



Humboldt Community Services District

Fiscal Year 2022/23

Capital Improvement Program

With Details for

Fiscal Year 2022/23 – 2026/27

Adopted May 24, 2022

EXECUTIVE SUMMARY

The Humboldt Community Services District Fiscal Year 2022/23 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 2022/23 and ending with Fiscal Year 2026/27. 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 22-23 totals include \$524,170 that was budgeted for CIP projects that were planned for FY 21-22 and were not completed. These funds were rolled into FY 22-23. Additionally, the District has applied for \$3.6M in grant funding that will directly 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 21-22	Scheduled FY 22-23	Projected FY 23-24	Projected FY 24-25	Projected FY 25-26	Projected FY 26-27	Projected 10 year*	Projected 20 year**
		1	2	3	4	5		
Sewer Facilities	\$1,538,000	\$1,570,000	\$1,590,000	\$1,685,000	\$2,110,000	\$2,000,000	\$17,075,000	\$13,350,000
Sewer Mains	\$22,000	\$630,000	\$755,000	\$1,810,000	\$1,689,000	\$1,591,000	\$32,184,043	\$34,648,085
Water Facilities	\$954,571	\$1,170,200	\$356,000	\$966,000	\$966,000	\$881,000	\$7,705,000	\$3,910,000
Water Mains	\$180,859	\$447,500	\$137,100	\$304,500	\$304,500	\$1,367,600	\$18,179,598	\$36,359,196
Building and Yard	\$141,000	\$94,000	\$96,000	\$120,000	\$20,000	\$30,000	\$100,000	\$500,000
Vehicles and Equipment	\$50,000	\$340,000	\$350,000	\$60,000	\$130,000	\$60,000	\$1,500,000	\$3,000,000
Sewer Total	\$1,655,500.0	\$2,417,000.0	\$2,568,000.0	\$3,585,000.0	\$3,874,000.0	\$3,636,000.0	\$50,059,042.6	\$49,748,085.1
Water Total	\$1,230,930.0	\$1,834,700.0	\$716,100.0	\$1,360,500.0	\$1,345,500.0	\$2,293,600.0	\$26,684,598.2	\$42,019,196.4
Total	\$2,886,430	\$4,251,700	\$3,284,100	\$4,945,500	\$5,219,500	\$5,929,600	\$76,743,641	\$91,767,281
							Annual averages for 10 and 20 year projections	\$15,348,728 \$9,176,728
							20 Year Projected Grand Total	\$195,027,752

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

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

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INTRODUCTION

The Fiscal Year (FY) 2022/2023 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 the upcoming rate study. 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 can. 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 2022 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. Since that time, the District has expanded the service area to include Myrtle town, Pine Hill, Humboldt Hill, Fields Landing, King Salmon, and Freshwater. Expansion was accomplished both by District construction of facilities, such as in Myrtle town and Cutten, and by acquisition of existing facilities such as the Pjalorsi 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 nearly 30% of total budget as the District's aging system requires replacement and improvements.

Ten- and twenty-year projections, developed for this plan, indicate that the District's capital expenditures will need to accelerate again to keep pace with the aging infrastructure that will be coming to the end of useful life during those timeframes. This includes over 100 miles of water and sewer mains, some of which will be approaching 100 years old at the end of the 20-year planning horizon. There is also a North Coast Regional Water Quality Control Board Cease and Desist Order in effect for the Elk River Regional Wastewater Treatment Facility that will require significant capital expenditure for compliance by 2030. The current estimated economic impact of this project to the District is \$10M.

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 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 Myrtle town, Mitchel Road, Freshwater and Pigeon Point (Freshwater/Mitchel Road Zone). Truesdale pump station (water purchased from HBMWD) supplies the central areas of Cutten, Rosewood, Pine Hill, Ridgewood and Elk River (Ridgewood Zone). District well water supplies the southern area of Humboldt Hill, King Salmon, Fields Landing and College of the Redwoods (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/Mitchel Road Zone. Water can also be moved from the Freshwater/Mitchel Road Zone to the Ridgewood Zone. Using current infrastructure, water cannot be moved from the Humboldt Hill Zone to the Ridgewood or Freshwater/Mitchel 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 undersized watermain most of which was installed in the 1950s. There are a total of 15 steel main replacement (SMR) projects remaining with a total length of about a half a mile that are scheduled over the next several years. 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 2020-2021 and the Ridgewood Tank rehabilitation was completed during FY 2021-2022. 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; Brier Lane 0.5MG, Donna Drive 0.5MG, Walnut Drive 0.5MG tank and the Cummings Road tank. 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	--
Cummings	0.12	24	30	1991	--
Dana Lane	0.375	30	48	1992	--
Donna Drive	0.5	24	61	1988	--
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	1996

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, Mitchel 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, Mitchel 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).

