

WRCRWA Budget Schedule
Fiscal Year 2024-2025
Member Contribution Summary Year-to-Year Comparison

Proposed Fiscal Year 2024-2025 Budget						
Expenditure Category	Corona	HGSD	JCSD	Norco	Western	Total
Operations:						
Treatment System	\$ 1,844,323	\$ 621,984	\$ 5,181,896	\$ 2,059,340	\$ 1,124,510	\$ 10,832,053
Conveyance System	140,520	45,549	-	147,116	96,939	430,124
General & Administration	305,392	87,421	699,372	314,717	224,965	1,631,867
Total Operating Contributions	\$ 2,290,235	\$ 754,954	\$ 5,881,268	\$ 2,521,173	\$ 1,446,414	\$ 12,894,044
Debt Service:						
SRF Loan	\$ 1,903,189	\$ 70,887	\$ 2,064,704	\$ 408,275	\$ 39,481	\$ 4,486,536
Capital:						
Pay-go Capital Improvement Projects ⁽¹⁾	\$ 1,020,851	\$ 292,224	\$ 2,177,352	\$ 1,046,699	\$ 757,374	\$ 5,294,500
Asset Replacement Reserve Funding	306,878	87,847	463,992	308,296	234,025	1,401,038
Total Capital Contributions	\$ 1,327,729	\$ 380,071	\$ 2,641,344	\$ 1,354,995	\$ 991,399	\$ 6,695,538
Total Member Contributions	\$ 5,521,153	\$ 1,205,912	\$ 10,587,316	\$ 4,284,443	\$ 2,477,294	\$ 24,076,118

Adopted Fiscal Year 2023-2024 Budget						
Expenditure Category	Corona	HGSD	JCSD	Norco	Western	Total
Operations:						
Treatment System	\$ 1,459,804	\$ 629,070	\$ 5,078,223	\$ 2,071,560	\$ 1,064,495	\$ 10,303,152
Conveyance System	118,149	44,377	-	143,576	93,022	399,124
General & Administration	261,952	74,986	599,890	269,951	192,965	1,399,744
Total Operating Contributions	\$ 1,839,905	\$ 748,433	\$ 5,678,113	\$ 2,485,087	\$ 1,350,482	\$ 12,102,020
Debt Service:						
SRF Loan	\$ 1,903,189	\$ 70,887	\$ 2,064,704	\$ 408,275	\$ 39,481	\$ 4,486,536
Capital:						
Pay-go Capital Improvement Projects	\$ 936,356	\$ 268,038	\$ 1,983,850	\$ 959,624	\$ 695,132	\$ 4,843,000
Asset Replacement Reserve Funding	156,087	44,681	301,940	159,007	116,833	778,548
Total Capital Contributions	\$ 1,092,443	\$ 312,719	\$ 2,285,790	\$ 1,118,631	\$ 811,965	\$ 5,621,548
Total Member Contributions	\$ 4,835,537	\$ 1,132,039	\$ 10,028,607	\$ 4,011,993	\$ 2,201,928	\$ 22,210,104
Total Member Contribution YTY Change	\$ 685,616	\$ 73,873	\$ 558,709	\$ 272,450	\$ 275,366	\$ 1,866,014

⁽¹⁾ \$1.8M is carried over from FY23-24 Budget

*** This proposed budget does not include any capital contribution projection for the Recycled Water project led by JCSD.

