of failure, life expectancy, repair history, project costs, the associated risks and outcomes of equipment failure, and input from MSD staff.

2.5 MSD Revenues

MSD revenues to fund the CIPs are generally obtained by collecting monthly customer user fees. As of June 2024, the monthly MSD rate for residential sewer services is $60.00. Commercial sewer rates are determined based on use. In addition to the sewer service fee, MSD charges a one-time fee of $10,000 per connection to the sewer system. **Table 6** summarizes the CIP revenue, expenditures, and projected ending balance for the 2023-2024 fiscal year. The Murphys Sanitary District Approved Operating Budget for 2023-2024 is included in **Appendix B.**

Table 6 – CIP Revenue, Expenditures, and Projected Balance

Revenue	Expenditures	Balance
$ 7,027,651.86	$ 4,590,000.00	$ 2,437,651.86

State and federal funding applications for approved projects have also been completed recently. Funds received through Clean Water State Revolving Fund (CWSRF) grant funds 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 all projects through revenues, 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 assessing 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 ultimately, input from the MSD staff. **Table 7** provides a summary of the improvement priorities.

Table 7 – Priority Projects

Project No.	Description
1	Sewer Line Replacement, MH 101-96
6	Sewer Line Replacement, MH 31-29
8	New Manhole Between MH 94-95
9	Sewer Line Replacement, MH 175-179
15	Clay Pipe Replacement, MH 35-31
23	Influent Force Main
34	Office Building
35	Maintenance Facility

4 Project Cost Estimation and Scheduling

Preliminary cost estimates have been prepared for each project in the CIP. These "pre-design" 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 costs 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.

Recommended MSD CIP projects were organized and broken down by implementation year based on priority. Timing and priorities of the projects were based on the following criteria:

1. Discussions with MSD staff
2. Staff condition assessments and life expectancies
3. Operation and Maintenance benefits

The overall view of the projects is presented for the 10-year period without inflation. As discussed, the identified CIP projects will assist MSD in developing annual budgets over the next ten (10) year planning horizon. All CIP projects include information on the anticipated construction year, construction costs, soft costs, and estimated project costs. Additional detailed information on each project and cost estimates are provided in **Appendix C**.

Table 8 provides a detailed cost estimate for each project in the MSD 10-year CIP without including inflation.

Table 8 – CIP List

Project	Description	Priority Yes No	Construction Year	Estimated Construction Cost	CIP Contingency (35%)	Eng / Design/ Admin (15%)	ESDC / CM (10%)	Estimated Project Cost	10-Year CIP					
									24-25	25-26	26-27	27-28	28-29	29-30
COLLECTION SYSTEM														
1	Sewer Line Replacement, MH 96-101	Yes	25-26	$585,075	$204,776	$87,761	$58,508	$936,120	$351,045	$585,075				
2	Sewer Line Replacement, MH 9-11, replace MH 204, add new MH between MH 203-204	No	26-27	$155,565	$54,448	$23,335	$15,557	$248,904			$248,904			
3	Sewer Line Replacement, MH 64-65 76A-77	No	28-29	$196,905	$68,917	$29,536	$19,691	$315,048					$315,048	
4	Sewer Line Replacement, MH 53-57-LP	No	29-30	$284,305	$99,507	$42,646	$28,431	$454,888						$454,888
5	Sewer Line Replacement, MH 43-45	No	24-25	$203,875	$71,356	$30,581	$20,388	$326,200				$326,200		
6	Sewer Line Replacement, MH 31-29	Yes	24-25	$92,730	$32,456	$13,910	$9,273	$148,368	$148,368					
7	Sewer Line Replacement, MH 40-41	No	24-25	$51,320	$17,962	$7,698	$5,132	$82,112					$82,112	
8	New Manhole Between MH 94-95	Yes	24-25	$15,000	$5,250	$2,250	$1,500	$24,000	$24,000					
9	Sewer Line Replacement, MH 175-179	Yes	24-25	$157,990	$55,297	$23,699	$15,799	$252,784	$252,784					
10	Clay Pipe Replacement, MH 18-17-14 MH 18 to clean out	No	26-27	$124,875	$43,706	$18,731	$12,488	$199,800			$199,800			
11	Clay Pipe Replacement, MH 18 to clean out	No	24-25	$23,125	$8,094	$3,469	$2,313	$37,000	$37,000					
12	Clay Pipe Replacement, MH 82-84	No	25-26	$110,700	$38,745	$16,605	$11,070	$177,120		$177,120				
13	Clay Pipe Replacement, MH 49-50	No	26-27	$83,250	$29,138	$12,488	$8,325	$133,200			$133,200			
14	Clay Pipe Replacement, MH 51-52	No	28-29	$55,500	$19,425	$8,325	$5,550	$88,800					$88,800	
15	Clay Pipe Replacement, MH 35-31	Yes	24-25	$377,400	$132,090	$56,610	$37,740	$603,840	$603,840					
16	Clay Pipe Replacement, MH 131-136	No	24-25	$25,625	$8,969	$3,844	$2,563	$41,000	$41,000					
17	Clay Pipe Replacement, MH 123-124 Add new MH	No	25-26	$116,750	$40,863	$17,513	$11,675	$186,800		$186,800				
18	Clay Pipe Replacement, MH 103-105	No	26-27	$25,900	$9,065	$3,885	$2,590	$41,440			$41,440			
19	Clay Pipe Replacement, MH 105-135	No	28-29	$199,800	$69,930	$29,970	$19,980	$319,680					$319,680	
20	Clay Pipe Replacement, MH 172-23	No	29-30	$25,900	$9,065	$3,885	$2,590	$41,440					$41,440	
21	Clay Pipe Replacement, MH 14 to LH	No	29-30	$153,600	$53,760	$23,040	$15,360	$245,760						$245,760
22	Clay Pipe Replacement, MH 14-10	No	29-30	$25,900	$9,065	$3,885	$2,590	$41,440						$41,440
23	Influent Force Main	Yes	27-28	$1,448,000	$506,800	$217,200	$144,800	$2,316,800			$868,800	$1,448,000		
COLLECTION SYSTEM SUBTOTAL:								$7,262,544	$1,458,037	$948,995	$1,492,144	$1,774,200	$847,080	$742,088
WASTEWATER TREATMENT PLANT PHASE II														
24	Sand Filtration System	No	29-30	$400,000	$140,000	$60,000	$40,000	$640,000						$640,000
25	Disinfection System	No	29-30	$50,000	$17,500	$7,500	$5,000	$80,000						$80,000
26	Backup Generator	No	29-30	$225,000	-	-	-	$225,000						$225,000
27	Site Fencing	No	29-30	$300,000	-	-	-	$300,000						$300,000
28	Pond 3 Sludge Removal	No	29-30	$552,500	-	-	-	$552,500					884,000	
WASTEWATER TREATMENT PLANT SUBTOTAL:								$1,797,500	$0	$0	$0	$0	$884,000	$1,245,000

