

FY 2024

Annual Operations Report



July 1, 2023 – June 30,
2024



Overview

During the fiscal year of July 1, 2023 - June 30, 2024, Veolia is still responsible for the Operations and Maintenance of the Rockland Wastewater Treatment Facility and its 13 lift stations.

On June 30, 2024, Veolia completed their 5th year of a 15-year partnership with the Rockland Sewer Commission. The current term of this contract is for three years expiring on 6/30/27 where both parties may enter an additional extension to complete the 15 years based on mutually acceptable terms and conditions.

1.0 Staffing

Veolia remains staffed at the project level for its O&M contract. The Veolia technical support and operational staff for the Rockland project this year includes:

- Director Operations North East Region: Michael Burke
- Project Manager: Richard Kotouch
- Assistant Project Manager: Megan Lynch until March 2024
Jesse Freeman took on the APM position June 2024
- Laboratory Technician: Steven Butts
- Maintenance Foreman: Charles Amaral
- O & M Tech II:
 - Garry Murrill
 - Shaun Chaponis (part-time)
- O & M Tech I:
 - Maxwell Jackson
 - Cristian Ryan
 - Yuri Fernandes
- Operator In Training
 - Michael Hurley



In FY 2023-2024, we gained 3 new employees. Michael Hurley was hired by Veolia in September 2023. Yuri Fernandes was hired to replace Michael Hurley and he currently has a grade 5 and start date was May '24. The Assistant Project Manager, Megan Lynch, left in March '24 to a different location staying within the company for other possibilities. Jesse Freeman came on board in June '24 as the new Assistant Project Manager.

At the end of the fiscal year '24 Richard Kotouch left the project and company to pursue other opportunities. Megan Lynch came back at the beginning of fiscal year '25 as the new Project Manager.

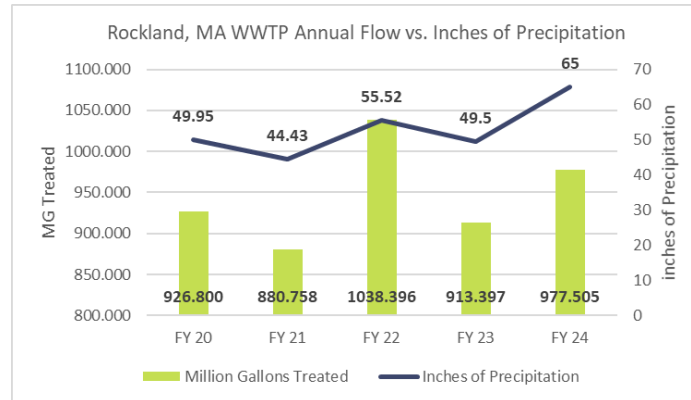
Current Employee Licenses as of 6/30/2024												
		Hoisting		Wastewater				NEWEA Collections			NEWEA Laboratory	
Employee	Title	1C Forklift	1B Boom Truck & Forklift	3M	5C	6C	7C	I	II	IV	I	
Rick Kotouch	Project Manager						X			X		
Megan Lynch	Asst. Project Manager (June '23 - Mar '24)	X					X					
Jesse Freeman	Asst. Project Manager (June 2024)					X						
Steven Butts	Lab Technician						X				X	
Chuck Amaral	Maintenance Foreman				X				X			
Shaun Chaponis (Part Time Weekends)	O & M Tech 2				X			X				
Garry Murrill	O & M Tech 2				X				X			
Max Jackson	O & M Tech 1			X								
Cristian Ryan	O & M Tech 1			X								
Micheal Hurley	Operator In Training (Sep '23 - Apr '24)											
Yuri Fernandes	O & M Tech 1 (May '24)				X							



