Humboldt Community Services District

Fiscal Year 2024/25

Capital Improvement Program

With Details for

Fiscal Year 2024/25 – 2028/29

and Projections out to Fiscal Year 2044/45

Adopted June 25, 2024

EXECUTIVE SUMMARY

The Humboldt Community Services District Fiscal Year 2024/25 Capital Improvement Plan (CIP) details the cost and scheduling for the anticipated capital projects and expenditures for the five-year period beginning with Fiscal Year 2024/25 and ending with Fiscal Year 2028/29. The plan also includes less detailed projections for anticipatable expenditures to the ten and twenty-year planning horizon. A table summarizing the capital expenses can be found below (Table 1). The FY 24/25 totals include $1.5M that was budgeted for CIP projects that were planned for FY 23/24 and were not completed. These funds were rolled into FY 24/25. The FY 24/25 CIP also includes $1M for repairing infrastructure that was damaged during the December 20, 2022 earthquake. The damage repair is grant funded by CalOES. Projected spending for capital projects in FY 24/25 is $5.4M. Additionally, the District continues to apply for grant funding that will offset costs associated with various proposed CIP projects in future years.

Table 1: Summary of Humboldt Community Service District anticipated capital expenses out to the 20-year planning horizon.

	Current FY 23-24	**Scheduled FY 24-25**	Projected FY 25-26	Projected FY 26-27	Projected FY 27-28	Projected FY 28-29	Projected Years 6 to 10*	Projected Years 11 to 20**
		1	2	3	4	5		
Sewer Facilities	$1,517,438	**$1,467,000**	$2,682,500	$2,441,500	$2,465,000	$2,360,000	$15,686,667	$30,933,333
Sewer Mains	$51,000	**$1,327,500**	$1,400,500	$1,460,100	$2,053,100	$3,295,500	$33,105,506	$55,529,013
Water Facilities	$1,011,362	**$1,138,200**	$1,150,500	$1,244,500	$1,190,500	$1,930,500	$6,682,500	$7,530,000
Water Mains	$217,843	**$952,500**	$683,333	$1,685,000	$2,026,666	$940,000	$45,075,000	$90,150,000
Building and Yard	$22,500	**$395,000**	$55,000	$0	$0	$110,000	$250,000	$500,000
Vehicles and Equipment	$783,776	**$129,500**	$85,000	$0	$0	$0	$2,000,000	$4,000,000
Sewer Total	$1,971,575.6	**$2,372,279.0**	$4,153,000.0	$3,901,600.0	$4,518,100.0	$5,710,500.0	$49,917,172.7	$88,712,346.3
Water Total	$1,632,343.4	**$2,177,610.0**	$1,903,833.0	$2,929,500.0	$3,217,166.0	$2,925,500.0	$52,882,500.0	$99,930,000.0
Total	$3,603,919	**$5,409,700**	$6,056,833	$6,831,100	$7,735,266	$8,636,000	$102,799,673	$188,642,346
				Annual averages for 10 and 20 year projections			$20,559,935	$18,864,235
				20 Year Projected Grand Total				$329,714,837

*column represents the cumulative expenses for the 5 years between year 6 and year 10

**column represents the cumulative expenses for the 10 years between year 11 and year 20

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INTRODUCTION

The Fiscal Year (FY) 2024/2025 Capital Improvement Program/Plan (CIP) is a five-year plan for budgeting and planning of District water and sewer facility and infrastructure improvements. The CIP is used to identify, prioritize and schedule necessary improvements. The CIP is also a tool to assist with rate setting and identification of funding sources for future projects. The CIP consists of projects that require major financial and human resources in a scheduled format. Interdependency of year-to-year project selections is a major consideration to ensure an efficient and orderly progression of improvements. Routine maintenance is not considered a capital improvement expense.

Criteria for CIP project selection includes projects that reduce maintenance and cost to the District, improve service and reliability, and provide for water security and infrastructure resiliency. The CIP is also used as the master plan for scheduled infrastructure replacements based on performance and useful life expectancy.

The CIP will inform and assist with the District's annual budgeting process as well as inform the rate and capacity charge setting process. The ten- and twenty-year projections are intended for planning purposes. These estimates represent known expenses that will impact the District's finances on a longer-term planning horizon than a standard five-year CIP does. These long-term projections do not represent an exhaustive list or project schedule. The ten- and twenty-year projections are intended to inform financial planning, rate setting and grant writing efforts so that the District can remain financially sustainable into the future.

The projected values reflected in these pages are in 2024 dollars with no consideration of potential inflation.

BACKGROUND

The District was formed in 1952 to provide water and wastewater services to the unincorporated areas of Eureka. Over the years, the District has expanded the service area to include Myrtletown, Pine Hill, Humboldt Hill, Fields Landing, King Salmon, and Freshwater. Expansion was accomplished both by District construction of facilities, such as in Myrtletown and Cutten, and by acquisition of existing facilities such as the Pialorsi water system in Humboldt Hill and the County Service Area No. 3 in King Salmon and Fields Landing.

Between 1974 and 1980, the Capital Improvement Program consisted mainly of equipment and plant purchases. From 1980 to 1990, the CIP included revenue bond financing of major water supply, distribution and storage projects. From 1990 onward, the District adopted a formal five-year CIP process that focused on steel main replacement and sewage lift station upgrades. The structured program has resulted in increases in production and project completion. Capital expenditures have also increased from an average of 10% to over 30% of the total budget as the District's aging system requires replacements and improvements.

Ten- and twenty-year projections (titled Years 6-10 and Years 11-20 in the tables for clarity), developed for this plan, indicate that the District's capital expenditures will need to accelerate to keep pace with necessary renewal of the aging infrastructure some of which has already come to the end of its useful life. This includes over 114 miles of water mains and 73 miles of sewer mains, some of which will be approaching 100 years old at the end of the 20-year planning horizon.