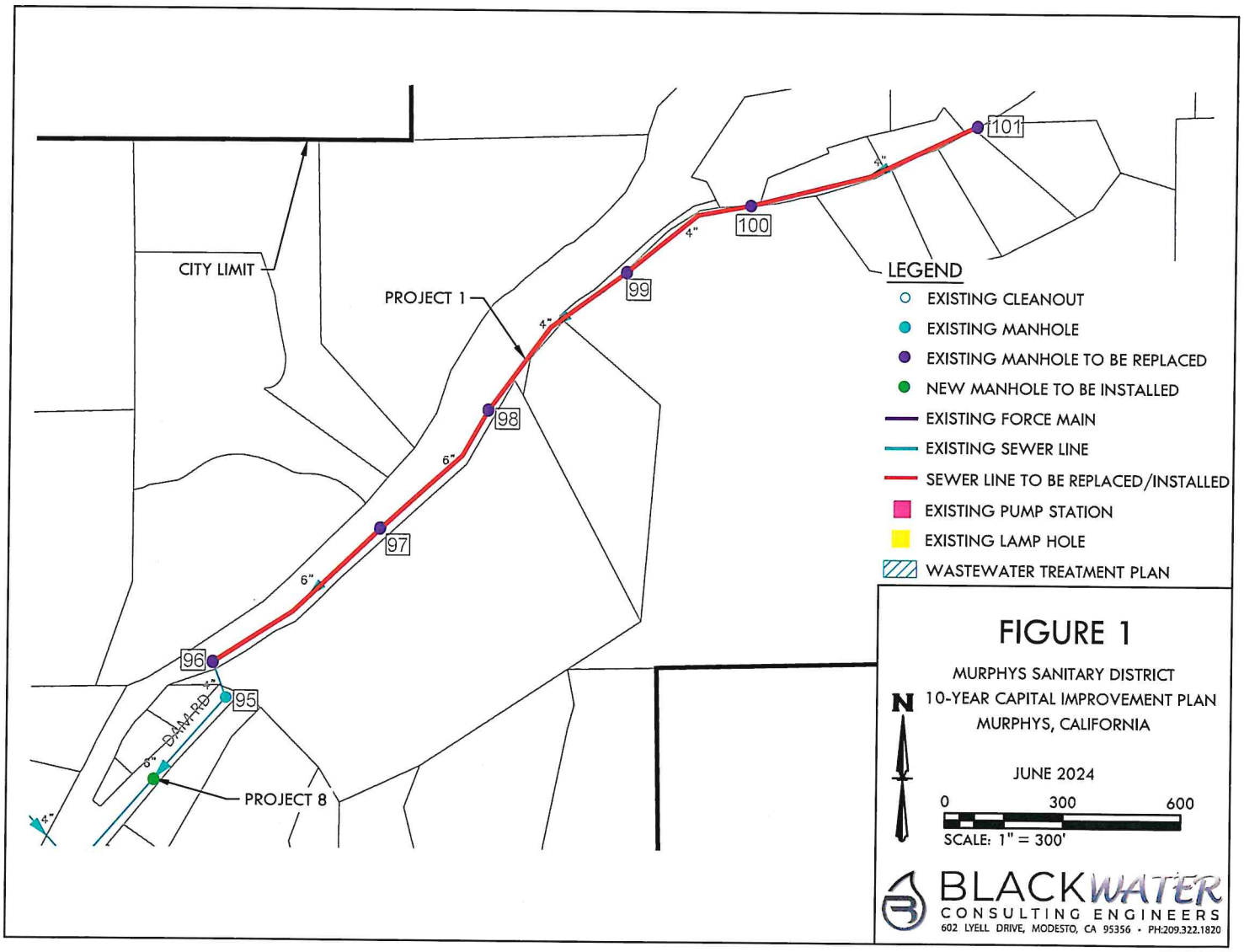
Project	Description	Priority Yes No	Construction Year	Estimated Construction Cost	CIP Contingency (35%)	Eng / Design/ Admin (15%)	ESDC / CM (10%)	Estimated Project Cost	10-Year CIP					
									24-25	25-26	26-27	27-28	28-29	29-30
EQUIPMENT														
29	Repair/Replacement of Trucks/Vehicles	No	24-25	$70,000	-	-	-	$70,000	$70,000					
30	Hydro Flusher	No	24-25											
31	Sewer Camera	No	24-25											
32	Security Camera	No	24-25											
33	Technology	No	24-25											
							EQUIPMENT SUBTOTAL:	$70,000	$70,000	$0	$0	$0	$0	$0
BUILDING														
34	Office Building	Yes	25-26	$450,000	$157,500	$67,500	$45,000	$720,000		$720,000				
35	Maintenance Building	Yes	25-26	$450,000	$157,500	$67,500	$45,000	$720,000		$720,000				
							BUILDING SUBTOTAL:	$1,440,000	0	1440000	0	$0	0	0
							TOTAL	$10,570,044	$1,528,037	$2,388,995	$1,492,144	$1,515,842	$1,731,080	$1,987,088

5 References

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

APPENDIX A

10-Year CIP Collection System Improvement Figures


CITY LIMIT
PROJECT 1
PROJECT 8
96
95
97
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99
100
101
DAM RD
4"
6"
LEGEND
EXISTING CLEANOUT
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
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BLACKWATER
CONSULTING ENGINEERS
602 LYELL DRIVE, MODESTO, CA 95356 · PH:209.322.1820