**WRCRWA Budget Schedule
Fiscal Year 2024-2025
Capacity, Rates, and Contributions
Fixed and Variable**

	Treatment System		Conveyance System		General & Administrative		
Fixed Rate per MGD:	\$28,876		\$2,783		\$9,713		
	Capacity	Contribution	Capacity	Contribution	Capacity	Contribution	Total by Agency
Corona	2.62	\$ 907,847	2.62	\$ 87,503	2.62	\$ 305,392	\$ 1,300,742
HGSD	0.75	\$ 259,880	0.75	\$ 25,049	0.75	\$ 87,421	\$ 372,350
JCSD	6.00	\$ 2,079,038	-	\$ -	6.00	\$ 699,372	\$ 2,778,410
Norco	2.70	\$ 935,568	2.50	\$ 83,496	2.70	\$ 314,717	\$ 1,333,781
WMWD	1.93	\$ 668,758	2.13	\$ 71,138	1.93	\$ 224,965	\$ 964,861
Total	14.00	\$ 4,851,091	8.00	\$ 267,186	14.00	\$ 1,631,867	\$ 6,750,144
Variable Rate per MGD:	\$1,710		\$97		\$0		
	Est. Flows	Rate	Est. Flows	Rate	Est. Flows	Rate	Total by Agency
Corona	1.50	\$ 936,476	1.50	\$ 53,017	-	\$ -	\$ 989,493
HGSD	0.58	\$ 362,104	0.58	\$ 20,500	-	\$ -	\$ 382,604
JCSD	4.97	\$ 3,102,858	-	\$ -	-	\$ -	\$ 3,102,858
Norco	1.80	\$ 1,123,772	1.80	\$ 63,620	-	\$ -	\$ 1,187,392
WMWD	0.73	\$ 455,752	0.73	\$ 25,801	-	\$ -	\$ 481,553
Total	9.58	\$ 5,980,962	4.61	\$ 162,938	-	\$ -	\$ 6,143,900
Grand Totals		\$ 10,832,053		\$ 430,124		\$ 1,631,867	\$ 12,894,044

WRCRWA Budget Schedule
Fiscal Year 2024-2025
Year-to-Year Comparison

	2023-2024	2024-2025	Change	
	Budget	Budget	Amount	% Change
Treatment System				
<u>Treatment Plant</u>				
Labor Costs	3,027,154	3,422,603	395,449	13.1%
Outside Services (Laboratory)	182,555	189,857	7,302	4.0%
Facility Maintenance	1,372,088	1,557,268	185,180	13.5%
Vehicles/Equipment Rental	151,358	171,130	19,772	13.1%
Utilities	2,167,155	2,462,936	295,781	13.6%
Chemicals	2,610,145	2,110,145	(500,000)	-19.2%
Solids Disposal/Sludge	415,272	456,799	41,527	10.0%
Permits and Fees	158,075	154,302	(3,773)	-2.4%
Facility Maintenance - Bldg & Yard	59,076	71,702	12,626	21.4%
Supplies	109,824	172,448	62,624	57.0%
Total Treatment Plant	10,252,702	10,769,190	516,488	5.0%
<u>Pre-treatment</u>				
Labor Costs	42,638	54,282	11,644	27.3%
Vehicle/Equipment Rental	2,132	2,714	582	27.3%
Laboratory - Quality Testing	4,680	4,867	187	4.0%
Supplies	1,000	1,000	-	0.0%
Total Pre-treatment	50,450	62,863	12,413	24.6%
Total Treatment System	10,303,152	10,832,053	528,901	5.1%
Conveyance System				
Labor Costs	208,369	211,702	3,333	1.6%
Facility Maintenance	74,600	79,564	4,964	6.7%
Vehicle/Equipment Rental	10,418	10,585	167	1.6%
Utilities	90,620	113,156	22,536	24.9%
Facility Maintenance - Bldg & Yard	5,117	5,117	-	0.0%
Misc. Supplies/Operating Expenses	10,000	10,000	-	0.0%
Total Conveyance System	399,124	430,124	31,000	7.8%
General and Administration				
Labor	504,080	531,578	27,498	5.5%
Outside Services (Consulting)	384,620	531,123	146,503	38.1%
Insurance Expense	303,000	389,000	86,000	28.4%
Audit Expense	20,600	21,500	900	4.4%
Mercury Monitoring - SARDA	8,320	8,653	333	4.0%
Basin Monitoring Program	26,000	30,234	4,234	16.3%
Vehicle/Equipment Rental	25,204	26,579	1,375	5.5%
Bank Charges	5,540	5,540	-	0.0%
Permits and Fees	15,880	18,500	2,620	100.0%
General Supplies	11,500	11,960	460	4.0%
Legal Costs - General	95,000	57,200	(37,800)	-39.8%
Total General and Administration	1,399,744	1,631,867	232,123	16.6%
Total Operating Expenses	12,102,020	12,894,044	792,024	6.5%