In 2016, the City of Eureka received a Cease-and-Desist Order (CDO) regarding discharges to Humboldt Bay. At the time, the CDO required compliance with a "Blending Prohibition" by 2028 and full compliance with the State's *Enclosed Bays and Estuaries Policy* by 2032. The Waterboard has adopted a

National Pollutant Discharge Elimination System (NPDES) Permit that requires compliance with these prohibitions by 2028 and 2042 respectively while at the same time rescinding the CDO. Currently, the City's estimate for compliance with the "Blending Prohibition" is as much as $20M which will require a District contribution of about $7M. The projects to address the Blending Prohibition are currently scheduled by COE to occur during FYs 26/27, 27/28 and 28/29.

Additionally, the City will be required to completely comply with the Enclosed Bays and Estuaries Policy by 2042, which may require the construction of an ocean outfall or a complete rehabilitation of the treatment plant. Based on studies commissioned by the City, District staff has estimated that this effort could cost as much $60M with an HCSD contribution on the order of $20M. That value is included in the 6-to-10-year and 11-to-20-year projection as a loan repayment to spread the cost over as much time as possible. There is no current estimate by the City for the cost to fully comply with the Enclosed Bays and Estuaries Policy.

WATER

The District's water distribution and storage system is complex, consisting of twenty-two (22) different pressure zones, ten (10) water storage tanks containing 5.0 million gallons (MG) of storage capacity, and twelve (12) water booster pumping stations. The District's water related capital expenditure plan is detailed in Table 3 and Table 4.

Water supply is furnished by three sources. Approximately one half of the District's consumption is purchased from the Humboldt Bay Municipal Water District (HBMWD) through the Truesdale booster pump station; one quarter is purchased from the City of Eureka (who purchases it from HBMWD) through the Hubbard and Harris booster pump station; the final quarter is pumped from District owned wells located in the Humboldt Hill area that draw off of the Eureka Plain Groundwater Basin near the Elk River.

These three water sources supply the three major service areas of the District. Hubbard and Harris pump station (water purchased from the City of Eureka) supplies the northern area of Myrtletown, Mitchell Road, Freshwater and Pigeon Point (Freshwater/Mitchell Road Zone). Truesdale pump station (water purchased from HBMWD) supplies Cutten, Rosewood, a portion of Pine Hill, Ridgewood and Elk River (Ridgewood Zone). District well water supplies the southern area of Humboldt Hill, King Salmon, Fields Landing, College of the Redwoods and a portion of Pine Hill (Humboldt Hill Zone).

Using the District's current infrastructure, water can be moved from the Ridgewood zone to the Humboldt Hill Zone and to the Freshwater/Mitchell Road Zone. Water can also be moved from the Freshwater/Mitchell Road Zone to the Ridgewood Zone. Using current infrastructure, water cannot be moved from the Humboldt Hill Zone to the Ridgewood or Freshwater/Mitchell Road Zones. This could prove problematic during a regional emergency because all of the District's current wells are located in the Humboldt Hill Zone.

Interties also exist between the City of Eureka water system and the District for emergency purposes. In most places, the City of Eureka pressure grid is approximately 5 psi greater than the District pressure grid. There are areas where the District's delivered pressure is higher than the City's pressure at the District's boundary. Although these District service/supply interties exist, moving water from one service zone to another is complicated by undersized transmission mains and under capacity storage volume necessary to supply both zone demands concurrently.

Systematic Steel Main Replacement

The systematic steel watermain replacement program was initiated in the early 1990s to replace approximately 15 miles of steel watermain most of which was installed in the 1950s. There are a total of 5 steel main replacement (SMR) projects remaining with a total length of less than a half a mile that are scheduled over the next several years. Two of these SMR projects are scheduled for the coming year. These projects are listed in Table 4, marked with an SMR for Steel Main Replacement.

Water Tank Rehab

During FY 2017-18, the District performed an assessment of three water storage tanks; Walnut Drive 1MG, Ridgewood and Donna Drive. The inspections revealed that all three tanks required rehabilitation including recoating, structural rehabilitation and were in need of safety upgrades for fall protection, venting and cathodic protection. The Walnut Drive and Ridgewood tanks were the highest priority. The Walnut Drive 1MG tank rehabilitation was completed during FY 20/21, the Ridgewood Tank rehabilitation was completed during FY 21/22 and the Brier Lane Tank rehabilitation was completed in FY 22/23. Construction on the Donna Drive Tank rehabilitation will begin during FY 24/25 and be completed during the summer of 2025. Due to the age and condition of the remaining District water storage tanks, all of the District's tanks will be evaluated and rehabilitation will be scheduled accordingly.

During the five-year term of this Capital Improvement Plan, the following water storage tanks are scheduled for rehabilitation; Donna Drive 0.5MG (2025), Walnut Drive 0.5MG (2026), the Cummings Road tank (2027) and the Dana Lane Tank (2028). The District will rehabilitate the remaining tanks within the ten-year planning horizon. The following table provides some detailed information regarding the District's water storage facilities (Table 2).

Table 2: The tabulated data shows details regarding the District's water storage tanks.

Water Storage Tank Data					
Location/Name	**Volume (MG)**	**Height (Feet)**	**Diameter (Feet)**	**Date Constructed**	**Date Refurbished**
Blue Spruce	1	35	72	2002	--
Brier Lane	0.5	32	52	1982	2023
Cummings	0.12	24	30	1991	Planned 2027
Dana Lane	0.375	30	48	1992	Planned 2028
Donna Drive	0.5	24	61	1988	Planned 2025
Lentell	0.15	20	37	1992	--
Pigeon Point	0.17	24	35.5	1996	--
Ridgewood	0.5	52	40	1982	2021
Walnut Drive	1	40	67	1971	2020
Walnut Drive	0.5	34	50	1952	Planned 2026

Pump Station Rehab/Upgrade

The District maintains twelve (12) water booster or pump stations. These include South Bay Well, Spruce Point Well, Blue Spruce Booster, Donna Drive Booster, Truesdale Pump Station, Ridgewood Pump Station, Hubbard Pump Station, Cummings Road Booster, Mitchell Road Booster, Lentell Booster, Kluck Booster, and Pigeon Point Booster. Some of these stations pump water out of the ground and up to a tank (South Bay Well and Spruce Point Well). Other stations move water from a low elevation up to a tank at a higher elevation and operate under level control (Blue Spruce Booster, Truesdale Pump Station, Ridgewood Pump Station, Cummings Road Booster, Mitchell Road Booster, Pigeon Point

Booster, and Hubbard Pump Station). The remaining stations pressurize water using hydropneumatics to deliver water with sufficient pressure to connections whose elevation cannot be reached by the nearest pressure zone (Donna Drive Booster, Lentell Booster, and Kluck Booster).