HUMBOLDT CSD FISCAL YEAR 2022/2023 CAPITAL IMPROVEMENT PLAN (CIP)

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

WATER	Current FY 21-22	Scheduled FY 22-23	Projected FY 23-24	Projected FY 24-25	Projected FY 25-26	Projected FY 26-27	Projected 10 years*	Projected 20 years**	Comments
WATER SYSTEM IMPROVEMENTS									
C=Contract									
PUMPING FACILITY UPGRADES									
AMR Program	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$705,000	\$1,410,000	6,000 remaining @ \$235/ea
SCADA Upgrade	\$25,000	\$100,000	\$100,000	\$100,000	\$100,000				
Humboldt County ADA Access	\$0	\$5,000							
Water Storage Tanks	\$9,281	\$15,000							Rolled over form 21-22
South Bay School Backflow Device	\$0	\$15,000							5 tanks Cleaning Maintenance
Donna Drive Hydro-tank	\$95,000	\$55,000							Rolled over form 21-22
Ridgewood Tank	\$615,800	\$54,200							DOHS required
Spruce Point Well	\$3,490	\$30,000							Tank Rehab
South Bay well	\$10,000	\$10,000							Well Cleaning and New Column Pipe
Brier Lane 0.5 MG Tank	\$40,000	\$660,000							Building
Hubbard 3rd Pump	\$15,000	\$35,000							Engineering 21/22 Rehabilitation 22/23
Truesdale WBS		\$25,000	\$25,000	\$25,000	\$25,000				Upsize pump/ mod system
Donna Drive 0.5 MG Tank		\$40,000	\$660,000	\$660,000					New pumps/Upgrade
Ridgewood Water Booster Station		\$30,000	\$30,000						Engineering 22/23 Temp System 23/24 Rehabilitation 24/25
18th & Quaker PSV		\$30,000	\$30,000						Third Pump Assembly
Walnut Drive 0.5 MG Tank			\$660,000	\$660,000					Resolves Fireflow Issues
Cummings Road Tank			\$40,000	\$40,000					Engineering 24/25 Rehabilitation 25/26
Pigeon Point WBS			\$15,000	\$15,000					Engineering 25/26 Rehabilitation 26/27
Donna Drive WBS			\$65,000	\$65,000					Rehab/roofing/siding
Water Resiliency at Little CA St.							\$1,000,000		Siding, roofing and drainage
Meyers Well							\$750,000		Booster Station and Well
Princeton Well							\$750,000		Reestablish a well on District owned property
Rehabilitate Remaining Tanks							\$4,500,000	\$2,500,000	Replace failed well on District owned property
Water Pumping Facilities Totals	\$854,571	\$1,170,200	\$356,000	\$966,000	\$966,000	\$881,000	\$7,705,000	\$3,910,000	\$16,908,771

*10 year column represents the cumulative expenses for the 5 years between year 5 and year 10
 **20 year column represents the cumulative expenses for the 10 years between year 10 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
CAPITAL IMPROVEMENTS - WATER		FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	10 years*	20 years**	
WATER MAIN REPLACEMENTS										
C=Contract										
SMR=STEEL MAIN REPLACEMENT										
New Connections	LF	\$7,500	\$7,500							Water main replacements
Christian Lane	SMR 150	\$28,359	\$35,000	\$7,500	\$7,500	\$7,500	\$7,500			\$270/LF except as noted
Water Rate Study		\$50,000								
Tower Lane	SMR 600	\$5,000	\$162,000							New connections
Park Street	SMR 360	\$90,000								Paving 22/23
18th Street	SMR 900		\$243,000							\$270/LF Plus Culvert
Stanford Court	SMR 100			\$27,000						Completed \$250/LF
Temple Circle	SMR 130			\$35,100						\$270/LF Length increased from 400 to 900 feet
Crane Street	SMR 250			\$67,500						\$270/LF
Vista Tie In Phase 1	C 700			\$189,000						\$270/LF
Shady Lane	SMR 400			\$108,000						\$270/LF
Vista Tie In Phase 2	C 700				\$189,000					\$270/LF
Meadowood	SMR 400				\$108,000					\$270/LF
Mitchell Road	C 3400						\$1,190,000			Myrtle to Cummings on Mitchell Road \$350/LF
Beechwood Dr.	SMR 370						\$99,900			\$270/LF
Austin Court	SMR 260						\$70,200			\$270/LF
AC Water Main Replacement Program	272694									AC Mains @ \$200/LF
Water Main Replacement Totals		\$180,859	\$447,500	\$137,100	\$304,500	\$304,500	\$1,367,600	\$18,179,598	\$36,359,196	\$57,280,854