**WRCRWA Budget Schedule
Fiscal Year 2024-2025
Debt Service Expenditures**

SRF Loan	Due Date	Member Agency	Allocation Percentage	Beginning Balance		Debt Service			Outstanding Balance
				7-01-2024		Interest	Principal	Payment	6-30-2025
Plant Expansion	12/31/2024	Corona	42.420%	\$ 23,203,464	\$	440,866	\$ 1,462,323	\$ 1,903,189	\$ 21,741,141
		HGSD	1.580%	864,250		16,421	54,466	70,887	809,784
		JCSD	46.020%	25,172,640		478,280	1,586,424	2,064,704	23,586,216
		Norco	9.100%	4,977,641		94,575	313,700	408,275	4,663,941
		Western	0.880%	481,354		9,145	30,336	39,481	451,018
100.000%				\$ 54,699,349	\$	1,039,287	\$ 3,447,249	\$ 4,486,536	\$ 51,252,100

SRF Loan maturity date: 12/31/2036

WRCRWA Budget Schedule
Fiscal Year 2024-2025
Capital Budget

Description	Agency Amounts to be Contributed					
	Total	Corona	HGSD	JCSD	Norco	Western
Pay-go Capital Improvement Projects						
<u>Treatment System</u>						
Solar Dryer Discharge Conveyor	1,292,000	241,785	69,212	553,713	249,175	178,115
Processed Non-potable Water Pump Improvements	337,000	63,066	18,053	144,428	64,994	46,459
Digester Rehabilitation	900,000	168,426	48,213	385,713	173,574	124,074
Diffuser Grid Addition/Modification	95,000	17,778	5,089	40,714	18,322	13,097
Bioreactor Modeling	40,000	7,486	2,143	17,143	7,714	5,514
Blower Building Air Intake/Ventilation Modifications	371,000	69,429	19,874	159,000	71,551	51,146
Blower Replacement	1,500,000	280,710	80,355	642,855	289,290	206,790
Electrical Load Study	40,000	7,486	2,143	17,143	7,714	5,514
Medium Voltage Switchgear	190,000	35,557	10,178	81,429	36,643	26,193
Dewatering Replacement	315,500	59,043	16,901	135,214	60,847	43,495
Total Treatment System	5,080,500	950,766	272,161	2,177,352	979,824	700,397
<u>Conveyance System</u>						
South Regional Pump Station (SRPS) Emergency Pump	214,000	70,085	20,063	-	66,875	56,977
Total Conveyance System	214,000	70,085	20,063	-	66,875	56,977
Total Pay-go Capital Improvement Project Contribution	5,294,500	1,020,851	292,224	2,177,352	1,046,699	757,374
Asset Replacement Reserve Funding						
Treatment System	1,082,654	202,608	57,998	463,992	208,801	149,255
Conveyance System	318,384	104,270	29,849	-	99,495	84,770
Total Asset Replacement Reserve Contribution	1,401,038	306,878	87,847	463,992	308,296	234,025
Total Capital Contributions	\$ 6,695,538	\$ 1,327,729	\$ 380,071	\$ 2,641,344	\$ 1,354,995	\$ 991,399

WRCRWA Pay-go Capital Improvement Projects Fiscal Year 2024-2025

Introduction

The WRCRWA Administrator is recommending approval and implementation of the following pay-go capital improvement projects for Fiscal Year 2024-2025.

1. Solar Dryer Discharge Conveyor
2. SRPS Emergency Pump
3. Processed Non-potable Water Pump Improvements
4. Digester Rehabilitation
5. Diffuser Grid Addition/Modification
6. Bioreactor Modeling
7. Blower Building Air Intake/Ventilation Modifications
8. Blower Replacement
9. Electrical Load Study
10. Medium Voltage Switchgear
11. Dewatering Replacement

The capital projects are critical to the successful operation of the WRCRWA Wastewater Treatment Plant. The projects are described on the following pages.