2.0 Facility Overview

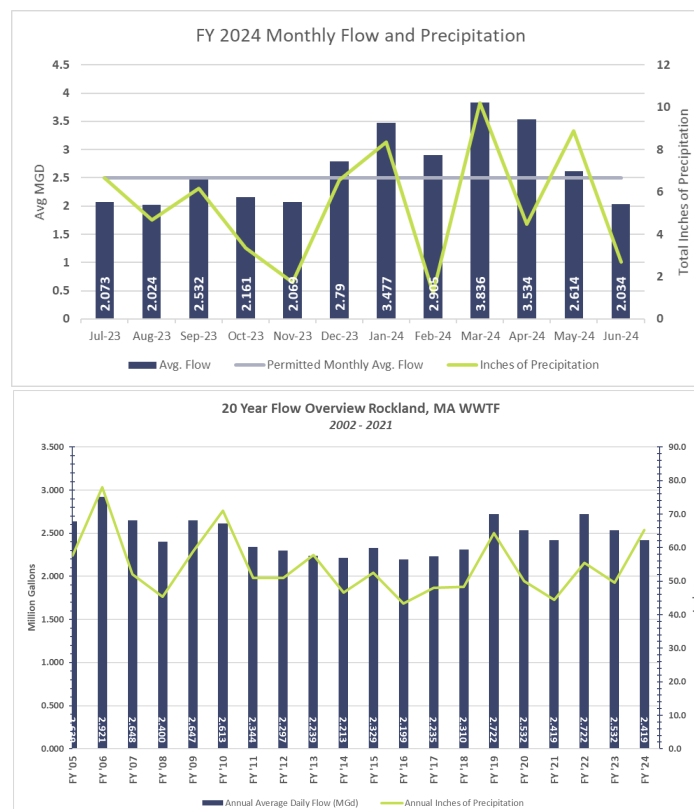
2.1 Weather

The facility received a total of **65"** of precipitation during FY 2023-2024. This amount was **12"** more than the previous five-year average of **53.1"**. The highest single day total of precipitation occurred on May 23rd, 2024 with a total of **3.02"**. The coldest temperature of the year of **10°F** occurred on January 20th, 2024, while the warmest day occurred on June 20th, 2024 with a temperature of **94°F**.



2.2 Flows

The facility treated a total of 977,505,000 gallons throughout the year with a daily average flow of **2.671** MGD. The highest total daily flow recorded was March 30th, 2023 at **5.490** MGD while the lowest total daily flow recorded was on October 31st, 2023 at **1.421** MGD.