In 2023, a shelter was constructed at South Bay Well to protect the wellhead and pump motor. In 2024, a third pump was added to the Hubbard Pump Station and Ridgewood Booster Station to provide redundancy and supply resiliency. Over the next five years, Truesdale, the District's primary pumping station, will receive an updated Motor Control Cabinet (MCC) as well as replacement pumps. This project is necessary because installed equipment is past its useable life. The buildings that protect the Pigeon Point Booster Station and Donna Drive Booster Station will be rehabilitated in 2027. The MCC and aged pumps at the Hubbard Pump Station will be updated in 2028. Other projects will need to occur in the 6-to-20-year time frame but are not yet scheduled or budgeted.

Table 3: Capital improvements planned for Humboldt Community Services District water pumping and storage facilities.

WATER		Current FY 23-24	**Scheduled FY 24-25**	Projected FY 25-26	Projected FY 26-27	Projected FY 27-28	Projected FY 28-29	Projected Years 6 to 10*	Projected Years 11 to 20**	Comments
			1	2	3	4	5			
WATER SYSTEM IMPROVEMENTS										
	C=Contract									
PUMPING FACILITY UPGRADES										
Donna Drive Hydro-tank		$60,500								DOHS required
Ridgewood Water Booster Station		$33,000								Third Pump Assembly
Water Sample Stations		$21,000	**$35,000**							
AMR Program		$155,000	**$275,200**	$210,000	$210,000	$210,000	$210,000	$1,050,000	$2,100,000	Replace Ten Percent Stock Per Year
SCADA Upgrade		$120,562	**$110,000**	$110,000	$110,000	$110,000				
Brier Lane 0.5 MG Tank	C	$550,000	**$40,000**							Engineering 22/23 Rehabilitation 23/24
Ridgewood Tank	C	$5,000	**$50,000**							Tank Rehab, demobilize, fence
Hubbard 3rd Pump		$36,300	**$7,500**							Upsize pump/ mod system
Donna Drive 0.5 MG Tank	C	$5,000	**$420,000**	$350,000						Engineering and Temp System 23/24 Rehab 24/25
Hubmboldt County ADA Access			**$5,500**	$5,500	$5,500	$5,500	$5,500	$27,500	$55,000	
Truesdale WBS		$25,000	**$40,000**	$35,000	$35,000	$35,000	$35,000	$35,000		New pumps/Upgrade
PRV Program			**$10,000**	$10,000	$10,000	$10,000	$10,000	$50,000	$50,000	Annual PRV Rehab/Replacement
South Bay School Backflow Device			**$20,000**							
Spruce Point Well	C		**$75,000**							Well Cleaning and New Submersible Pump
Walnut Drive 0.5 MG Tank	C		**$50,000**	$375,000	$350,000	$20,000				Engineering 24/25 Rehabilitation 25/26 inspections 26/27
Cummings Road Tank	C			$55,000	$375,000	$325,000	$45,000			Engineering 25/26 Rehabilitation 26/27 inspections 27/28
Pigeon Point WBS					$30,000					Rehab/roofing/siding
Donna Drive WBS	C				$75,000					Siding, roofing and drainage
Dana Lane Tank					$44,000	$350,000	$375,000	$20,000		
Hubbard MCC and Pumps Update						$125,000				
Princeton Well							$1,250,000			Reestabilsh a well on District owned property
Meyers Well									$825,000	Replace failed well on District owned property
Water Resiliancy at Little CA St.						.		$1,500,000		Booster Station and Well
Rehabilitate Remaining Tanks								$4,000,000	$4,500,000	
Water Pumping Facilities Totals		$1,011,362	**$1,138,200**	$1,150,500	$1,244,500	$1,190,500	$1,930,500	$6,682,500	$7,530,000	$21,878,062

*column represents the cumulative expenses for the 5 years between year 6 and year 10

**column represents the cumulative expenses for the 10 years between year 11 and year 20

Table 4: Capital improvements planned for Humboldt Community Services District water main replacements.

WATER			Current	Scheduled	Projected	Projected	Projected	Projected	Projected	Projected	Comments
			FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	Years 6 to 10*	Years 11 to 20**	
CAPITAL IMPROVEMENTS - WATER				**1**	2	3	4	5			Water main replacements
WATER MAIN REPLACEMENTS	**C=Contract**										$300/LF except as noted
	SMR=STEEL MAIN REPLACEMENT										
	ACMR=ASBESTOS CEMENT MAIN REPLACEMENT										
		LF									
New Connections			$15,000	**$15,000**	$15,000	$15,000	$15,000	$15,000	$75,000	$150,000	New connections
18th Street	SMR	450	$107,508								$300/LF 450 feet
Stanford Court	SMR	100	$29,700								$300/LF
Temple Circle	SMR	130	$50,635								$300/LF
Walnut EQ Repair			$15,000	**$500,000**							Grant Funded
Crane Street	SMR	850		**$297,500**							$350/LF
Shady Lane	SMR	400		**$140,000**							$350/LF
Meadowood	SMR	400			$200,000						$500/LF
Vista Tie In Phase 1	C	700			$100,000	$150,000	$100,000				$500/LF
Mitchell Road	C	3400			$368,333	$1,105,000	$736,666				Myrtle to Cummings on Mitchel Road $650/LF
Vista Tie In Phase 2	C	700				$100,000	$250,000				$500/LF Includes Hillcrest and Gayhana
Beechwood Dr.	SMR	370				$185,000					$500/LF
Austin Court	SMR	260				$130,000					$500/LF
College Streets Upgrade ACMR	ACMR	3700					$925,000	$925,000			$500/LF
AC Water Main Replacement Program		272694							$45,000,000	$90,000,000	AC Mains @ $500/LF
Water Main Replacement Totals			$217,843	**$952,500**	$683,333	$1,685,000	$2,026,666	$940,000	$45,075,000	$90,150,000	$141,730,342