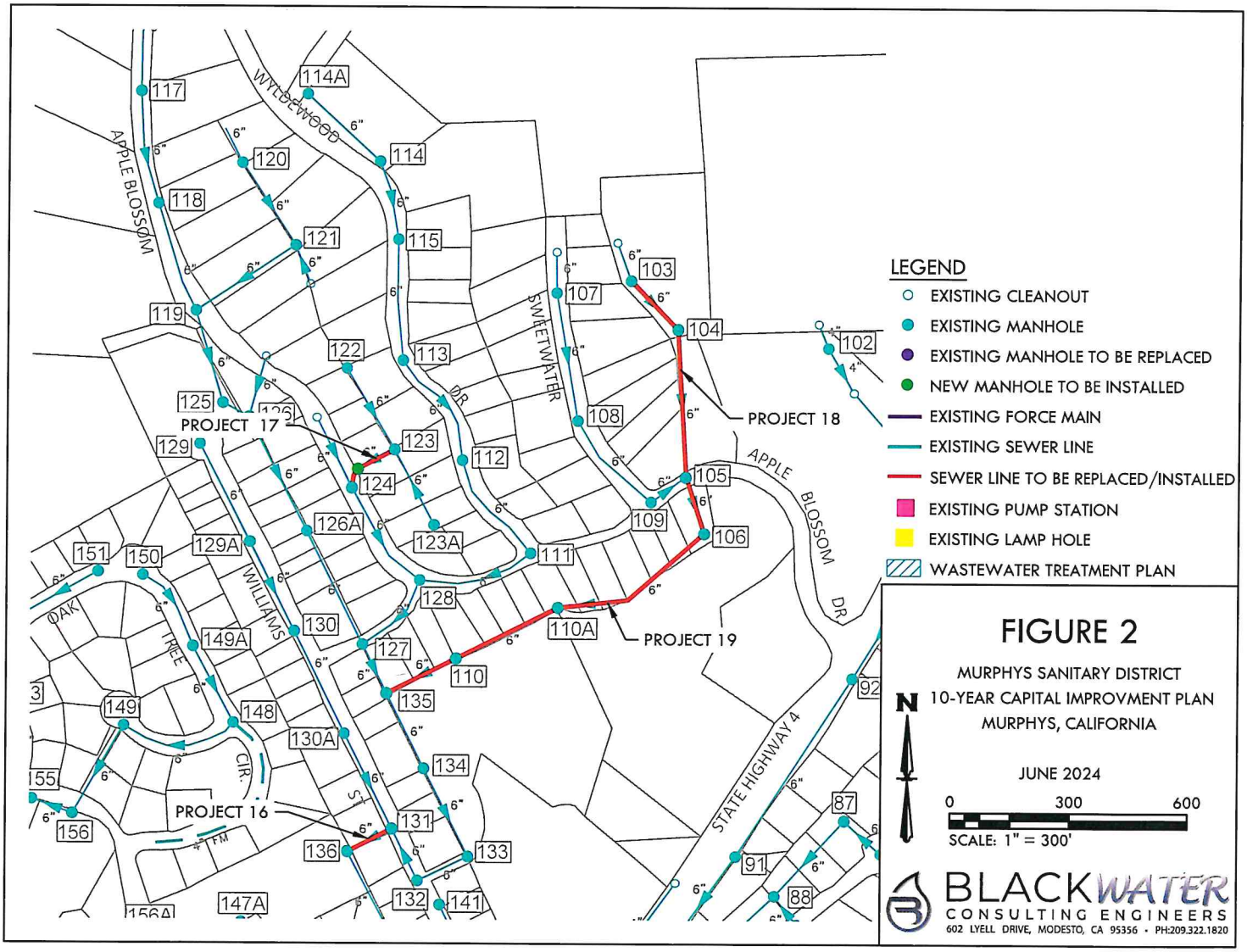

FIGURE 2

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

JUNE 2024

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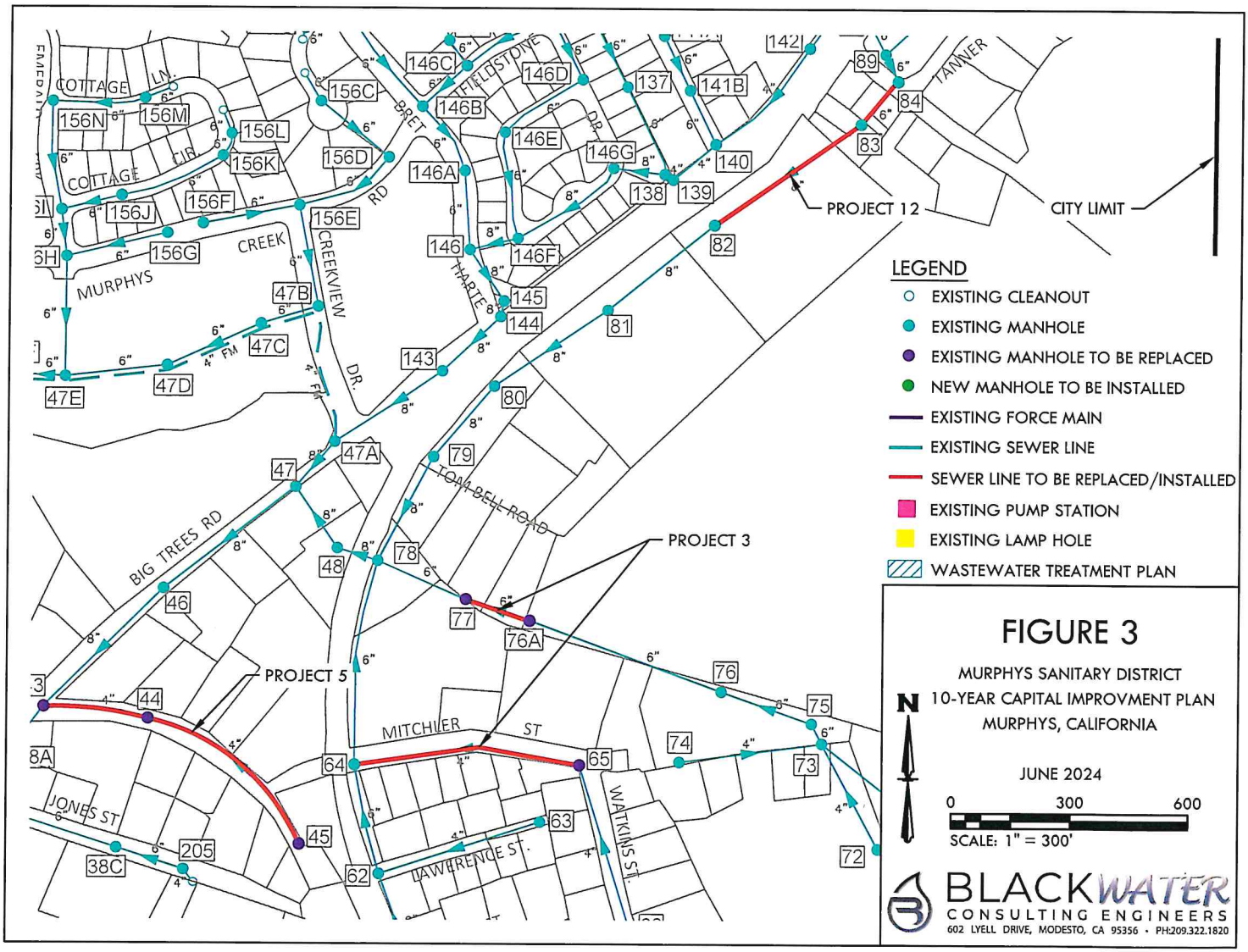
PROJECT 12
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PROJECT 3
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EXISTING FORCE MAIN
EXISTING SEWER LINE
SEWER LINE TO BE REPLACED/INSTALLED
EXISTING PUMP STATION
EXISTING LAMP HOLE
WASTEWATER TREATMENT PLAN
FIGURE 3
MURPHYS SANITARY DISTRICT
10-YEAR CAPITAL IMPROVMENT PLAN
MURPHYS, CALIFORNIA
JUNE 2024
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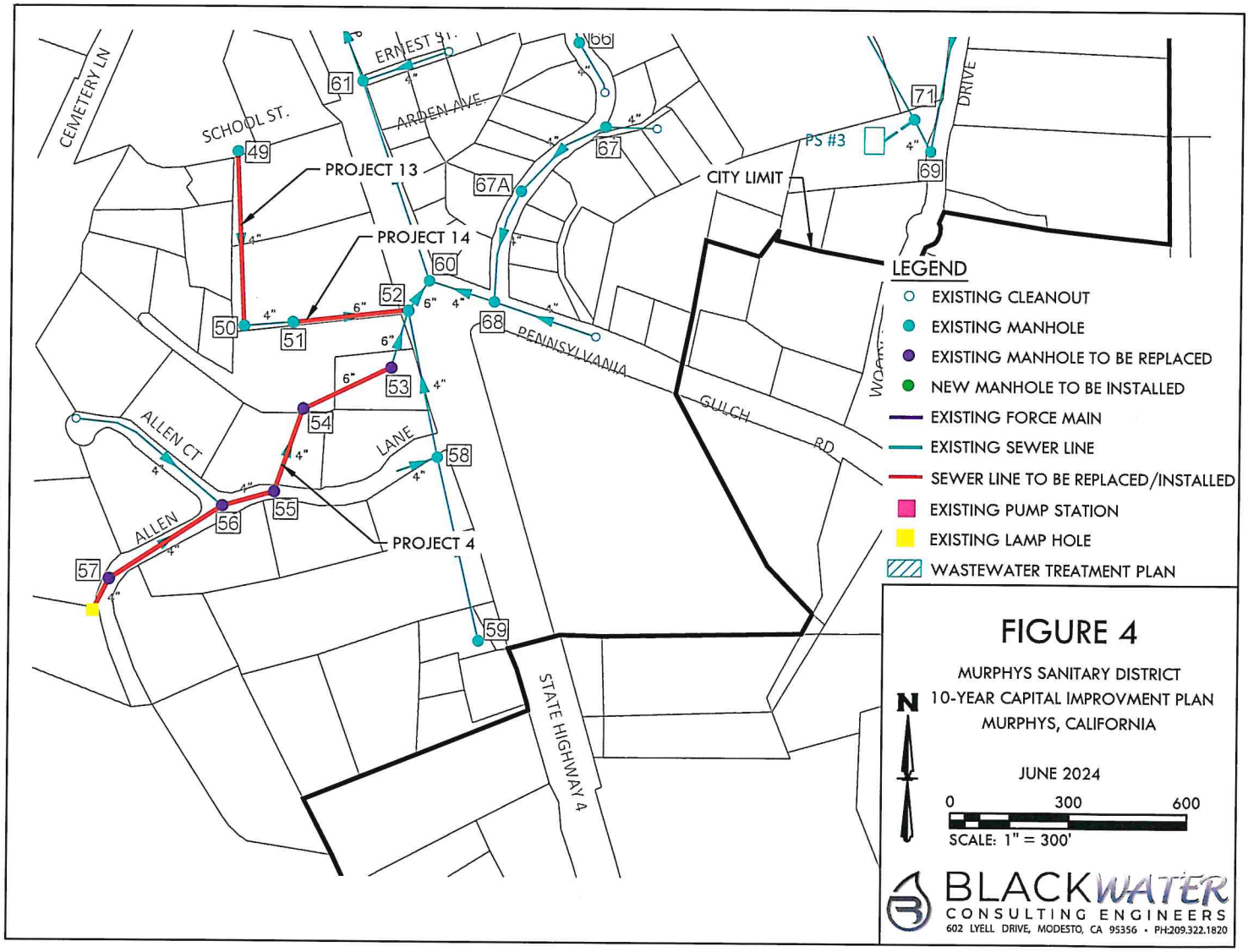
CEMETERY LN
SCHOOL ST.
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PROJECT 14
PROJECT 4
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EXISTING MANHOLE TO BE REPLACED
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EXISTING FORCE MAIN
EXISTING SEWER LINE
SEWER LINE TO BE REPLACED/INSTALLED
EXISTING PUMP STATION
EXISTING LAMP HOLE
WASTEWATER TREATMENT PLAN
FIGURE 4
MURPHYS SANITARY DISTRICT
10-YEAR CAPITAL IMPROVMENT PLAN
MURPHYS, CALIFORNIA
JUNE 2024
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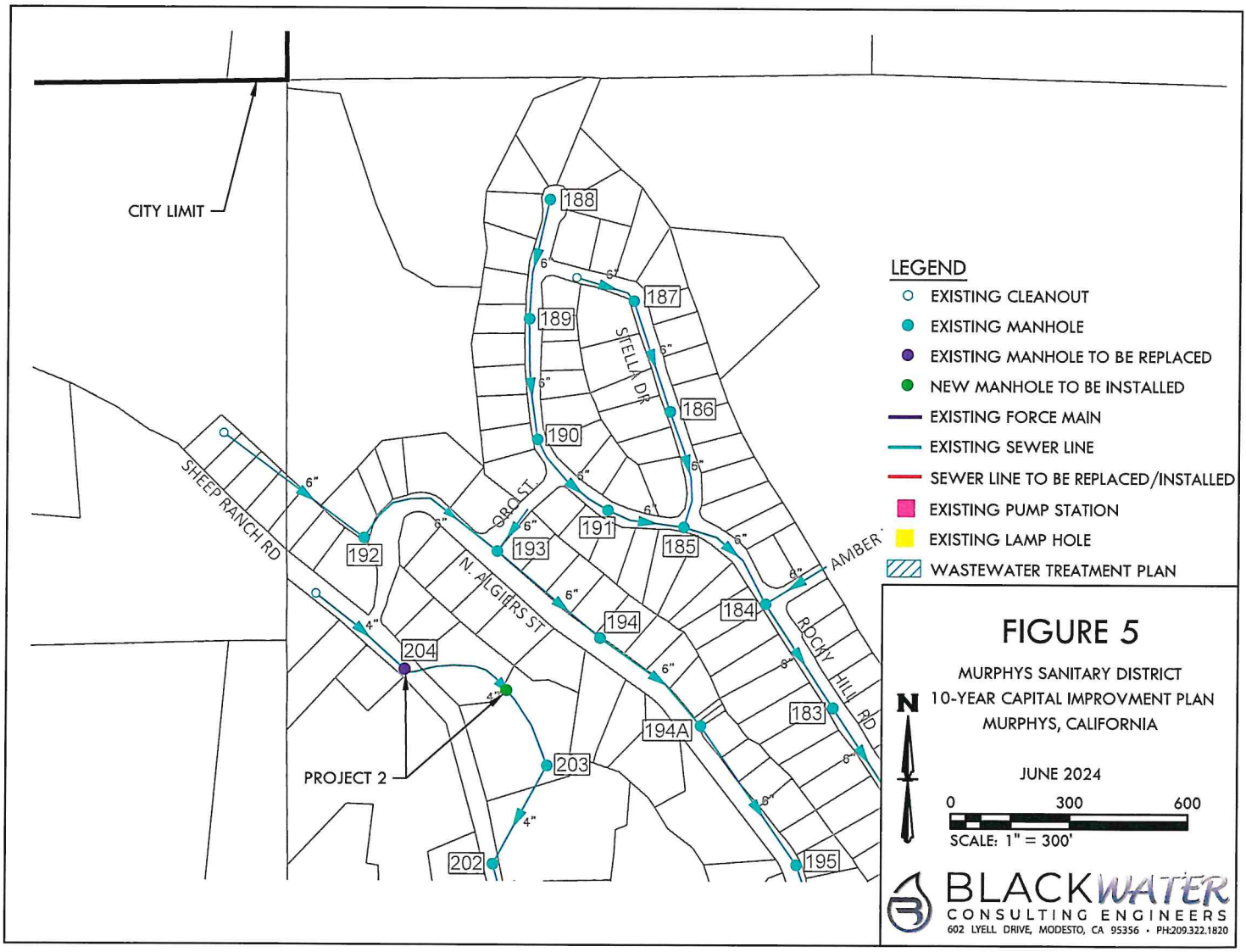
CITY LIMIT
SHEEP RANCH RD
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GROST
N. ALGIERS ST
AMBER
ROCKY HILL RD
PROJECT 2
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194
183
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194A
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202
195
6"
4"
LEGEND
EXISTING CLEANOUT
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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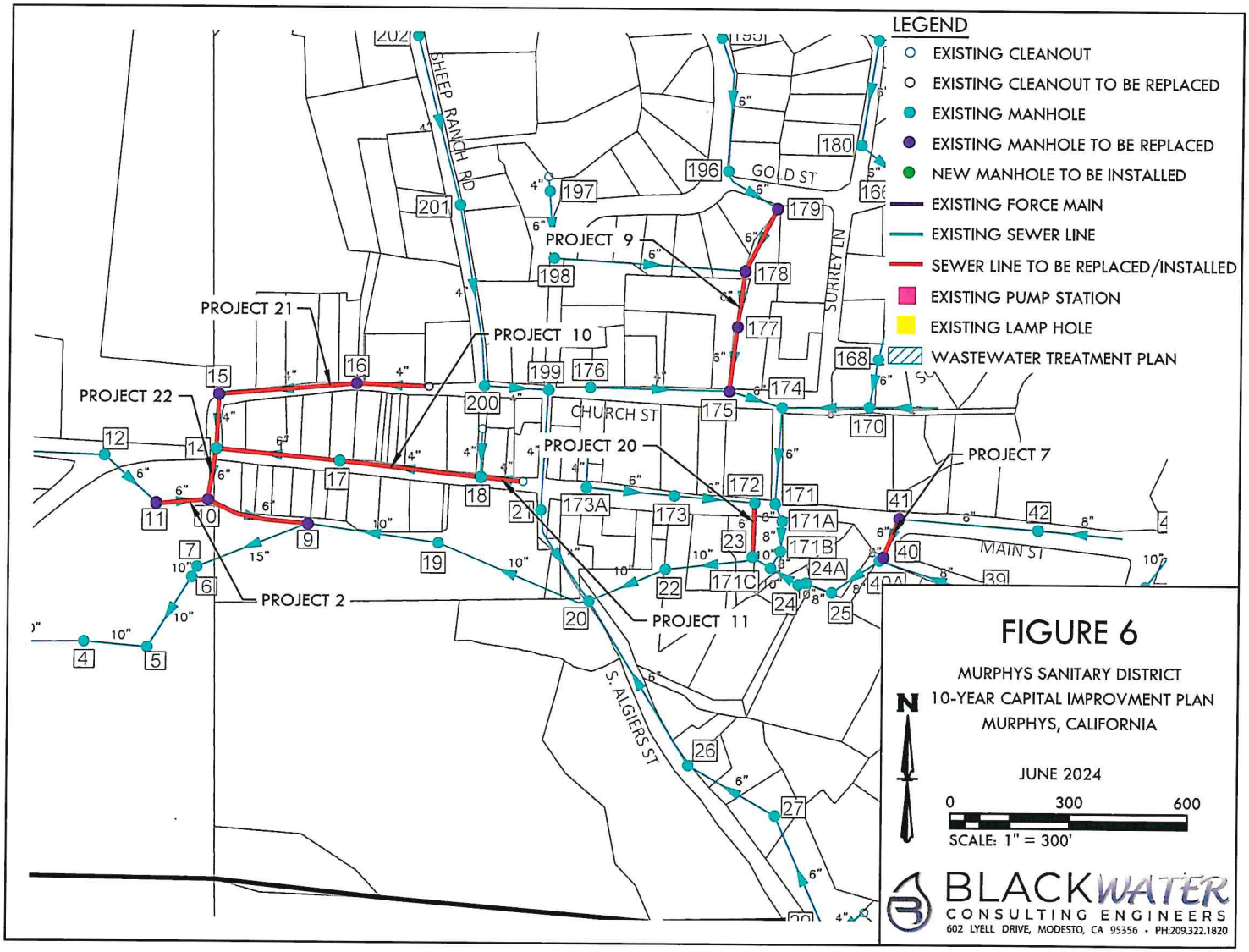
SCALE: 1" = 300'
BLACKWATER
CONSULTING ENGINEERS
602 LYELL DRIVE, MODESTO, CA 95356 • PH:209.322.1820