3.0 Operational Overview

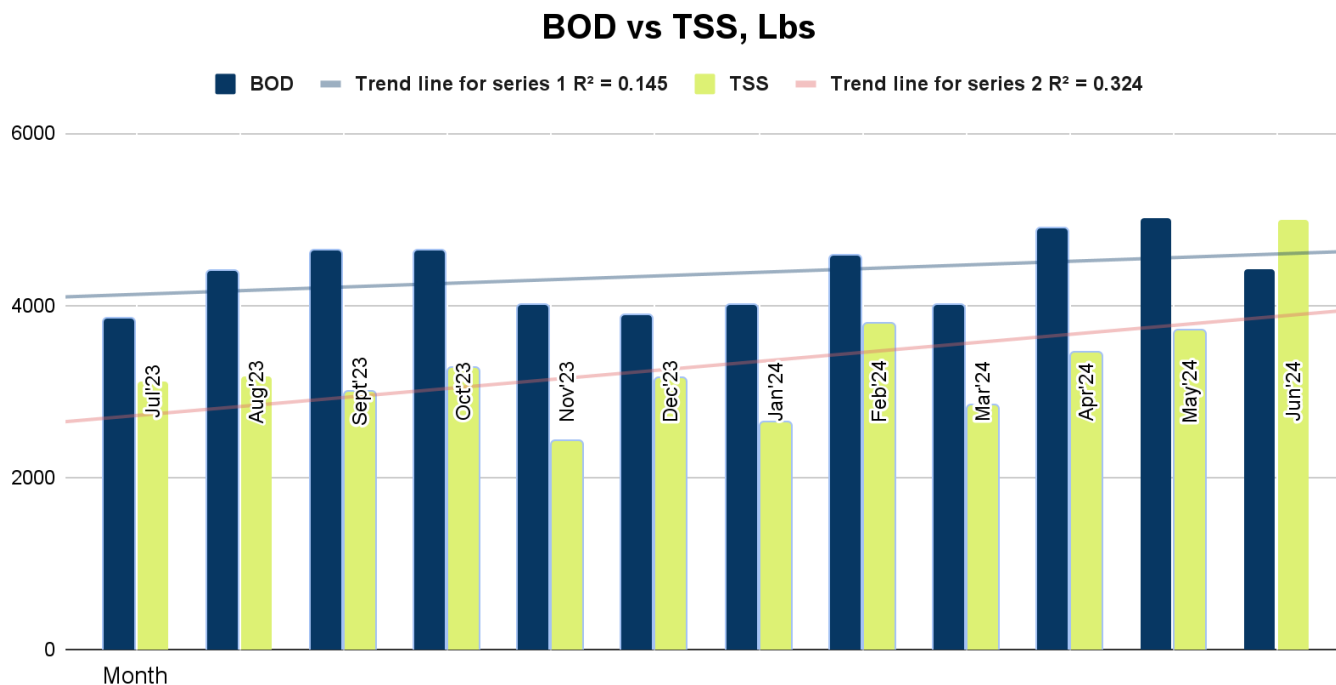
3.1 Process Control

The Veolia staff has continued to deliver exceptional high-quality effluent throughout 2023-2024. This was achieved through the combined effort, experience, and expertise of the highly qualified staff. Process control continues to be a true passion of the staff who take pride in operating the facility for the Town of Rockland.

3.2 Influent Loadings

The influent BOD lbs. /day average increased by **11%** from FY '23 to FY '24. With an average of **4050** lb per /day in FY '23 to, **4362** lbs. /day FY '24. The influent TSS lbs. /day average decreased by **2%** with an average of **3489** lbs. /day in FY '23 to a total of **3296** lbs./day in FY '24.

FY24 Influent Flow and Loadings									
Month	Plant Flow	Raw BOD	Raw BOD		Raw TSS	Raw TSS		Raw NH3	Raw Total P
		Mg / l	Lbs / day		Mg / l	Lbs / day		Mg / l	Mg / l
Jul'23	2.073	223	3855		180	3112		20	4
Aug'23	2.024	261	4406		188	3173		92	15
Sept'23	2.532	220	4646		142	2999		122	17
Oct'23	2.161	257	4632		182	3280		74	14
Nov'23	2.069	232	4003		140	2416		108	13
Dec'23	2.79	167	3886		136	3165		116	11
Jan'24	3.179	151	4003		100	2651		47	12
Feb'24	2.905	189	4579		156	3780		62	15
Mar'24	3.577	134	3998		95	2834		57	13
Apr'24	3.395	173	4898		122	3454		60	13
May'24	2.614	230	5014		170	3706		58	12
Jun'24	2.034	261	4427		294	4987		89	14
Average	2.613	208	4362		159	3296		75	13