WRCRWA Pay-go Capital Improvement Projects
Fiscal Year 2024-2025 Budget

Capital Project No. 1: Solar Dryer Discharge Conveyor

<i>Allocation</i>	<i>Treatment</i>
<i>Estimated Total Cost:</i>	<i>\$1,792,000</i>
<i>Budget Carryover from Fiscal Year 2023-2024</i>	<i>\$1,292,000</i>

Summary

The Solar Dryer Conveyor project consists of the replacement of four conveyors at the “dry end” of the Solar Dryer and modifying the discharge chute. These conveyors transfer the processed sludge from the solar drier into the sludge loadout building where they are discharged into semi-trailers for offsite disposal.

Justification

This system is a single point of potential failure and needs to be fortified. During times of wetter solids, the current system conveys the wet solids to the end without much drying.

Background

The project consists of replacement of four conveyors at the “dry end” of the Solar Dryer. The conveyors on the “dry end” of the dryer that feed the truck loadout facility were sized for dryer solids. The solar dryer feed conveyors have sufficient capacity (provided the sludge is fairly dry, >50%). However, if dewatering equipment produces wetter solids, if a solar dryer bay is offline, or in periods of colder weather, wet solids could be conveyed from the wet end to the dry end without much drying occurring. Due to this potential, these conveyors should be replaced to allow for similar capacities as the “wet” feed conveyors. Also, the discharge chute at the end of the solar dryer needs to be modified to prevent solids bridging at times of the year.

It is recommended that with the replacement of the conveyance system, the chute should be modified to be wider and reduce the potential for “bridging” of solids above the conveyor. Additionally, it is recommended to have spare motors and parts to keep this system running.

Schedule

Projected completion date for this project is by the end of Fiscal Year 2024-2025.

WRCRWA Pay-go Capital Improvement Projects
Fiscal Year 2024-2025 Budget

Capital Project No. 2: South Regional Pump Station (SRPS) Emergency Pump

Allocation:	Conveyance
Estimated Total Cost:	\$1,000,000
Budget Carryover from Fiscal Year 2023-2024	\$214,000

Summary

Design, purchase, and installation of a standalone diesel bypass pump at the SRPS.

Justification

Currently there is no back up power at the SRPS. By design, in the event of a power outage, the wet well fills and if power is not restored quickly, raw sewage overflows into the Inland Empire Brine Line (Brine Line). Numerous improvements and upgrades have been implemented at the SRPS and WRCRWA Treatment Plant since 2016 to increase the overall system redundancy and reliability. The goal of the improvements/upgrades are to prevent future sewage overflow into the Brine Line located adjacent to the SRPS. Installation of a standalone diesel bypass pump will provide additional redundancy and reliability to the sewage collection system. The pump will also allow WRCRWA to maintain independent hydraulic control in the event of mechanical and/or electrical equipment failures at SRPS allowing the SRPS to continue to pump flows to the WRCRWA Treatment Plant rather than discharging them to the Brine Line.

Background

The SRPS serves the City of Riverside, Home Gardens, City of Norco, and City of Corona by pumping wastewater from these cities just over three miles to the WRCRWA Treatment Plant. Average daily pumping flow is 3 MGD.

Orange County Sanitation recently objected to un-planned and unnoticed sewage flows in the Brine Line and added a requirement to the Santa Ana Watershed Project Authority's (SAWPA) discharge permit that required development of a plan to incorporate robust redundancies to prevent discharges to the Brine Line. Installation of the standalone diesel bypass pump will comply with this requirement should it be added to WRCRWA's permit from SAWPA.

The WRCRWA Treatment Plant was designed to rely on the Brine Line and ultimately Orange County Sanitation District as a back-up if there were problems that WRCRWA's system could not handle. This option provides for redundancy against failure not only due to electrical but also due to mechanical issues. It also provides an added advantage over the generator only option that was considered last year as it is a more efficient option.

Schedule

The project has been selected to receive a Cal OES Hazard Mitigation Assistance grant. Orange County Sanitation District and SAWPA have acknowledged the proposed plan. Work is slated to begin in late spring/early summer 2023 with completion expected in Fall 2025.