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
SHEEP RANCH RD
GOLD ST
SURREY LN
CHURCH ST
MAIN ST
S. ALGIERS ST
PROJECT 2
PROJECT 7
PROJECT 9
PROJECT 10
PROJECT 11
PROJECT 20
PROJECT 21
PROJECT 22
FIGURE 6
MURPHYS SANITARY DISTRICT
10-YEAR CAPITAL IMPROVMENT PLAN
MURPHYS, CALIFORNIA
JUNE 2024
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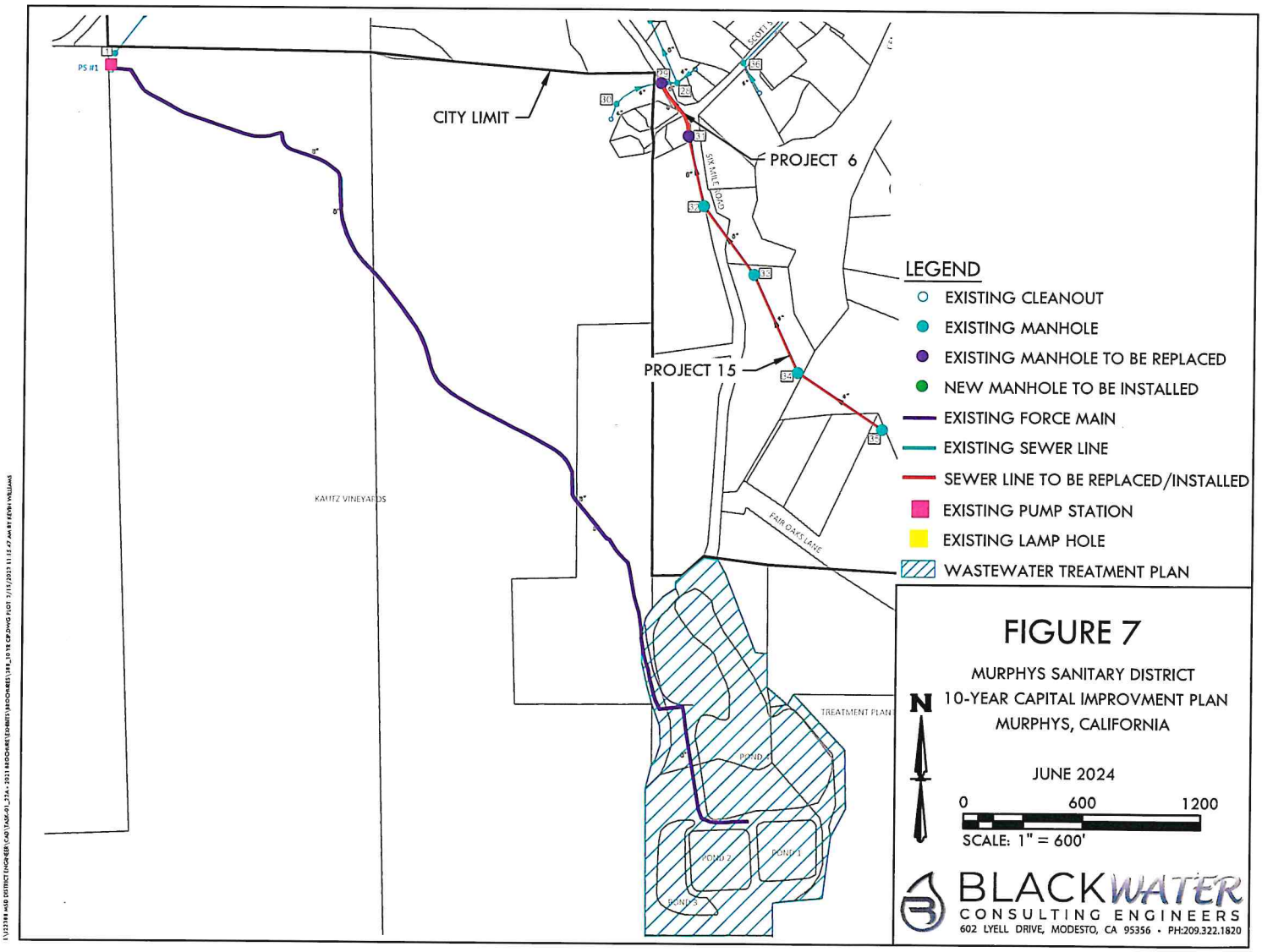
SCALE: 1" = 300'
BLACKWATER
CONSULTING ENGINEERS
602 LYELL DRIVE, MODESTO, CA 95356 • PH:209.322.1820