3.3 Primary Treatment

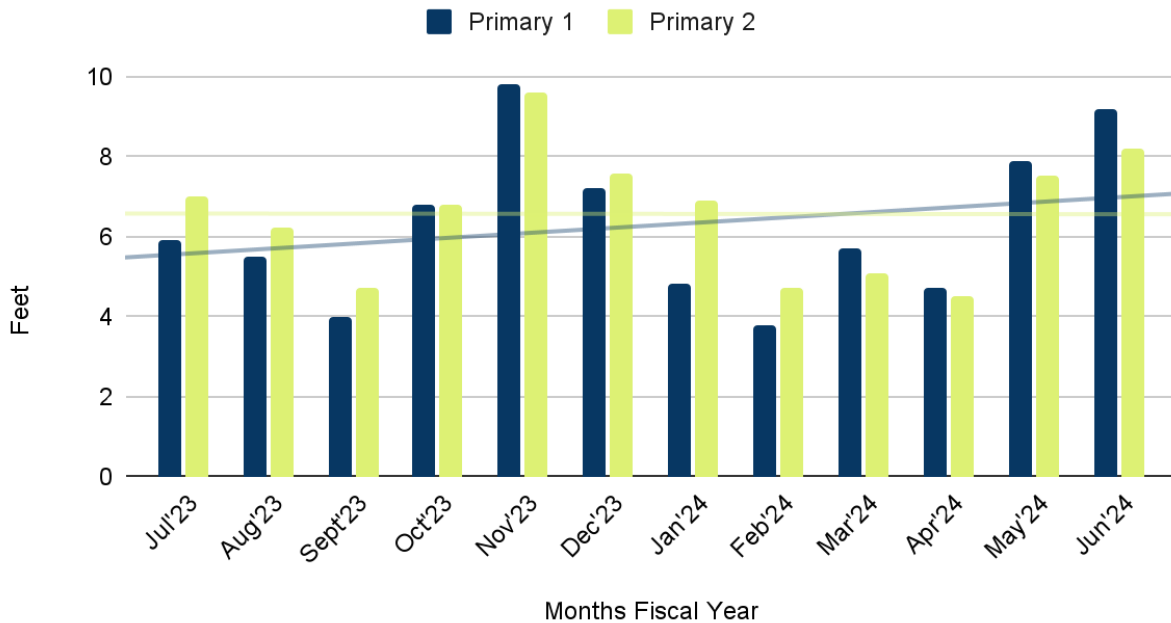
The primary treatment TSS % removal increased in FY24. The TSS Percent Removal was 31% in FY 2023 and the % Increased to 45% in FY 2024. The primary treatment BOD % removal had shown a decrease in FY '24. The BOD % removal was 75% in FY 2023 and decreased to 61% in FY 2024. The annual average primary blanket was 7.02' in FY '23 and relatively unchanged to 6.95' in FY '24.



Primary Percent Removal									
Date	Primary BOD Mg/l	Primary TSS Mg/l	Primary NH3 Mg/l	Primary TP Mg/l		Primary % removal BOD	Primary % removal TSS	Primary % removal NH3	Primary % removal TP
Jul'23	130	80	17	3.6		58	44	85	2 -
Aug'23	167	87	34	3.7		64	46	37	25
Sept'23	132	78	44	5.7		60	55	36	34
Oct'23	150	85	20	2.6		58	47	27	19
Nov'23	183	177	30	5.3		79	26 -	28	41
Dec'23	100	83	43	3.3		60	61	37	30
Jan'24	113	100	27	2.8		75	0	57	23
Feb'24	76	82	19	2.6		40	53	31	17
Mar'24	82	57	23	4		61	60	40	31
Apr'24	67	36	16	0.9		39	30	27	7
May'24	148	107	29	4		64	63	50	33
Jun'24	176	117	33	2.9		67	40	37	21
Avg	127	91	28	3		61	45	41	25