* 10 year column represents the cumulative expenses for the 5 years between year 5 and year 10
 ** 20 year column represents the cumulative expenses for the 10 years between year 10 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 Plant for treatment. By agreement, the District has purchased approximately 30% of the current plant capacity. Annually the District sends approximately \$1.5M to the City of Eureka for operation and maintenance of the regional facility. This represents approximately 19 percent of the total operating expenses budgeted for FY 2022-23.

The hilly terrain and historical piecemeal development within the District resulted in a system that includes 28 sewage lift stations. For comparison, the McKinleyville Community Services District (MCSD) operates six stations, City of Arcata operates eight stations, and City of Fortuna operates five stations. The City of Eureka, adjacent to and similar to the District topography, operates 26 stations. Needless to say, this many stations have resulted in major person-power and financial resources to operate, maintain, and replace. Under current operations, the District has no alternative but to upgrade and replace 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: 1) To eliminate approximately 3 major and 3 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 in-direct 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.

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 (Myrtle town) 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", the Hemlock metering station will be eliminated with the Hemlock rerouting project that is scheduled to be completed FY 24-25, Hartman Ln "reversal" is scheduled to be completed FY 23-24, and F Street is scheduled to be "reversed" FY 25-26.

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.

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 one of the City of Eureka's lift stations,

Pound Road. Additionally, the developable land in Westgate and Ridgewood have limited access to the Martin Slough Interceptor as it was constructed.

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 rehabs 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 12 of the 28 lift stations. The lift stations being addressed during the current five-year CIP are Sea Ave, Blackberry, Bailey, Artino, Allard, Roth Court, Pine Hill, Christine, Hoover, Beechwood, King Salmon, and Wellington.

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 deterioration, 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 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.

Trouble spots that are large enough to be considered a capital improvement that will be repaired during the next five years include Dr. Office Lane (un-named road at 2826 Harris), Noe Street, Walnut Drive at Hemlock, Mesa/Bell Terrace, London Drive at Burns, Ridgewood Drive at Ridgewood Elementary, and Summit Ridge to David. 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. Much 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.

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 Pine Hill Bridge HDD project that was completed in FY 2020-2021 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 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 ADA access project. 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 and 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 COE Wastewater Treatment Facility (COE-WTF). 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 COE-WTF 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.

City of Eureka Wastewater Treatment Facility (COE-WTF)

The City of Eureka is currently under a Cease-and-Desist order issued in 2016 from the North Coast Regional Water Quality Control Board (NCRWQCB) for discharging to Humboldt Bay. The requirements being imposed by the NCRWQCB include full secondary treatment, including de-chlorination to all discharge flows to Humboldt Bay, as well as compliance with the applicable water quality objectives for ammonia by 2030. In short, what this means is that the COE-WTF does not 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.

Although detailed reports have not yet been furnished by the City that document the plans to come into compliance with the NCRWQCBs order; the estimate at this time is that these upgrades will total on the order of \$30M. 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 budgetary item in the ten-year projection of \$10M to cover the requisite upgrades to the COE-WTF.

HUMBOLDT CSD FISCAL YEAR 2022/2023 CAPITAL IMPROVEMENT PLAN (CIP)