PS #1
CITY LIMIT
PROJECT 6
PROJECT 15
SIX MILE ROAD
FAIR OAKS LANE
KAUTZ VINEYARDS
TREATMENT PLAN
POND 4
POND 2
POND 1
POND 3
LEGEND
EXISTING CLEANOUT
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
N
0
600
1200
SCALE: 1" = 600'
BLACKWATER
CONSULTING ENGINEERS
602 LYELL DRIVE, MODESTO, CA 95356 • PH:209.322.1820

APPENDIX B

Murphys Sanitary District
Operating Budget Revenue FY 2023/2024

Murphys Sanitary District
Approved Operating Budget Income

	2023/24 Approved Budget
4100 · Srv Chrgs - Residential	644,400.00
4102 · Srv Chrgs - Apartments	59,760.00
4104 · Srv Chrgs - Lodges/Churches	8,551.80
4106 · Srv Chrgs - School	4,272.00
4108 · Srv Chrgs - Commercial	177,970.44
Total Monthly Billing	894,954.24
4999 · Rental Income	7,800.00
4110 · Pln Chk & Inspection Fees	300.00
4111 · Late Fees	2,000.00
4120 · Taxes	135,000.00
4130 · Other Services-Autopay set up	1,500.00
4140 · General Reserve Interest	
4141 · LAIF Interest	-
4140 · General Reserve Interest	100,000.00
4150 · Vacant lot Billing	1,700.00
4160 · Refunds - Rebates	500.00
Total Misc Income	248,800.00
TOTAL REVENUE	1,143,754.24

Approved June 08, 2023

Murphys Sanitary District Approved Operating Budget Expenses 2023/2024

	Jul '22 - Jan'23	Feb'23 - June'23	EOY Projection	22/23 Budget	Approved 23/24 Budget	% Change
Wages						
Wages - Operations	115,508.96	90,200.00	205,708.96	211,855.00	227,496.69	
Wages - Office	100,964.13	45,500.00	146,464.13	159,233.31	123,041.66	
Overtime - Operations	4,087.13	1,912.87	6,000.00	6,000.00	3,000.00	
Overtime - Office	0.00	-	-	500.00	-	
On-Call Comp - Operations	9,000.00	6,600.00	15,600.00	15,600.00	10,500.00	
	0.00					
Total Wages	229,560.22	144,212.87	373,773.09	393,188.31	364,038.35	-7.00%
Employee Benefits						
Health Insurance - Operations	60,185.66	46,500.00	106,685.66	108,000.00	120,000.00	
Health Insurance Administration	24,290.06	15,750.00	40,040.06	42,000.00	42,000.00	
UAL Pension Expense	4,397.00	-	4,397.00	18,174.00	-	
calPERS Retirement - Operations	9,459.98	6,500.00	16,564.35	16,785.95	19,715.09	
calPERS Retirement - Admin	4,353.12	2,750.00	7,103.12	10,135.00	8,330.00	
Accured Vac-Ops	0.00	-	-	3,951.00	2,562.01	
Accurd Vac-Admin	0.00	-	-	1,701.00	-	
Total Employee Benefits	102,685.82	71,500.00	174,790.19	200,746.95	192,607.10	-4.00%
Payroll Taxes						
FICA-Medicare-SS	20,529.41	13,000.00	33,529.41	36,438.80	38,500.00	
Total PR Taxes	20,529.41	13,000.00	33,529.41	36,438.80	38,500.00	5.00%
Workers' Compensation						
Workers' Comp – Operations	15,897.80	15,897.80	17,000.31	16,000.00	16,000.00	
Workers' Comp -- Board					23.00	
Workers' Comp. – Administration	700.00	700.00	1,420.00	700.00	700.00	
Total Workers' Compensation	16,597.80	16,597.80	18,420.31	16,700.00	16,723.00	0.00%
Operations - Maint & Repairs						
R&M - Collection	1,397.84	1,602.16	3,000.00	3,000.00	3,000.00	
R&M - Treatment	1,475.57	1,524.43	3,000.00	3,000.00	3,000.00	
R&M - Truck	243.50	1,756.50	2,000.00	4,000.00	4,000.00	
R&M - Tractor	71.08	928.92	1,000.00	1,000.00	500.00	
R&M-Trailer-Trash Pumps	0.00	-	-	500.00	500.00	
R&M - Hydro Equipment	747.74	252.26	1,000.00	1,000.00	1,500.00	
R&M - Sml Tools & Equipment	871.86	128.14	1,000.00	1,000.00	1,000.00	
Total Operations - Maint & Repairs	4,807.59	6,192.41	11,000.00	13,500.00	13,500.00	0.00%
Operations - Supplies						
Equipment Rental	0.00	350.00	350.00	350.00	350.00	
Gas-Oil-Fuel	2,787.22	5,212.78	8,000.00	9,500.00	8,500.00	
Supplies - Collection	173.54	1,326.46	1,500.00	1,500.00	1,500.00	
Supplies - Treatment	14,434.37	21,000.00	35,434.37	35,000.00	37,000.00	
Office Supplies - Operations	936.81	1,000.00	1,936.81	2,500.00	2,000.00	
Safety Supplies	352.00	1,000.00	1,000.00	1,000.00	1,000.00	
Uniforms	1,512.49	1,887.51	3,400.00	4,000.00	4,000.00	
Software Update-PQ					2,000.00	
Total Operations - Supplies	20,196.43	31,776.75	51,621.18	53,850.00	56,350.00	5.00%