Average Blanket levels

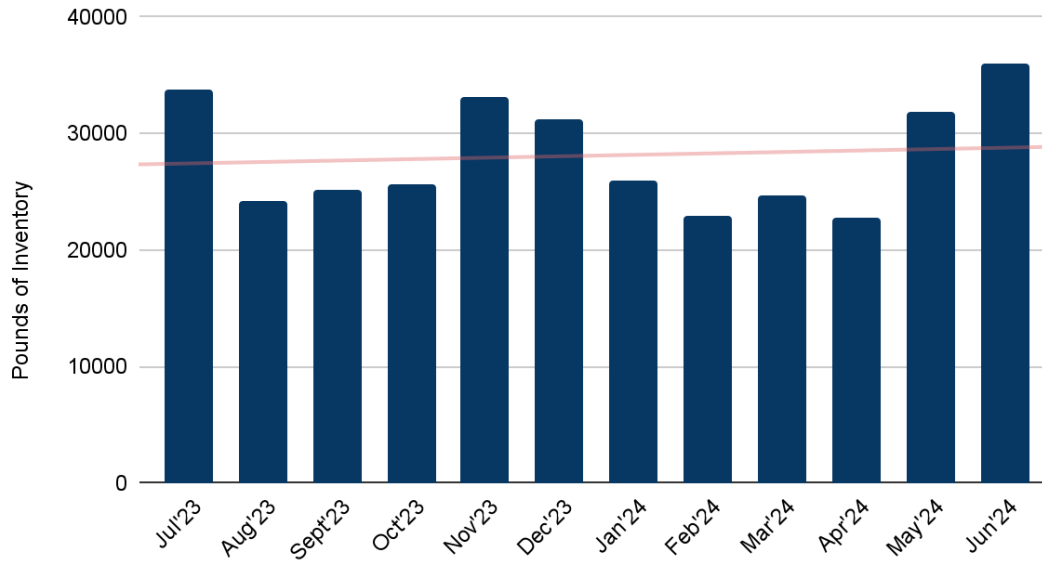


3.4 Secondary Treatment

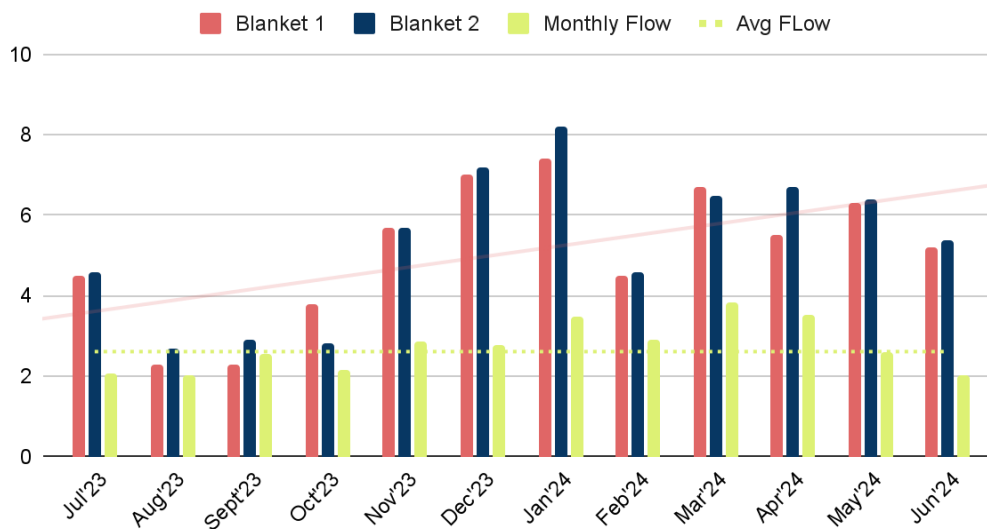
Throughout FY 2023 - 2024, the Rockland staff continued to implement procedures to increase plant solids removal volume and this continues to help reduce excess loadings to the aeration system coming from the primary treatment system due to digester overflow. The annual average total aeration inventory increased from **27,425** lbs. in FY '23 to **28,105** lbs. in FY '24. The average clarifier loading throughout the year was **1450** lbs/day/Tank.



Lbs of Inventory



Blankets Vs Flow





3.5 Digester Performance

The annual average Primary Digester temperature in FY 2023 was **96°F**. The average Volatile Solids Reduction was **11%**.

This fiscal year, the digester overflow, which goes back into the primary treatment, was eliminated with a differential of nearly **410k gallons** to gallons pressed vs pumped to digestion.