*column represents the cumulative expenses for the 5 years between year 6 and year 10
**column represents the cumulative expenses for the 10 years between year 11 and year 20

SEWER

The District's sewage collection system is straightforward in concept. All sewage collection gravity flows or is pumped to the City of Eureka's Elk River Wastewater Treatment Facility for treatment. By agreement, the District owns 32.1% of the current plant capacity. Annually the District sends approximately $1.9M to the City of Eureka for operation and maintenance of the regional facility. This represents nearly half of the total sewer related operating expenses budgeted for FY 24/25. In addition, the District contributes, on average, $1.75M annually to sewer related CIPs to the City of Eureka. This represents over 40 percent of the District's total CIP budget for sewer related capital spending over the five year planning horizon.

The hilly terrain and historical piecemeal development within the District has resulted in a system that includes 28 sewer lift stations. For comparison, the McKinleyville Community Services District (MCSD) operates six lift stations, City of Arcata operates eight stations, and City of Fortuna operates five stations. The City of Eureka, which is adjacent to and with similar topography as the District, operates 26 stations. Under current operations, the District has no alternative but to upgrade and replace many of these stations to achieve reduced maintenance, emergency call-out and sewage overflow potential.

The District's sewer related capital expenditure plan is detailed in Table 5 and Table 6.

Martin Slough Lift Station Reversals

In the early 1980's the concept of a regional sewage lift station serving both the City of Eureka and District customers in the Ridgewood, Pine Hill and City Golf Course area was explored. The stated objectives were threefold: I) To eliminate approximately three major and three minor City and 13 minor District lift stations; 2) Reduce the large pumping and maintenance costs associated with pumping into cascading lift station systems, which pumps along an indirect route, completely around the City through the cross-town interceptor and 3) Provide for future development of approximately 5,000 new residential units in the non-sewered areas of Westgate and Ridgewood as well as expansion of the Cutten area.

Another stated benefit of this project is to redirect the City of Eureka' s "O" Street sewage lift station to the new Martin Slough Interceptor, thereby freeing up capacity in the City's northeast (Myrtletown) sewage drainage area. Before the Martin Slough Interceptor project, the City's northeastern collection system, was at capacity.

Over the years, the project morphed into the Martin Slough Interceptor project for which construction was completed in 2015. By 2007, the concept project had been modified to the point that only ten of the District's lift stations had the potential to be "turned" or "reversed"; Artino, Sea Avenue, Pine Hill, Hidden Meadows, Alder, F Street, Hartman, D Street, Spruce, Campton, and the metering station at Hemlock. Of these ten, Campton has been "turned" and converted to a metering station, Sea Avenue is in the process of being "turned" and is expected to be completed during the summer of 2024, the Hemlock metering station will be eliminated with the Hemlock rerouting project that is scheduled to be completed 2028, Hartman Ln "reversal" is scheduled to be completed in 2026, and F Street is scheduled to be "reversed" in2027.

The remaining six lift stations (Artino, Pine Hill, Hidden Meadows, Alder, D Street and Spruce) are not currently scheduled to be "turned." Some of these lift stations are currently listed in the ten-year projections. They will be prioritized and scheduled as it becomes cost effective to consider performing the necessary work to "turn" these stations. Most of these stations serve very small sewer sheds and the cost of performing the work necessary to "turn" them currently outweighs the resulting benefit. As

development occurs within those sewer sheds, the economics associated with "tuning" these lift stations becomes more favorable.

In the case of Pine Hill, the Martin Slough Interceptor project was modified at some point between planning and execution so that the Pine Hill lift station cannot flow to the Martin Slough Interceptor. Turning the Pine Hill lift station will require major upgrades to the City of Eureka's Pound Road lift station. Additionally, the developable land in Westgate and Ridgewood have limited access to the Martin Slough Interceptor as it was constructed and will require extensive infrastructure to accommodate development in those areas.

Lift Station Rehab

The District currently maintains 28 lift stations; Hoover, Alder, Spruce, Foxwood, S. Broadway, Sequoia, Christine, Sea Avenue, Pine Hill, Bailey, Wellington, Beechwood, Moore Ln, Maple Ln, Perch, Buhne, King Salmon, Fields Landing, Blackberry, Hartman, Roth Ct, Artino, Hidden Meadows, Cedar Ridge, Liberty Bell, Edgewood, F Street, and D Street.

The anticipated life of a lift station is between 15 and 20 years. Given that there are nearly 30 lift stations, the District is continually performing rehabilitation activities on these assets. In fact, to keep pace with degradation, the District needs to rehab the equivalent of two lift stations per year. This is in the form of pump upgrades, replacement panel enclosures, rail replacements, lid replacements, and grouting/concrete. Rarely does the District undertake a complete lift station rehabilitation because the ongoing maintenance of the lift stations allows staff to spread the effort and expense across many years and avoid shutting down and re-routing an entire station to accommodate a rehabilitation project.