Murphys Sanitary District Approved Operating Budget Expenses 2023/2024

	Jul '22 - Jan'23	Feb'23 - June'23	EOY Projection	22/23 Budget	Approved 23/24 Budget	% Change
Operations - Utilities						
Collections - Electric/Water	11,891.36	12,327.64	24,219.00	20,440.00	30,000.00	
WWTP - Electric/Water	25,358.58	18,241.42	43,600.00	40,304.00	45,000.00	
Telephone - Internet	2,889.43	1,500.00	4,389.43	4,600.00	4,500.00	
Total Operations - Utilities	40,139.37	32,069.06	72,208.43	65,344.00	79,500.00	22.00%
Operations - Other						
Education Operations	1,287.00	1,713.00	3,000.00	3,000.00	3,000.00	
Research - Monitoring	10,108.27	13,891.73	24,000.00	24,000.00	24,000.00	
Answering Service	1,870.00	1,480.00	3,350.00	3,600.00	3,550.00	
Security-Alarm Service	1,637.35	2,285.80	3,923.15	7,500.00	3,700.00	
Total Operations - Other	14,902.62	19,370.53	34,273.15	38,100.00	34,250.00	-10.00%
Administrative - Rents - Leases						
7050.10 · Rents & Leases - Collectio	720.00	-	720.00	720.00	720.00	
Total Administrative - Rents - Leases	720.00		720.00	720.00	720.00	0.00%
Administrative - Supplies						
Office Supplies - Admin	6,184.57	500.00	6,684.57	4,000.00	4,000.00	
Operating Expenses					1,500.00	
Postage	563.35	1,219.30	1,782.65	3,300.00	1,500.00	
Printing	76.16	223.84	300.00	300.00	300.00	
Publications	0.00	300.00	300.00	300.00	300.00	
Office Equipment - Software	2,100.88	899.12	3,000.00	3,000.00	3,000.00	
Website-email Expenses	395.24	104.76	500.00	500.00	500.00	
Total Administrative - Supplies	9,320.20	3,247.02	12,567.22	11,400.00	11,100.00	-2.00%
Administrative - Utilities						
Electric - Water Office	2,407.81	1,750.00	4,157.81	3,828.00	4,500.00	
Telephone-Internet Access	2,890.13	1,750.00	4,640.13	4,400.00	4,200.00	
Total Administrative - Utilities	5,297.94	3,500.00	8,797.94	8,228.00	8,700.00	6.00%
Administrative - Other						
Bank Charges - Vanco Fees	704.50	500.00	1,204.50	1,200.00	1,440.00	
County Lien Costs -Mileage	381.56	118.44	500.00	500.00	500.00	
Education	2,541.23	1,500.00	4,041.23	3,000.00	4,500.00	
Memberships	13,181.90	-	13,181.90	10,500.00	10,000.00	
Grant Expenses	0.00	2,500.00	2,500.00	2,500.00	2,500.00	
15 Ernest St Building RM	1,550.00	1,450.00	3,000.00	3,000.00	3,000.00	
Total Administrative - Other	18,359.19	6,068.44	24,427.63	20,700.00	21,940.00	6.00%
Administrative - Insurance						
Liability - Property Ins	29,811.60	-	29,811.60	29,000.00	35,000.00	
Total Administrative - Insurance	29,811.60		29,811.60	29,000.00	35,000.00	21.00%
Administrative – Professional						
Ofice Cleaning	420.00	300.00	720.00	720.00	-	
Accounting Services	9,700.00	-	9,700.00	9,700.00	10,000.00	
Professional-Legal Services	0.00	2,000.00	2,000.00	6,000.00	6,000.00	
Board Expenses	5,772.97	4,675.00	10,447.97	11,000.00	11,000.00	
Website/IT Maintenance					1,200.00	
Software Update-PQ					1,500.00	
Total Administrative – Professional	15,892.97	6,975.00	22,867.97	27,420.00	29,700.00	8.00%

Murphys Sanitary District Approved Operating Budget Expenses 2023/2024

	Jul '22 - Jan'23	Feb'23 - June'23	EOY Projection	22/23 Budget	Approved 23/24 Budget	% Change
Administrative - License-Permit						
State Permits-Reporting	28,402.00	8,564.56	36,966.56	41,000.00	41,000.00	
Plan Check Permits -	225.00	-	300.00	500.00	300.00	
Total Administrative - License-Permit	28,627.00	8,564.56	37,266.56	41,500.00	41,300.00	0.00%
Administrative - Advertising						
Advertising	52.50	147.50	200.00	750.00	500.00	
Customer Outreach	398.75	351.25	750.00	750.00	750.00	
Total Administrative - Advertising	451.25	498.75	950.00	1,500.00	1,250.00	-16.00%
Administrative – Engineering						
Engineering-General	3,796.75	1,203.25	5,000.00	7,500.00	5,000.00	-33.00%
Administrative - Debt Service						
WWTP Upgrade SRF Loan	0.00	43,670.48	43,670.48	43,670.48	-	
Total Administrative - Debt Service	0.00	43,670.48	43,670.48	43,670.48	-	0.00%
			955,695.16	1,009,506.54	950,178.45	-1.50%
				Reserve Transfer CIP 23/24	193,575.79	
				Total 2023/2024 Expenditures	1,143,754.24	

Restricted Reserve Fund
Approved CIP Revenue and Expenses 2023-2024

Restricted Reserve Fund Allocations 2023-2024	3 mos. Billing Income	Debt Service	Capital Repair Replacement 50%	Equipment Repair Replacement 20%	Discretionary 30%
	224,000.00	43,671.00	1,048,197.54	419,279.01	628,918.52
CIP Revenue					
From Operating to Reserves			***96,787.90***	***38,725.16***	***58,072.73***
Connection Fees			***20,000.00***		
Grant Project: WWTP II			***350,000.00***		
Grant Project: Collections			***4,100,000.00***		
CIP Expenditures					
Capital Equipment Repair/Replace			*(120,000.00)*	(12,000.00)	
15 Ernest St Improvements			*(8,000.00)*		
Grant Project: WWTP II			*(350,000.00)*		
Grant Project: Collections			(4,100,000.00)		
Balance	**224,000.00**	**43,671.00**	**1,036,985.44**	**446,004.17**	**686,991.25**
				Projected ending balance 2024	**2,437,651.86**