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

SEWER	Current FY 21-22	Scheduled FY 22-23	Projected FY 23-24	Projected FY 24-25	Projected FY 25-26	Projected FY 26-27	Projected 10 year*	Projected 20 year**	Comments
SEWER FACILITIES									
V=Vendor									
C=Contract									
M=Martin Slough Reversal									
Sea Avenue SLS	M	\$50,000							Upgrade/Reversal
Sewer Rate Study		\$50,000							
Sequoia SLS		\$10,000							SLS rehab/pumps
Blackberry SLS		\$60,000							SLS rehab/pumps
Bailey SLS	C	\$32,000							Stationary Generator
Artino SLS	C	\$75,000							Stationary generator
Allard Access Vault			\$10,000						Meter vault upgrade
Roth Court SLS			\$70,000						SLS rehab/pumps
Pine Hill SLS Generator	C		\$75,000			\$15,000			Generator 23/24 Panel Enclosure 26/27
Hoover SLS Upgrade			\$100,000	\$300,000	\$450,000	\$450,000			Upgrade SLS and flow meter Plus flood hardening
Christine SLS				\$50,000					New electrical control panel
Pine Hill SLS Rehab					\$200,000				SLS conversion/rehab
Beechwood SLS Panel					\$50,000	\$50,000			Control Panel and Enclosure 25/26 Pumps 26/27
King Salmon SLS	C				\$75,000				Stationary generator
Wellington SLS						\$50,000			Panel Replacement
SCADA Upgrade						\$100,000	\$400,000		
WWTP Upgrades							\$10,000,000		Per estimates by COE
CIP Contribution to COE		\$1,391,600	\$1,335,000	\$1,335,000	\$1,335,000	\$1,335,000	\$6,675,000	\$13,350,000	Based on 2021 COE CIP
Sewage Facilities		\$1,593,600	\$1,590,000	\$1,685,000	\$2,110,000	\$2,000,000	\$17,075,000	\$13,350,000	\$40,973,600

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

HUMBOLDT CSD FISCAL YEAR 2022/2023 CAPITAL IMPROVEMENT PLAN (CIP)

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

SEWER	Current FY 21+22	Scheduled FY 22-23	Projected FY 23-24	Projected FY 24-25	Projected FY 25-26	Projected FY 26-27	Projected 10 years*	Projected 20 years**	Comments
SEWER MAINS									
MAIN EXTENSION & REPLACEMENTS									
	C=Contract								
	M=Martin Slough Reversal								
	V=Vendor								
New Connections	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000			Sewer main replacements \$200.00/LF except as noted
Hemlock M,C 4500	\$17,000	\$250,000	\$250,000	\$250,000					Per footage and manhole count \$400/LF
Dr. Office Lane 370		\$148,000							Engineering 22/23 Reversal 23/24 \$400/LF
Hartman Lane M,C 900		\$65,000	\$360,000						Engineering and \$400/LF
Noe Street C 700		\$162,000	\$40,000	\$280,000					Engineering and \$400/LF
Mesa /Bell Terrace C 11700			\$100,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,500,000		\$400/LF pending grant funding \$400/LF
South Broadway FM C 525			\$210,000						
Walnut Drive Trouble Spot			\$40,000						
Walnut Drive Laterals C 900			\$25,000						Engineering and \$400/LF
F Street M 220			\$88,000						\$400/LF
London Drive at Burns C 200			\$80,000						\$400/LF
Ridgewood Drive C 265			\$106,000						\$400/LF
Summit Ridge to David M,C 1215			\$50,000	\$486,000					Engineering 25/26 Reversal 26/27
Spruce SLS 125			\$50,000						\$400/LF
Quaker Street 125			\$50,000						\$400/LF
Worthington St. M							\$1,500,000		
Martin Slough Reversals							\$1,500,000		
Trouble Spots							\$2,860,000		
Fields Landing FM 7150							\$7,500,000		
Humboldt Hill Sewer Sys							\$15,606,309	\$31,212,619	\$175/LF District Wide AC and Clay
Gravty Main Replacement							\$1,717,733	\$3,435,466	\$400/LF District Wide Aging Forcemains
Forcemain Replacement 12883									
Sewer Main	\$22,000	\$630,000	\$755,000	\$1,810,000	\$1,689,000	\$1,591,000	\$32,184,043	\$34,648,085	\$73,329,128

* 10 year column represents the cumulative expenses for the 5 years between year 5 and year 10
 ** 20 year column represents the cumulative expenses for the 10 years between year 10 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 a 2005 Dodge pickup, a 2010 Ford service truck, and a 2012 Ford construction truck. The van and the pickup have reached their useful life because of age and repair history. The 2010 Ford service truck and the 2012 Ford construction truck have diesel engines that will no longer be allowed to operate in California.

Heavy Duty Equipment

During the next five years, the District will be replacing a 2010 Peterbilt 7-yard dump truck and a 580 Super M Backhoe. The dump truck has a diesel engine that will no longer be allowed to operate in California. The backhoe is at the end of its useful life because of age and repair history.