WRCRWA Pay-go Capital Improvement Projects
Fiscal Year 2024-2025 Budget

Capital Project No. 3: Processed Non-potable Water Pump Improvements

<i>Allocation:</i>	<i>Treatment</i>
<i>Estimated Total Cost:</i>	<i>\$337,000</i>
<i>Budget Carryover from Fiscal Year 2023-2024</i>	<i>\$337,000</i>

Summary

Replacement of processed non-potable water pumps and suction piping at the WRCRWA Treatment Plant.

Justification

Pumps for the processed non-potable water system have experienced degradation. The condition of the existing screen on the suction piping is unknown but based on material being in the pipe it appears the screen is not functional or the DIP pipe lining is falling apart and this is the material that is ending up in the pump. The suction pipe condition needs to be verified. Once the suction pipe condition is verified and resolved, new pumps should be purchased to replace the damaged units.

Background

It is speculated the degradation could be from a low suction head or even potentially chlorination being too high. The local representative for Grundfos visited the site and has been provided information regarding the installation and access to the existing pumps. Upon review of the pumps, it was noted that there is debris in the pumps and also in the suction piping. It is believed that this debris has caused the issues to the pumps by damaging the pump vanes.

Schedule

Projected completion date for this project is by the end of Fiscal Year 2024-2025.

WRCRWA Pay-go Capital Improvement Projects
Fiscal Year 2024-2025 Budget

Capital Project No. 4: Digester Rehabilitation

Allocation:

Estimated Total Cost:

Budget Carryover from Fiscal Year 2023-2024

Treatment

\$1,800,000

\$0

Summary

Cleaning, inspection, and repair of any damaged or degraded coatings.

Justification

With both Digesters #1 and #2 having flat bottoms (prone to solids accumulation) and being in service for seven years, are now due to be taken offline (one at a time) for cleaning, inspection, and repair of any degraded or damaged coatings. Cleaning of Digesters #1 and #2 had been contingent on Digester #3 being built and brought online.

Background

Digesters #1 and #2 were converted from aerobic digesters to anaerobic digesters during the plant expansion. They were placed in-service as anaerobic digesters in early 2017. Over the past seven years, they have been continuously fed both primary sludge and thickened waste activated sludge (TWAS), which contains debris not broken down in the digestion process or removed during daily dewatering activities (grit and debris). This debris reduces the overall biological capacity of each digester as well as settled debris eventually negatively impact equipment operation. During recent months, the centrifuges have experienced several failures. Staff surmise the failures resulted from settled debris being sucked into the centrifuges as the centrifuge feed line is located 18" off the digester floor. For overall digester health and protection of downstream equipment, both digesters #1 and #2 should be taken offline (one at a time for cleaning, inspection, and repair of anything discovered.

During Fiscal Year 2024-2025 staff are requesting \$900,000 for Digester #1 cleaning. In Fiscal Year 2025-2026, there will be another \$900,000 needed for Digester #2.

Schedule

This project is planned to kick off in September 2024. This project will span two fiscal years and should conclude in Fiscal Year 2025-2026.

WRCRWA Pay-go Capital Improvement Projects
Fiscal Year 2024-2025 Budget

Capital Project No. 5 & 6: Diffuser Grid Addition/Modification (Including Modeling)

Allocation:	Treatment
Estimated Total Cost:	\$1,606,000
Budget Carryover from Fiscal Year 2023-2024	\$0

Summary

Improve the performance of Bio-reactor #1 by adding additional aeration capacity (Diffuser Grids).

Justification

Bio-reactor #1 has limited aeration capacity which can be overwhelmed during higher flows. By adding additional aeration capacity in other areas of the bio-reactor, WRCRWA will have increased treatment capacity and better redundancy. This increased aeration capacity will help stabilize treatment and reduce the likelihood of ammonia “bleed-through”.

Background

Currently air diffusers are installed in 2 of the four passes with the aerator in the middle of these passes. This leaves 50% of the aerobic portion of the bioreactor. At times the plant experiences ammonia break through to the tertiary filters, which is believed to be associated with the short aerobic HRT and SRT. Again, this occurs because only 50% of the aerobic section of the bioreactor is under aeration.