During the coming five-year period, the District will be performing rehabilitation work on 11 of the 28 lift stations. The lift stations being addressed during the current five-year CIP are Bailey, Artino, Allard, Pine Hill, Christine, Fields Landing, Hoover, Beechwood, Foxwood, King Salmon, and Wellington. Additionally, a new lift station is proposed for the intersection of Mike Lane and Park Street and planned for FY 28/29. The District experiences emergency conditions at this location whenever there is excessive precipitation. A new lift station at this location would significantly reduce the probability of sewer overflow.

Trouble Spots (Enhanced Cleaning Locations)

A "Trouble Spot" or "Enhanced Cleaning Location" is a location within the District's sewer collection system that has given the maintenance staff "trouble" and is in need of periodic attention. The District has a sewer maintenance program to deal with trouble spots in the collection system. When a problem is reported or detected, maintenance staff will investigate the issue to determine the root cause. If the cause of the problem is determined to be the District's infrastructure, (root intrusion, infrastructure degradation, sagging, damage, design issues, etc.) a project will be initiated and the area will be identified as a trouble spot. Once an area is identified as a trouble spot, that section, area or location is put on a list (work order) to be repaired and prioritized along with other District projects.

During the time between when a trouble spot is identified and when a permanent solution can be implemented, the maintenance staff will make periodic inspections and take temporary corrective action (sewer line cleaning, de-rooting, etc.) as needed. There are currently over 125 work orders for sewer main and lateral line repairs and over 35 for manhole and cleanout repairs that have resulted from the enhanced cleaning/trouble spot program. All 160 of these locations are trouble spots or enhanced cleaning locations that District staff must monitor and maintain until such time that a permanent solution can be implemented.

Trouble spots that are large enough to be considered capital improvements that will be repaired during the next five years include Dr. Office Lane (un-named road at 2826 Harris) (2025), Noe Street (2026), Mesa/Bell Terrace (2028), London Drive at Burns (2026), Ridgewood Drive at Ridgewood Elementary (2027), Summit Ridge to David (2027), Worthington (2028) and Quaker to Mike reroute (2029). There is money included in the ten-year plan for additional trouble spot repairs but those future projects cannot be scheduled at this time because trouble spots develop over time as the system deteriorates.

Systematic Sewer Line Replacement

As the infrastructure ages, the District must consider replacement. The systematic sewer line replacement program takes into account the age of the assets, the history of problems and repairs, critical loading to the asset, the material that the asset was constructed from, and the design life of the asset. As feasible, the District will schedule sewer line replacements for the most vulnerable assets. The most vulnerable of the District's in ground sewer assets are asbestos cement and clay pipes. Over 50 miles of the existing sewer system was constructed in the 1960s and 70s from asbestos cement composite pipe. This material does not hold up well to the sulfur compounds that off-gas from wastewater and must be replaced to reduce Inflow and Infiltration, and to avoid catastrophic failure.

The District is planning to implement an infrastructure renewal program to address these high priority, aged and vulnerable assets. The program is scheduled for the 6-to-20-year timeframe with anticipating annual spending of $3.5M. This accelerated schedule is necessary because all of this infrastructure is currently beyond its useable life and must be replaced.

Outside Agency Obligations

The District is affected by several outside agencies including the City of Eureka, County of Humboldt and the State of California. These agencies impose programs or regulations that require District response. In the case of the County of Humboldt, the District's Pine Hill Bridge HDD project that was completed in FY 20/21 is an example of an outside agency obligation. The County determined that Pine Hill Bridge needed to be replaced. The District owns a watermain that serves as an interconnect between Humboldt Hill and Pine Hill. The District's watermain was attached to Pine Hill Bridge. The District's watermain would be out of service for the duration of the construction project to replace Pine Hill Bridge. This would isolate Humboldt Hill, King Salmon, Fields Landing, and College of the Redwoods from the rest of the District. These communities would be reliant only on the District's ability to provide well water. If there were a problem with the District's wells, the District would have no way to provide water to these communities.

A second example of a County imposed Capital Improvement is the County's Americans with Disabilities Act (ADA) access project(s). The County is working to improve ADA access at intersections and other areas with high foot traffic by incorporating access ramps, bulb out aprons and high visibility, high traction surfaces as well as other improvements. Through the course of this work, the County will disturb many valve cans, meter boxes and other District assets. When these assets are affected by the County's project, the District supplies the materials and labor to ensure that the components are replaced to the District's standards. During FY 21-22 the County surprised the District with a pavement upgrade project on Humboldt Hill. This project resulted in about $45,000 in District labor and materials, over several months, to raise the valve cans and sewer maintenance access points.

City of Eureka CIP

The District's wastewater flows through several metered locations to the City of Eureka (COE, City), through some of their infrastructure and to the Greater Eureka Area Wastwater Treatment Plant (GEAWTP). The contract with the City for wastewater treatment specifies that a portion of the City's

capital improvements are the responsibility of the District. This includes 32.1 percent of capital improvements to the GEAWTP as well as specific pumping stations and trunk lines or interceptors. Additionally, the District is contractually obligated to pay for three percent of operation and maintenance to all of the City's wastewater collections and treatment infrastructure not covered by the afore-mentioned 32.1 percent. A line item is included in the District's Capital Improvement Plan to cover the anticipated expenses associated with the City's capital improvements.

Greater Eureka Area Wastwater Treatment Plant (GEAWTP)

In 2016, the City of Eureka received a Cease-and-Desist Order (CDO) regarding discharges to Humboldt Bay. At the time, the CDO required compliance with a "Blending Prohibition" by 2028 and full compliance with the State's Enclosed Bays and Estuaries Policy by 2032. The Waterboard has adopted a National Pollutant Discharge Elimination System (NPDES) Permit that requires compliance with these prohibitions by 2028 and 2042 respectively while at the same time rescinding the CDO. Currently, the City's estimate for compliance with the "Blending Prohibition" is $20M which will require a District contribution of about $7M.