3.6 Solids Removal

Veolia staff operated the Belt Filter Press for a total of **1,658** hours during FY '24, down **1%** from the FY '23 total of **1,709** hours. The average percent solids fed to the BFP from the digestion system was **1.45%**, and the BFP produced cake with average percent solids of **21.25%**. A total of **5,214,259** gallons pumped to the BFP throughout the year. Solids removed was up **10%** from FY '23 with **1,176** wet tons of sludge hauled to the Synagro Thermal Conversion Facility in Woonsocket, RI or to Agresource, Maine, composting, via South Shore Disposal Corp. **75** sludge dumpsters were hauled from the facility throughout the year.

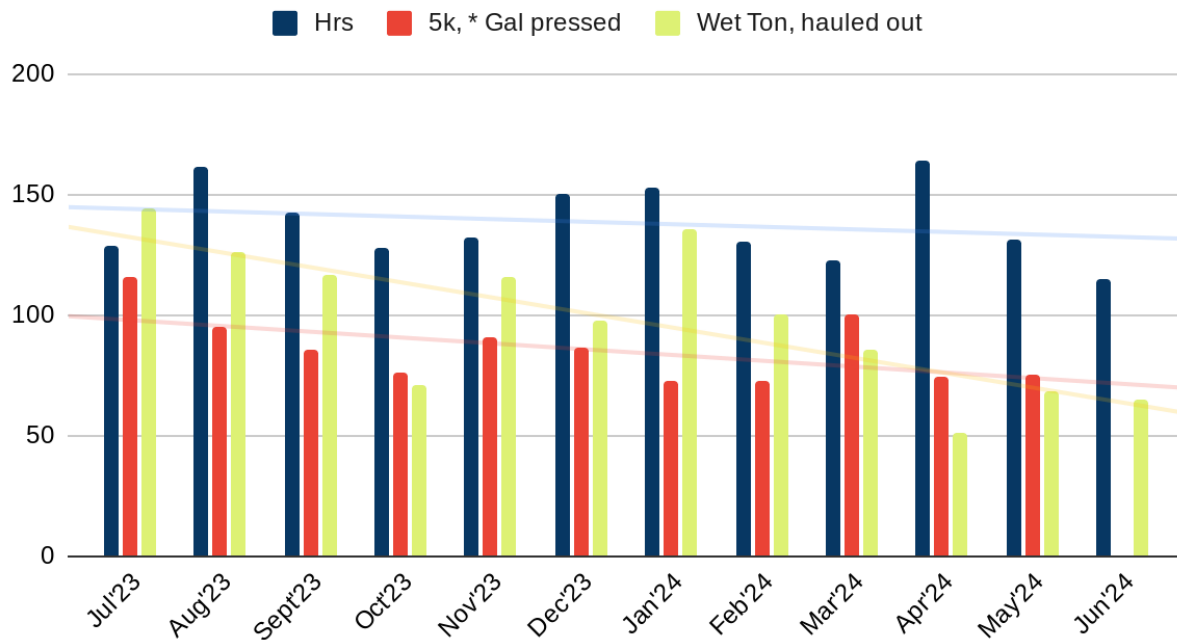
Synagro closed down for repairs for multiple months in 2023 and 2024. During these months that they were shut down had caused an increase in Rockland's sludge accumulation and pounds building up in the primary clarifiers, aerators, and in the secondary clarifiers.