Initially, it is proposed to add additional diffuser grids to BR1. Fourteen (14) additional grids could be added. Nine (9) would be placed in pass 2, all to the south of the existing walkway and then five (5) would be placed in pass 1. Two (2) would be placed to the north of the walkway and the remaining three (3) would be placed south of the walkway. An additional pipe header will be added to extend to passes 1 and 2 and provide air to the diffusers. Walkways will be added to provide access to the new diffuser grids in these passes. Modeling is needed to verify the proposed approach.

During Fiscal Year 2024-2025 the ask is for \$135,000.

Schedule

This project is planned to kick off in September 2024. The first set of tasks would be modeling of the proposed changes and design, with installation in the subsequent year. This project will span two fiscal years and should conclude in Fiscal Year 2025-2026.

Capital Project No. 7: Blower Building Air Intake/Ventilation Modifications

<i>Allocation:</i>	<i>Treatment</i>
<i>Estimated Total Cost:</i>	<i>\$371,000</i>
<i>Budget Carryover from Fiscal Year 2023-2024</i>	<i>\$0</i>

Summary

Improve air exchanges in the blower building for blower operations.

Justification

The current blower building has limited ventilation filtration and no temperature controls. During summer months blowers fail due to increase heat. To mitigate the heat, doors and windows are opened (to reduce heat), but dust is then introduced resulting in bearing failures. Both heat and dust are to be addressed through this project.

Background

The blower building currently has no forced ventilation. As such, air is pulled into the room via the suction of the blowers that are in operation. The blower room has louvers with filters, but during warmer temperature periods, the room gets too hot for blower operation. To resolve this issue, the garage door is opened to cool the room. Opening this door, however, causes dust to enter the room which is causing operation issues with the blowers. It is recommended that a climate control system be installed to keep temperatures and dust in an acceptable range for blower operation.

This can be accomplished with a twofold approach as follows:

1. A combined intake plenum system should be incorporated to provide direct air feed to each of the blowers. This will be done by adding a plenum intake structure to the north of the building, including inlet filters. All blower intake air will pass through this structure and then ducting will be provided into the room to direct pre-filtered air to each of the blowers.
2. With the intake blower air separated from the room ventilation, either a cooling system using air conditioning or evaporative cooling can be used for the air in the room.

Thus, the blowers will have sufficient filtered air flow to each unit and the room will be cooled sufficiently to keep the electronics and motors cool enough to allow for normal and consistent operations.

Schedule

This project is planned to kick off in July 2024. It will run in concert with the Blower replacement project as they are interconnected.

WRCRWA Pay-go Capital Improvement Projects
Fiscal Year 2024-2025 Budget

Capital Project No. 8: Blower Replacement

Allocation:

Estimated Total Cost:

Budget Carryover from Fiscal Year 2023-2024

Treatment

\$1,500,000

\$0

Summary

Replace three turbo blowers associated with the activated sludge process.

Justification

Over the past few years, WRCRWA has experienced failures of the existing HIS Turbo Blowers. During the most recent failure we were made aware that HSI equipment is no longer supported, and replacement parts are non-existent.

Background

WRCRWA is currently equipped with five turbo blowers that support the aerobic biological process. These five blowers vary in age and manufacturer. In 2012 (or so), WRCRWA supplemented its aeration capacity within the oxidation ditch by adding diffuser grids and three turbo blowers. Those original three turbo blowers were manufactured by Houston Service Industries (HSI). HSI was subsequently purchased by Atlas Copco. During the 2017 plant expansion and addition of another biological reactor, two more turbo blowers were installed. These two “newer” turbo blowers were manufactured by APG-Neuros.

Over the past few years, WRCRWA has experienced failures of the HSI blowers (typically related to the air bearings and dust). In 2023, HSI blower #2 experienced an electrical component failure and subsequent mechanical failure. Through this failure and attempted repair, Atlas Copco has notified WRCRWA that the HSI product line is no longer supported and that replacement parts are non-existent. Atlas Copco manufactures a similar product and as they replace existing HSI blowers, those used units are being scavenged for parts to make repairs on other HSI blowers.