Additionally, the City will be required to completely comply with the Enclosed Bays and Estuaries Policy by 2042, which may require the construction of an ocean outfall or a complete rehabilitation of the treatment plant. Based on studies commissioned by the City, District staff has estimated that this effort could cost as much $60M with an HCSD contribution on the order of $20M. That value is included in the 6-to-10-year and 11-to-20-year projection as a loan repayment to spread the cost over as much time as possible. There is no current estimate by the City for the cost to fully comply with the Enclosed Bays and Estuaries Policy.

The requirements being imposed by the NCRWQCB through the recently adopted NPDES permit include full secondary treatment (blending prohibition), including de-chlorination to all discharge flows to Humboldt Bay, as well as compliance with the applicable water quality objectives for ammonia (full Enclosed Bays and Estuaries Policy Compliance). In short, what this means is that the GEAWTP does not currently have sufficient capacity to treat all of the wastewater that is sent there nor does that facility have the ability to sufficiently remove ammonia from the waste stream. Additionally, the Waterboard may determine that the City cannot continue to discharge to Humboldt Bay at all by 2042.

Although detailed reports have not yet been furnished by the City that document the plans to come into compliance with the NCRWQCBs blending prohibition orders; the estimate at this time is that wastewater treatment plant upgrades will total $20M by 2028. The Wastewater Treatment Agreement with the City specifies that 32.1 percent of capital improvements to the COE-WTF are the responsibility of the District. There is a budget included with the HCSD CIP Contribution to COE line item to cover the requisite upgrades to the GEAWTP.

The anticipated cost of full compliance with the Enclosed Bays and Estuaries Policy has not yet been addressed by the City. Compliance with this requirement as detailed in the current Draft NPDES Permit could result in very expensive upgrades to the City's treatment facility and the District will be required to contribute to the cost of those upgrades. Based on the current agreement, that contribution will be 32.1% of the cost. District staff has estimated that this will cost the District about $20M and a line item has been included with a 15 year loan to cover those expenses within the 20 year planning horizon.

Table 5: Capital improvements planned for Humboldt Community Services District sewer facilities.

SEWER		Current FY 23-24	**Scheduled FY 24-25**	Projected FY 25-26	Projected FY 26-27	Projected FY 27-28	Projected FY 28-29	Projected Years 6 to 10*	Projected Years 11 to 20**	Comments
SEWER FACILITIES			**1**	2	3	4	5			
	V=Vendor									
	C=Contract									
	M=Martin Slough Reversal									
Roth Court SLS		$77,000								SLS rehab/pumps
Sea Avenue SLS	M	$22,000	**$24,000**							Upgrade/Reversal
Allard Access Vault			**$20,000**							Meter vault upgrade
Foxwood SLS			**$45,000**							Pump Replacement
Christine SLS			**$75,000**							New electrical control panel
Fields Landing SLS			**$100,000**							Pump Replacemet
Hoover SLS Upgrade			**$100,000**							Upgrade SLS and Flow meters
Artino SLS	C		**$30,000**	$82,500						Pump Replacement Standby Generator Grant Funded
King Salmon SLS	C		**$15,000**	$82,500						Flood Hardening then Stationary generator
Hoover SLS Flood Hardening			**$250,000**	$380,000	$445,000	$495,000				Flood Hardening Grant Funded
Bailey SLS	C			$110,000						Standby Generator Grant Funded
Beechwood SLS Panel				$55,000	$55,000					Control Panel and Enclosure 25/26 Pumps 26/27
Pine Hill SLS Generator	C			$102,500	$16,500					Generator 25/26 Panel Enclosure 26/27
SCADA Upgrade		$82,438	**$110,000**	$110,000	$110,000	$110,000				SCADA Systematic Replacement Program
Sewer Pump Rehabilitation				$10,000	$10,000	$10,000	$10,000	$50,000	$100,000	Annual Allotment for Unplanned Sewer Pump Repairs
Wellington SLS					$55,000					Panel Replacement
Mike Lane SLS	C					$100,000	$600,000			Create new station, reverse flow on Quaker RE Spill History
Pine Hill SLS Rehab								$220,000		SLS conversion/rehab
Projected COE-EBEP								$6,666,667	$13,333,333	Per COE with 15 year loan to distribute costs
CIP Contribution to COE		$1,336,000	**$698,000**	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$8,750,000	$17,500,000	Based on 2024 COE CIP average five year projection
Sewage Facilities		$1,517,438	**$1,467,000**	$2,682,500	$2,441,500	$2,465,000	$2,360,000	$15,686,667	$30,933,333	

*column represents the cumulative expenses for the 5 years between year 6 and year 10

**column represents the cumulative expenses for the 10 years between year 11 and year 20

Table 6: Capital improvements planned for Humboldt Community Services District sewer mains.

SEWER			Current FY 23-24	**Scheduled FY 24-25**	Projected FY 25-26	Projected FY 26-27	Projected FY 27-28	Projected FY 28-29	Projected Years 6 to 10*	Projected Years 11 to 20**	Comments
SEWER MAINS				**1**	2	3	4	5			Sewer main replacements
MAIN EXTENSION & REPLACEMENTS											
C=Contract											
M=Martin Slough Reversal											
V=Vendor											
New Connections			$4,000	**$5,500**	$5,500	$5,500	$5,500	$5,500			
Dr. Office Lane	C	370	$17,000	**$222,000**							Per Engineer's Estimate
Walnut EQ Repair	C		$15,000	**$350,000**	$150,000						Grant Funded
South Broadway FM	C	11700	$15,000	**$110,000**		$350,000	$820,000	$2,340,000	$7,020,000		$1000/LF per Engineer's Estimate
Hemlock	M,C	4500		**$80,000**	$330,000	$330,000	$330,000				Per footage and manhole count
Hartman Lane	M,C	900		**$120,000**	$550,000						Engineering 24/5 Reversal 25/26
Noe Street	C			**$75,000**	$200,000						$440/LF
Walnut Drive Trouble Spot	C	525		**$300,000**							$440/LF
Walnut Drive Laterals	C			**$65,000**							
London Drive at Burns	C	220			$120,000						$440/LF
F Street	M,C	900			$45,000	$450,000					Engineering and $440/LF
Ridgewood Drive	C	200				$88,000					$440/LF
Summit Ridge to David	C	265				$116,600					$440/LF
Spruce SLS	M,C	1215				$55,000	$534,600				Engineering 25/26 Reversal 26/27
Mesa /Bell Terrace/B-Loma	C	700				$65,000	$308,000				Engineering and $400/LF
Worthington St.		125					$55,000				$440/LF
Quaker Park Mike	C	1000						$400,000			$440/LF
Humboldt Hill Sewer Sys								$550,000	$2,750,000	$5,500,000	
Fields Landing FM		7150							$3,146,000		$440/LF
Martin Slough Reversals	M								$1,650,000	$3,300,000	
Trouble Spots									$1,650,000	$4,950,000	
Gravity Main Replacement		265,000							$15,000,000	$38,000,000	$200/LF District Wide AC and Clay
Forcemain Replacement		12883							$1,889,506	$3,779,013	$400/LF District Wide Aging Forcemains
Sewer Main			$51,000	**$1,327,500**	$1,400,500	$1,460,100	$2,053,100	$3,295,500	$33,105,506	$55,529,013	