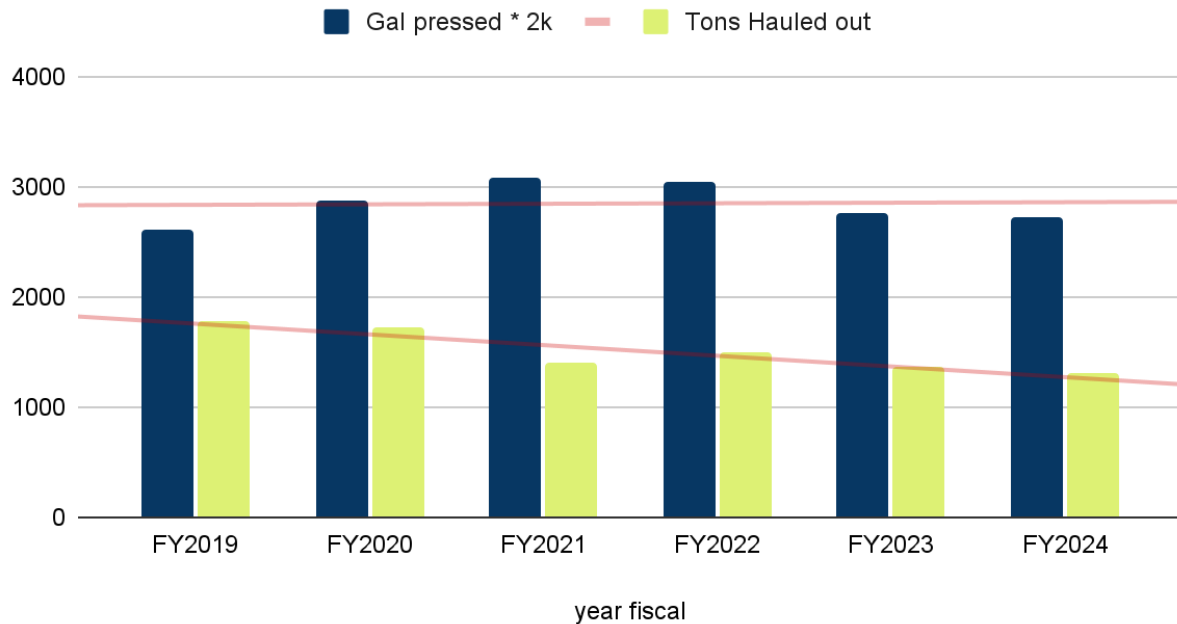
Solids removed and belt performance							
Date	Hours	Belt feed	Weight tons	Feed % in	Cake % out	pickups	
Date	Hrs	Gal	Wet Ton	%	%	count	
Jul'23	128.4	510,385	144.0	1.5	21.40	7	
Aug'23	161.6	577,299	126.3	1.4	22.80	7	
Sept'23	142.7	473,224	116.4	1.4	22.40	6	
Oct'23	127.4	428,509	70.5	1.4	22.60	5	
Nov'23	132.4	381,901	116.0	1.4	22.50	8	
Dec'23	150.5	454,170	98.0	1.4	22.00	6	
Jan'24	152.4	432,214	135.3	1.4	20.80	8	
Feb'24	130.5	362,674	100.1	1.3	22.40	6	
Mar'24	122.3	362,712	85.7	1.3	21.60	6	
Apr'24	164.0	500,524	50.9	1.4	21.50	6	
May'24	131.0	373,008	68.4	1.3	21.00	5	
Jun'24	115.0	375,639	64.8	1.2	21.50	5	
Average	138	436022	98	1.4	21.9	6	



Press Overview



5 year, Trend, Gal Vs Wet Tons





3.7 Compliance Overview

The new MADEP Wastewater General Permit was issued in early 2023.

FY 2024 Rockland WWTF Cumulative NPDES Violation Report

Violations Report									
Effluent Reportable, Violations Cumulative.			Pass Fail // Violations Highlighted in color.						
Reportable limits are set in Daily, Weekly, and Monthly limits.			Daily	Weekly	Monthly				
Date	Flow	Ecoli	TSS	BOD	Metals	NH3	Phos	DO / pH / Cl2	Count of Violation
Jul'23	2.073	107	Pass	Pass	Pass	Pass	Pass	Pass	0
Aug'23	2.024	Pass	Pass	Pass	Pass	Pass	Pass	Pass	0
Sept'23	2.532	95	Pass	Pass	Pass	Pass	Pass	Pass	1
Oct'23	2.161	Pass	Pass	Pass	Pass	Pass	Pass	Pass	0
Nov'23	2.069	Pass	Pass	Pass	Pass	Pass	Pass	Pass	0
Dec'23	2.790	88	Pass	Pass	Pass	Pass	Pass	Pass	1
Jan'24	3.179	Pass	Pass	Pass	Pass	Pass	Pass	Pass	1
Feb'24	2.905	80	Pass	Pass	Pass	Pass	Pass	Pass	1
Mar'24	3.577	Pass	Pass	Pass	Pass	Pass	Pass	Pass	1
Apr'24	3.395	Pass	Pass	Pass	Pass	Pass	Pass	Pass	1
May'24	2.614	Pass	Pass	Pass	Pass	Pass	Pass	Pass	1
Jun'24	2.034	101	Pass	Pass	Pass	Pass	Pass	Pass	0
Count of Violation	7	0	0	0	0	0	0	0	7