Approve June 3, 2023

APPENDIX C

Project Details and Cost Estimates

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Sewer Line Replacement, MH 101-96				Project 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.			
General Location:	Dam Road			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
8" DIA. PVC SDR-35	LF	2,415	$205	$495,075
SANITARY SEWER MANHOLE	EA	6	$15,000	$90,000
			Estimated Construction Subtotal	**$585,075**
			Construction Contingency (35%)	$204,776
			Eng/Design/Admin(15%)	$87,761
			ESDC/CM - Cons. Mgmt (10%)	$58,508
			Total Project Cost	$936,120

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Sewer Line Replacement, MH 11-9, Replace MH 204, Add New MH Between MH 203-204				**Project 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.			
General Location:	Behind DEA			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
8" DIA. PVC SDR-35	LF	393	$205	$80,565
SANITARY SEWER MANHOLE	EA	5	$15,000	$75,000
			Estimated Construction Subtotal	**$155,565**
			Construction Contingency (35%)	$54,448
			Eng/Design/Admin(15%)	$23,335
			ESDC/CM - Cons. Mgmt (10%)	$15,557
			Total Project Cost	$248,904

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Sewer Line Replacement, MH 64-65 and MH 76A-77				**Project 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.			
General Location:	Mitchler @ Diggins			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
8" DIA. PVC SDR-35	LF	741	$205	$151,905
SANITARY SEWER MANHOLE	EA	3	$15,000	$45,000
			Estimated Construction Subtotal	**$196,905**
			Construction Contingency (35%)	$68,917
			Eng/Design/Admin(15%)	$29,536
			ESDC/CM - Cons. Mgmt (10%)	$19,691
			Total Project Cost	$315,048

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Sewer Line Replacement, Lamp Hole to MH 57-53				**Project 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 lamp hole located approximately 90 feet south west of manhole 57.			
General Location:	Allen Lane Red Store			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
8" DIA. PVC SDR-35	LF	1,021	$205	$209,305
SANITARY SEWER MANHOLE	EA	5	$15,000	$75,000
			Estimated Construction Subtotal	**$284,305**
			Construction Contingency (35%)	$99,507
			Eng/Design/Admin(15%)	$42,646
			ESDC/CM - Cons. Mgmt (10%)	$28,431
			Total Project Cost	$454,888

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Sewer Line Replacement, MH 45-43				**Project 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.			
General Location:	Main Street			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
8" DIA. PVC SDR-35	LF	775	$205	$158,875
SANITARY SEWER MANHOLE	EA	3	$15,000	$45,000
			Estimated Construction Subtotal	**$203,875**
			Construction Contingency (35%)	$71,356
			Eng/Design/Admin(15%)	$30,581
			ESDC/CM - Cons. Mgmt (10%)	$20,388
			Total Project Cost	$326,200

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Sewer Line Replacement, MH 31-29				**Project 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.			
General Location:	6 Mile Road @ Scott Street			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
8" DIA. PVC SDR-35	LF	306	$205	$62,730
SANITARY SEWER MANHOLE	EA	2	$15,000	$30,000
			Estimated Construction Subtotal	**$92,730**
			Construction Contingency (35%)	$32,456
			Eng/Design/Admin(15%)	$13,910
			ESDC/CM - Cons. Mgmt (10%)	$9,273
			Total Project Cost	$148,368

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Sewer Line Replacement, MH 41-40				**Project 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.			
General Location:	Jones Street @ Main			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
8" DIA. PVC SDR-35	LF	104	$205	$21,320
SANITARY SEWER MANHOLE	EA	2	$15,000	$30,000
			Estimated Construction Subtotal	**$51,320**
			Construction Contingency (35%)	$17,962
			Eng/Design/Admin(15%)	$7,698
			ESDC/CM - Cons. Mgmt (10%)	$5,132
			Total Project Cost	$82,112

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Add New Manhole Between MH 94-95				Project 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.			
General Location:	Dam Road			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
SANITARY SEWER MANHOLE	EA	1	$15,000	$15,000
			Estimated Construction Subtotal	**$15,000**
			Construction Contingency (35%)	$5,250
			Eng/Design/Admin(15%)	$2,250
			ESDC/CM - Cons. Mgmt (10%)	$1,500
			Total Project Cost	$24,000

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Sewer Line Replacement, MH 179-175				**Project 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.			
General Location:	Church Street by pool			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
8" DIA. PVC SDR-35	LF	478	$205	$97,990
SANITARY SEWER MANHOLE	EA	4	$15,000	$60,000
			Estimated Construction Subtotal	**$157,990**
			Construction Contingency (35%)	$55,297
			Eng/Design/Admin(15%)	$23,699
			ESDC/CM - Cons. Mgmt (10%)	$15,799
			Total Project Cost	$252,784

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Clay Pipe Replacement, Clean Out to MH 18, MH 18-14				**Project 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.			
General Location:	Main Street			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
6" DIA. PVC SDR-35	LF	675	$185	$124,875
			Estimated Construction Subtotal	**$124,875**
			Construction Contingency (35%)	$43,706
			Eng/Design/Admin(15%)	$18,731
			ESDC/CM - Cons. Mgmt (10%)	$12,488
			Total Project Cost	$199,800

Notes:
1. Quantities Estimated

6/12/2024

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Clay Pipe Replacement, Clean Out to MH 18				**Project 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.			
General Location:	Sheep Ranch			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
6" DIA. PVC SDR-35	LF	125	$185	$23,125
			Estimated Construction Subtotal	**$23,125**
			Construction Contingency (35%)	$8,094
			Eng/Design/Admin(15%)	$3,469
			ESDC/CM - Cons. Mgmt (10%)	$2,313
			Total Project Cost	$37,000

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Clay Pipe Replacement, MH 84-82				Project 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.			
General Location:	Tanner Court			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
8" DIA. PVC SDR-35	LF	540	$205	$110,700
			Estimated Construction Subtotal	**$110,700**
			Construction Contingency (35%)	$38,745
			Eng/Design/Admin(15%)	$16,605
			ESDC/CM - Cons. Mgmt (10%)	$11,070
			Total Project Cost	$177,120

Notes:
1. Quantities Estimated

6/12/2024

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Clay Pipe Replacement, MH 49-50				Project 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.			
General Location:	School Street			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
6" DIA. PVC SDR-35	LF	450	$185	$83,250
			Estimated Construction Subtotal	**$83,250**
			Construction Contingency (35%)	$29,138
			Eng/Design/Admin(15%)	$12,488
			ESDC/CM - Cons. Mgmt (10%)	$8,325
			Total Project Cost	$133,200

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Clay Pipe Replacement, MH 51-52				Project 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).			
General Location:	Behind Chevron			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
6" DIA. PVC SDR-35	LF	300	$185	$55,500
			Estimated Construction Subtotal	**$55,500**
			Construction Contingency (35%)	$19,425
			Eng/Design/Admin(15%)	$8,325
			ESDC/CM - Cons. Mgmt (10%)	$5,550
			Total Project Cost	$88,800

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Clay Pipe Replacement, MH 35-31				Project 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.			
General Location:	Six Mile, Davie & Bottomly Property			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
6" DIA. PVC SDR-35	LF	2,040	$185	$377,400
			Estimated Construction Subtotal	**$377,400**
			Construction Contingency (35%)	$132,090
			Eng/Design/Admin(15%)	$56,610
			ESDC/CM - Cons. Mgmt (10%)	$37,740
			Total Project Cost	$603,840

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Clay Pipe Replacement, MH 131-136				Project 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.			
General Location:	Williams Street			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
8" DIA. PVC SDR-35	LF	125	$205	$25,625
			Estimated Construction Subtotal	**$25,625**
			Construction Contingency (35%)	$8,969
			Eng/Design/Admin(15%)	$3,844
			ESDC/CM - Cons. Mgmt (10%)	$2,563
			Total Project Cost	$41,000

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Clay Pipe Replacement, MH 123-124, Add New MH				**Project 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.			
General Location:	Apple Blossom			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
6" DIA. PVC SDR-35	LF	550	$185	$101,750
SANITARY SEWER MANHOLE	EA	1	$15,000	$15,000
			Estimated Construction Subtotal	**$116,750**
			Construction Contingency (35%)	$40,863
			Eng/Design/Admin(15%)	$17,513
			ESDC/CM - Cons. Mgmt (10%)	$11,675
			Total Project Cost	$186,800