*column represents the cumulative expenses for the 5 years between year 6 and year 10

**column represents the cumulative expenses for the 10 years between year 11 and year 20

ROLLING STOCK

Rolling Stock includes all vehicles and construction equipment that the District owns. Some of the vehicles are used to transport personnel and equipment, others are used to transport materials to or from construction sites. Equipment includes tractors, trailers, truck mounted sewer cleaning and camera equipment, specialty underground boring equipment, and specialty large scale plumbing equipment. Rolling Stock covers any equipment that the District uses that is on tracks or wheels.

The District's current policies include replacement schedules for Rolling Stock based upon mileage, age, hours of operation, and repair history. If any of these criteria are exceeded, a piece of equipment becomes eligible for replacement. The District Management uses discretion to determine which equipment will be recommended for replacement based on the critical nature of the equipment, the expected longevity, redundant assets, and other contributing circumstances. Some equipment replacement is unavoidable while others are less necessary.

Details regarding the capital expenditures associated with the District's rolling stock can be found in Table 7.

Light Duty

During the next five years, the District will be replacing two 2012 Ford construction trucks. These two vehicles are scheduled for replacement due to age, reliability and repair cost. This will be challenging because these vehicles technically fall into the State of California's new requirements for vehicle electrification but there are no commercially available vehicles that can serve the duties that these vehicles serve. District staff is working with the State and vendors to identify a workable solution.

Heavy Duty Equipment

During the next five years, the District does not have plans to replace any of the heavy equipment fleet.

Specialty Equipment

District staff intends to purchase some specialty equipment this fiscal year. This includes a riding mower that will significantly reduce the labor required to maintain the District's pumping stations, lift stations and tank sites. District staff will be purchasing a replacement radio repeater for the truck radio system. The existing equipment is over 30 years old and has failed. The District's sewer push camera and hydrostatic pressure pump need to be replaced due to age and repair history. The push camera is used to inspect underground sewer facilities that are too small to accommodate the van mounted CCTV system. The hydrostatic pressure pump is used to pressure test new water lines before that are put into service.

Table 7: Capital improvements planned for Humboldt Community Services District rolling stock.

REVENUE FUNDED CAPITAL PROGRAM PROJECTIONS					Current FY 23-24	**Scheduled** **FY 24-25**	Projected FY 25-26	Projected FY 26-27	Projected FY 27-28	Projected FY 28-29	Projected Years 6 to 10*	Projected Years 11 to 20**	Comments
VEHICLES / EQUIPMENT						**1**	2	3	4	5			
			C=Contract **V=Vendor**										
Light Duty Service Vehicles				Mileage Hours									
4	2010	Ford F450 w/crane	V	*109,707*	$167,707								Replacement/AQMD
3	2012	Ford 4x4	V	*102,764*		**$85,000**							Age/Repair History
2	2012	Ford 4x4	V	*111,248*			$85,000						Age/Repair History
Heavy Duty Equipment													
10	2010	Peterbilt 7 CY Dump Truck	V	*57,829*	$171,715								Replacement/AQMD
Specialty Equipment													
17	2001	Sewer Camera Van	V	24,364	$444,354								Age/Repair History
		Riding Mower	V			**$10,000**							Labor Efficiency
		Truck Radio Repeater	V			**$12,000**							Failed Replace
		Sewer Push Camera	V			**$17,500**							Age/Repair History
		Hydrostatic Pressure Pump				**$5,000**							Age/Repair History
		Fleet Replacement Program									$2,000,000	$4,000,000	
				Vehicles & Equipment	$783,776	**$129,500**	$85,000	$0	$0	$0	$2,000,000	$4,000,000	$6,998,276

*column represents the cumulative expenses for the 5 years between year 6 and year 10

**column represents the cumulative expenses for the 10 years between year 11 and year 20

OFFICE AND CORPORATION YARD IMPROVEMENTS

The District office and corporation yard are critical to the daily operation of the District's systems, assets, and services. This facility serves as a meeting place for personnel, work space for administration, customer service and engineering staff, a location to hold Board of Directors meetings as well as facilities for equipment and vehicle storage, maintenance and repair. As with the rest of the District's assets, the office and corporation yard requires capital improvement planning to keep the facilities useful, safe and up to date. During the current five-year planning period, the District will be completing repairs to the office building exterior, replacing the roof on the breakroom building, rehabilitating the small truck storage facility replacing the cover over the drying bed, repairing pavement in the corporation yard and the parking lot and planning the corporation yard expansion that will be necessary as growth occurs in the District.

The District's office and corporation yard related capital expenditure plan is detailed in Table 8.

Table 8: Capital improvements planned for Humboldt Community Services District's office and corporation yard.