Specialty Equipment

The District is projecting the need to replace the sewer camera van during the second year of the current capital improvement plan. This critical piece of equipment allows District staff to see inside of sewer lines and identify problems before they manifest as emergencies. The camera van is at the end of useful life because of age and repair history.

HUMBOLDT CSD FISCAL YEAR 2022/2023 CAPITAL IMPROVEMENT PLAN (CIP)

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

REVENUE FUNDED		Current	Scheduled	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Comments
CAPITAL PROGRAM PROJECTIONS		FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	10 Year*	20 Year**		
VEHICLES / EQUIPMENT											
		C=Contract									
		V=Vendor									
		Mileage									
		Hours									
Light Duty Service Vehicles											
9	2006 Ford Van	V									Replacement/age
4	2010 Ford F450 w/crane	V	\$140,000								Replacement/AQMD
16	2005 Dodge	V			\$60,000						Replacement/age
3	2012 Ford 4x4	V					\$60,000				Replacement /age
Heavy Duty Equipment											
10	2010 Peterbilt 7 CY Dump Truck	V	\$200,000								Replacement/AQMD
M-1	2004 580 Super M Backhoe	V			\$130,000						Replacement/age
Specialty Equipment											
	Sewer Camera	V		\$350,000							age/repair history
	Fleet Replacement Program							\$1,500,000	\$3,000,000		
	Vehicles & Equipment	\$50,000	\$340,000	\$350,000	\$60,000	\$130,000	\$60,000	\$1,500,000	\$3,000,000	\$5,490,000	

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

**20 year column represents the cumulative expenses for the 10 years between year 10 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 repairing the office building exterior, replacing the roof on the office and breakroom, rehabilitating the small truck storage facility and repairing pavement in the corporation yard and the parking lot.

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 CAPITAL PROGRAM PROJECTIONS	Current FY 21-22	Scheduled FY 22-23	Projected FY 23-24	Projected FY 24-25	Projected FY 25-26	Projected FY 26-27	Projected 10 Year*	Projected 20 Year**	Comments
BUILDING, YARD & PAVING IMPROVEMENTS									
Office Building Exterior phase 1	\$35,000	\$50,000							Front of Office
Yard Paving Repairs	\$35,000								
Vehicle Storage Upgrades	\$16,000	\$10,000							VacCon Storage
Office Building and breakroom Roof	\$40,000	\$20,000							Roof Replacement/Age
Office ADA	\$15,000	\$14,000	\$16,000	\$20,000					20% of building remodel cost
Office Building Exterior phase 2			\$80,000						North and back of Office
Small Truck Garage				\$100,000					Rehabilitation
Seal Coat Parking Lot					\$20,000				Front parking lot
Drying Bed Cover						\$30,000			Replacement
Future Yard Paving							\$100,000		
Office and Yard Facility Upgrades								\$500,000	
Building and Yard	\$141,000	\$94,000	\$96,000	\$120,000	\$20,000	\$30,000	\$100,000	\$500,000	\$1,101,000

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

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

GRANT PROGRAM

In FY 2021-22, 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 was able to apply for \$3.6M through this program for various mitigation projects throughout the District. Those projects include a 2.2-mile forcemain replacement project connecting the South Broadway SLS to the COE-WTF, a critical power project that will include standby generators at the Pine Hill, Bailey, and Artino SLS, 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 22-23 fiscal year and beyond.

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.

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 COE-WTF, SCADA upgrades, Martin Slough reversals, force main replacements, gravity sewer replacements, water storage tank rehabilitation, and ongoing fleet replacement. These ten-year totals are not all inclusive, but for planning purposes, the District will be facing \$80M in expenses. These projects and expenses are necessary to the continued operation of the District and represent an accelerated level of spending as compared to the District's current budgeting for capital improvements. The current capital expenditures over the next five years average \$4.7M. To meet the projected \$80M of expenditures at the ten-year horizon, the District will need to save an additional \$8M annually over the next ten years or be prepared to spend \$15M/year on capital improvements from year 6 through 10.

Twenty Year

Similar to the ten-year projections, the twenty-year projections indicate anticipated expenditures for the twenty-year planning horizon. While 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 \$100M. What this means is that the District should be planning for annual expenditures on the order of \$10M over the between years 10 and 20.