WRCRWA is now faced with needing to replace the three HSI blowers (before failure) to ensure availability of adequate air in support of the biological processes. It is in WRCRWA’s best interest to investigate all blower technologies to ensure integration with the remaining two APG-Neuros blowers along with efficiency and ultimate biological air demands.

Schedule

This project is planned to kick off in July 2024. This project may span two fiscal years depending on equipment considerations and availability of replacement equipment.

WRCRWA Pay-go Capital Improvement Projects
Fiscal Year 2024-2025 Budget

Capital Project No. 9: Electrical Load Study

Allocation:

Treatment

Estimated Total Cost:

\$40,000

Budget Carryover from Fiscal Year 2023-2024

\$0

Summary

Conduct a 12-month electrical load study to better understand capacity within the existing low voltage gear.

Justification

Before proceeding with upgrades throughout the treatment plant (blower and dewatering upgrades), it is critical to understand the existing capacities and limitations of the existing electrical equipment.

Background

This existing gear is at or near capacity, however a 12-month load study could be performed to determine if some additional capacity is available. Otherwise, to gain additional capacity, additional MCC line-ups would be required and would have to be fed directly from the medium voltage switchgear.

Schedule

This project is planned to kick off in July 2024.

WRCRWA Pay-go Capital Improvement Projects
Fiscal Year 2024-2025 Budget

Capital Project No. 10: Medium Voltage Switchgear

Allocation:

Treatment

Estimated Total Cost:

\$3,138,000

Budget Carryover from Fiscal Year 2023-2024

\$0

Summary

Replace the medium voltage switchgear and place it in the existing electrical building.

Justification

The existing outdoor medium voltage switchgear is 26 years old and is becoming obsolete. It is due for replacement and should be relocated inside the newly built Electrical Building to provide a better environment conducive to such equipment.

Background

Due to the age of the gear and it being installed outdoors, it is recommended that this equipment be replaced to ensure it can be maintained and operated properly in the foreseeable future. A new electrical building has been constructed and the low voltage switchgear was moved into this building. There is room for a new medium voltage switchgear to be installed in this building also.

Depending on the outcome of the blower investigation, dewatering replacement study and low voltage load study, the medium voltage system might be impacted. The request would be for \$190,000 during Fiscal Year 2024-2025 with replacement being in Fiscal Year 2026-2027.

Depending on outcome of all studies, this could remain in Fiscal Year 2026-2027 or might need to shift into Fiscal Year 2025-2026.

Schedule

This project is planned to kick off in July 2024.

WRCRWA Pay-go Capital Improvement Projects
Fiscal Year 2024-2025 Budget

Capital Project No. 11: Dewatering Equipment Replacement

Allocation:

Treatment

Estimated Total Cost:

\$4,378,000

Budget Carryover from Fiscal Year 2023-2024

\$0

Summary

Replace the three existing Andritz centrifuges.

Justification

Dewatering sludge is a critical component of biosolids management. Over the past few years, the Centrifuges at WRCRWA have experienced numerous failures resulting in decreased operating cycles. Limited dewatering capacity jeopardizes the treatment plant's ability to maintain regulatory compliance.

Background

During the later stages of the plant expansion design, it was surfaced that the original centrifuges were outdated and no longer serviceable. The design team sought replacement equipment that would meet the needs of the facility while also fitting within the existing footprint of the original equipment. Andritz centrifuges were selected and installed during the plant expansion.

While the existing Andritz centrifuges have met the needs of the facility, they are being pushed to their limits. The centrifuges are being ran at the far end of their speed rating to achieve decent % solids concentration while maintaining desirable centrate quality. The units are being stressed resulting in reduced component life and increasingly sever failures.

With the units suffering a higher rate of mechanical breakdown, very rarely do we have three units available. This has resulted in increased run times for the other two units available. An investigation of best available technologies and based on current WRCRWA sludge conditions, staff recommend replacing the existing centrifuges to gain greater operational redundancy and productivity.

During Fiscal Year 2024-2025 the ask is for \$315,000.

Schedule

This project is planned to kick off in July 2024.