REVENUE FUNDED		Current	Scheduled	Projected	Projected	Projected	Projected	Projected	Projected	Comments
CAPITAL PROGRAM PROJECTIONS		FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	Years 6 to 10*	Years 11 to 20**	
BUILDING, YARD & PAVING IMPROVEMENTS			1	2	3	4	5			
Office ADA		$17,500	**$35,000**	$25,000						20% of building remodel cost
Vehicle Storage Upgrades			**$20,000**							VacCon Storage
Yard Paving Repairs			**$40,000**							Pavemeint Repairs in Corp Yard
Breakroom Roof	C		**$45,000**							Roof Replacement/Age
Office Building Exterior phase 2	C		**$125,000**							Upstairs Siding and Windows
Small Truck Garage	C		**$125,000**							Rehabilitation
Drying Bed Cover		$5,000	**$5,000**							Replacement
Seal Coat Parking Lot	C			$30,000						Front parking lot
Yard Expansion	C						$110,000	$250,000		
Office and Yard Facility Upgrades									$500,000	
Building and Yard		**$22,500**	**$395,000**	$55,000	$0	$0	$110,000	$250,000	$500,000	

*column represents the cumulative expenses for the 5 years between year 6 and year 10

**column represents the cumulative expenses for the 10 years between year 11 and year 20

GRANT PROGRAM

In FY 21/22, the District initiated a grant writing program to identify and procure assistance funding to help offset accelerating capital improvement costs. During FY 21/22 we focused efforts on FEMA's Hazard Mitigation Grant Program (HMGP). This program is coupled to the County's Hazard Mitigation Planning efforts that the District participates in. Projects identified in the District's Hazard Mitigation Plan are eligible for federal funding assistance through the HMGP.

The District has applied for over $10M in grant funding and continues to identify and pursue grant opportunities. The current applications include a critical power project that will include standby generators at the Pine Hill, Bailey, and Artino SLS. Grants that have been awarded include a 2.2-mile forcemain replacement project connecting the South Broadway SLS to the GEAWTP, an earthquake repair project for infrastructure within Walnut Drive and a flood hardening project at the Hoover SLS. Funds from these grants will directly offset the cost of the associated projects allowing the District to apply CIP money to other critical projects in future years. The grant writing program will continue into the future.

EXTENDED PROJECTIONS

Historically, the Capital Improvement Plan is a five-year projection and schedule for capital projects and expenditures. This format captures some very important information about the near future of the District and helps to plan, prioritize and schedule projects that will impact the District's budget and workforce. What is missing from the CIP is a longer view of infrastructure needs based on the state of the system. The five-year CIP only addresses those projects that are immediately necessary and does not enable the District to plan and save for the much larger looming needs associated with aging infrastructure renewal.

This document incorporates ten and twenty-year projections that capture known long-term improvements that the District will need to undertake in the foreseeable planning horizon. Placing these items in print will enable staff to strategize and plan for the anticipated improvements that will be necessary in the future to keep District operations on track and sustainable.

Extended projections are included in all of the tables detailing capital expenditures planning (Table 3 through Table 8)

Ten Year

The ten-year planning horizon includes some large expenditures that the District needs to be planning for. These include upgrading the GEAWTP, Martin Slough reversals, force main replacements, gravity sewer replacements, water distribution systematic replacement, water storage tank rehabilitation, and ongoing fleet replacement. These ten-year totals are not all inclusive, and are intended for budgetary planning purposes only. Over the ten-year horizon, the District will be facing $140M in capital expenses. These projects and expenses are critical to the continued operation of the District and represent an accelerated level of spending as compared to the District's historic budgeting for capital improvements. The current capital expenditures over the next five years average $6.9M annually. To meet the projected $140M of expenditures at the ten-year horizon, the District will need to accelerate annual spending to $14M annually.

Twenty Year

Similar to the ten-year projections, the twenty-year projections indicate anticipated expenditures for the twenty-year planning horizon. Again, these expenditures are not all inclusive, they do represent anticipated expenditures that the District needs to plan for. Included on the twenty-year horizon are additional systematic main replacements (water and sewer), storage tank rehabilitation, source water development for resiliency, office/corporation yard improvements and expansion, as well as ongoing fleet replacement. Once again, these projection estimates are not all inclusive but represent those expenditures that can be anticipated that are not being addressed in the five-year CIPs.

The financial impact at the 20-year planning horizon is an additional $180M. What this means is the District should be planning for annual expenditures on the order of $18M annually between years 11 and 20.

Fifty Year

While it is impossible to accurately predict what will happen on the fifty-year planning horizon, the design life of most water and sewer infrastructure is fifty years. What this means is that a project that is constructed today will predictably be at its end of life in fifty years. Likewise, a project that was constructed in 1974 is currently at its end of life. The majority of the District's underground infrastructure was constructed well over fifty years ago and, therefore is already due for replacement.

Over the 20-year planning horizon, District staff have developed a plan to rehabilitate or replace the most vulnerable of this underground infrastructure. The total projected cost of combined underground infrastructure (water and sewer) rehabilitation and replacement over the next 20-years is $145M. This suggests an annualized cost of $7.3M over the 20-year planning horizon. This is based on the cost projections for only the most vulnerable assets that have suffered the effects of deferred maintenance.

The District owns and maintains a combined 190-miles of underground mains (water and sewer). The current cost per foot of construction used for budgetary purposes is $440/linear-foot of pipe (for reference, the current engineering estimate of probable construction cost for the South Broadway Forcemain project is $1,400/linear-foot and the engineer's estimated cost for the Walnut Earthquake Repair is over $900/linear-foot). If the District were to create a plan to replace all underground infrastructure over a fifty-year schedule, using $440/linear-foot, the resulting annual cost would also be $8.8M. This is the same value as what is projected for the critically neglected infrastructure. What this says is that the District can anticipate CIP spending to continue at the rate projected for the 20-year planning horizon into perpetuity.