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Clay Pipe Replacement, MH 103-105				Project 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.			
General Location:	Apple Blossom			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
6" DIA. PVC SDR-35	LF	140	$185	$25,900
			Estimated Construction Subtotal	**$25,900**
			Construction Contingency (35%)	$9,065
			Eng/Design/Admin(15%)	$3,885
			ESDC/CM - Cons. Mgmt (10%)	$2,590
			Total Project Cost	$41,440

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Clay Pipe Replacement, MH 105-135				Project 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.			
General Location:	Apple Blossom			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
6" DIA. PVC SDR-35	LF	1,080	$185	$199,800
			Estimated Construction Subtotal	**$199,800**
			Construction Contingency (35%)	$69,930
			Eng/Design/Admin(15%)	$29,970
			ESDC/CM - Cons. Mgmt (10%)	$19,980
			Total Project Cost	$319,680

Notes:
1. Quantities Estimated

6/12/2024

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Clay Pipe Replacement, MH 172-23				**Project 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.			
General Location:	Main Street behind UPUD			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
6" DIA. PVC SDR-35	LF	140	$185	$25,900
			Estimated Construction Subtotal	**$25,900**
			Construction Contingency (35%)	$9,065
			Eng/Design/Admin(15%)	$3,885
			ESDC/CM - Cons. Mgmt (10%)	$2,590
			Total Project Cost	$41,440

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Clay Pipe Replacement, CO to MH 16-14				**Project 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.			
General Location:	Church Street @ Main			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
6" DIA. PVC SDR-35	LF	660	$185	$122,100
SANITARY SEWER MANHOLE	EA	2	$15,000	$30,000
6" SANITARY SEWER CLEANOUT	EA	1	$1,500	$1,500
			Estimated Construction Subtotal	**$153,600**
			Construction Contingency (35%)	$53,760
			Eng/Design/Admin(15%)	$23,040
			ESDC/CM - Cons. Mgmt (10%)	$15,360
			Total Project Cost	$245,760

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Clay Pipe Replacement, MH 14-10				**Project 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.			
General Location:	Main Street @ Kramer			
Existing Pipe Material:	Clay			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
6" DIA. PVC SDR-35	LF	140	$185	$25,900
			Estimated Construction Subtotal	**$25,900**
			Construction Contingency (35%)	$9,065
			Eng/Design/Admin(15%)	$3,885
			ESDC/CM - Cons. Mgmt (10%)	$2,590
			Total Project Cost	$41,440

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Influent Force Main				**Project 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.			
General Location:	Murphys Grade Road to WWTP			
Existing Pipe Material:	Clay & PVC			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
8" SSFM PVC Piping, Valves, and Appurtenances	LF	5500	$200	$1,100,000
Trenching, Bedding, and Backfill	LF	5500	$40	$220,000
Access Driveway Repair	SF	64,000	$2	$128,000
			Estimated Construction Subtotal	**$1,448,000**
			Construction Contingency (35%)	$506,800
			Eng/Design/Admin(15%)	$217,200
			ESDC/CM - Cons. Mgmt (10%)	$144,800
			Total Project Cost	$2,316,800

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Sand Filtration System				Project 24
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.			
General Location:	WWTP			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
Sand Filtration System	EA	1	$400,000	$400,000
			Estimated Construction Subtotal	**$400,000**
			Construction Contingency (35%)	$140,000
			Eng/Design/Admin(15%)	$60,000
			ESDC/CM - Cons. Mgmt (10%)	$40,000
			Total Project Cost	$640,000

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Disinfection System				**Project 25**
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.			
General Location:	WWTP			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
Disinfection System	EA	1	$50,000	$50,000
			Estimated Construction Subtotal	**$50,000**
			Construction Contingency (35%)	$17,500
			Eng/Design/Admin(15%)	$7,500
			ESDC/CM - Cons. Mgmt (10%)	$5,000
			Total Project Cost	$80,000

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Backup Generator				Project 26
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.			
General Location:	WWTP			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
Generator	EA	1	$225,000	$225,000
			Estimated Construction Subtotal	**$225,000**
			Construction Contingency (0%)	$0
			Eng/Design/Admin(0%)	$0
			ESDC/CM - Cons. Mgmt (0%)	$0
			Total Project Cost	$225,000

Notes:
1. Quantities Estimated
2. Soft Cost not included

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Site Fencing				Project 27
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.			
General Location:	WWTP			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
Fencing	LS	1	$300,000	$300,000
			Estimated Construction Subtotal	**$300,000**
			Construction Contingency (0%)	$0
			Eng/Design/Admin(0%)	$0
			ESDC/CM - Cons. Mgmt (0%)	$0
			Total Project Cost	$300,000

Notes:
1. Quantities Estimated
2. Soft Cost not included

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BLACKWATER CONSULTING ENGINEERS

Pond 3 Sludge Removal				**Project 28**
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.			
General Location:	WWTP			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
Sludge Removal	LS	1	$552,500	$552,500
			Estimated Construction Subtotal	**$552,500**
			Construction Contingency (0%)	$0
			Eng/Design/Admin(0%)	$0
			ESDC/CM - Cons. Mgmt (0%)	$0
			Total Project Cost	$552,500

Notes:
1. Quantities Estimated
2. Soft Cost not included

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BLACKWATER CONSULTING ENGINEERS

Repair/Replacement of Trucks/Vehicles				Project 29
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.			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
Truck/Vehicle	EA	2	$35,000	$70,000
			Estimated Construction Subtotal	**$70,000**
			Construction Contingency (0%)	$0
			Eng/Design/Admin(0%)	$0
			ESDC/CM - Cons. Mgmt (0%)	$0
			Total Project Cost	$70,000

Notes:
1. Quantities Estimated
2. Soft Cost not included

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Hydro Flusher				Project 30
Existing Condition and Risk of Failure:				
Project Description:	This project consists of purchasing a new Hydro Flusher			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
Hydro Flusher	EA	1		$0
			Estimated Construction Subtotal	**$0**
			Construction Contingency (0%)	$0
			Eng/Design/Admin(0%)	$0
			ESDC/CM - Cons. Mgmt (0%)	$0
			Total Project Cost	$0

Notes:
1. Quantities Estimated
2. Soft Cost not included

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Sewer Camera				Project 31
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.			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
Sewer Camera System	EA	1		$0
			Estimated Construction Subtotal	**$0**
			Construction Contingency (0%)	$0
			Eng/Design/Admin(0%)	$0
			ESDC/CM - Cons. Mgmt (0%)	$0
			Total Project Cost	$0

Notes:
1. Quantities Estimated
2. Soft Cost not included

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Security Camera				Project 32
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.			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
Security Camera System	EA	1		$0
			Estimated Construction Subtotal	**$0**
			Construction Contingency (0%)	$0
			Eng/Design/Admin(0%)	$0
			ESDC/CM - Cons. Mgmt (0%)	$0
			Total Project Cost	$0

Notes:
1. Quantities Estimated
2. Soft Cost not included

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Technology				Project 33
Existing Condition and Risk of Failure:				
Project Description:				
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
Fencing	LS	1		$0
			Estimated Construction Subtotal	**$0**
			Construction Contingency (0%)	$0
			Eng/Design/Admin(0%)	$0
			ESDC/CM - Cons. Mgmt (0%)	$0
			Total Project Cost	$0

Notes:
1. Quantities Estimated
2. Soft Cost not included

6/12/2024

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Office Building				**Project 34**
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.			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
Building	EA	1	$450,000	$450,000
			Estimated Construction Subtotal	**$450,000**
			Construction Contingency (35%)	$157,500
			Eng/Design/Admin(15%)	$67,500
			ESDC/CM - Cons. Mgmt (10%)	$45,000
			Total Project Cost	$720,000

Notes:
1. Quantities Estimated

6/12/2024

BLACKWATER CONSULTING ENGINEERS

Maintenance Facility				**Project 35**
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.			
Item	**Unit**	**Quantity**	**Unit Cost**	**Total Unit Cost**
Building	EA	1	$450,000	$450,000
			Estimated Construction Subtotal	**$450,000**
			Construction Contingency (35%)	$157,500
			Eng/Design/Admin(15%)	$67,500
			ESDC/CM - Cons. Mgmt (10%)	$45,000
			Total Project Cost	$720,000

Notes:
1. Quantities Estimated