The plant achieved a monthly average of **0.1** mg/L of Final Effluent Total Phosphorous during the summer permit months when the NPDES limit is 0.10 mg/L and a monthly average of **0.14** mg/L during the winter permit months when the NPDES limit is 1.0 mg/L.

The Final Effluent Ammonia during the winter reporting period was **.7** mg/L while the NPDES permit limit was 3.3 mg/L. During the Spring reporting period with a NPDES limit of 2.5 mg/L, the plant had an average Final Effluent Ammonia of **1.42** mg/L and during the summer months, the plant had an average Final Effluent Ammonia of **0.49** mg/L when the NPDES reporting limit was 1.0 mg/L.

3.8 Wet Weather Management

The Rockland sewer system continues to experience significant infiltration and inflow during rain events. The Rockland High Flow Management Plan was developed many years ago to alleviate peak flows from creating any adverse impacts at the treatment facility. The plan includes setting up the facility's portable diesel-powered Godwin pumps during high flows to remove flow from the influent line if necessary, to protect the treatment process downstream. Staff will utilize these pumps to shave off any excessive flow during wet weather events and fill all offline tanks before implementing the MA DEP approved blending of treated wet weather flow with facility effluent. Veolia staff implemented the facility High Flow Management Plan on **8** occasions throughout FY 2024 and was required to shave influent flow on **3** occasions. A total amount of **51.1** million gallons was shaved from the facility. Effluent blending was needed **3** times throughout the reporting period in the amount of **21.4** million gallons.

All High Flows are reported to the MADEP and EPA via the Sanitary Sewer Overflow (SSO)/Bypass notification form as well as reported internally through Veolia's Intelex event reporting system.



High Flow Management Events						
Date	Flow MGD	Percip Inch	bypass INF volume MG	HFMP count	Blending eff event count	Blended volume MG
Jul'23	2.073	6.65	0.0	0.0	0.0	0.0
Aug'23	2.024	4.69	0.0	0.0	0.0	0.0
Sept'23	2.532	6.17	0.0	0.0	0.0	0.0
Oct'23	2.161	3.36	0.0	0.0	0.0	0.0
Nov'23	2.069	1.72	0.0	0.0	0.0	0.0
Dec'23	2.790	6.57	6.3	1.0	0.0	0.0
Jan'24	3.179	8.36	17.1	2.0	1.0	9.3
Feb'24	2.905	1.25	0.9	1.0	0.0	0.0
Mar'24	3.577	10.22	16.8	2.0	1.0	8.0
Apr'24	3.395	4.48	7.8	1.0	1.0	4.2
May'24	2.614	8.87	1.8	1.0	0.0	0.0
Jun'24	2.034	2.69	0.4	0.0	0.0	0.0
yr totals=		65.03	51.11	8	3	21.42

Five Year Overview HFME						
Date	HFME	MG ALL	Bypassed	Blended	Percip	
2020	1	926.8	3.0	0.3	50.0	
2021	0	879.3	2.5	0.0	64.4	
2022	0	1075.0	1.3	0.0	54.8	
2023	0	953.4	15.7	3.0	49.6	
2024	8	956.0	51.0	21.0	65.0	
Average	2	958.1	14.7	4.9	56.8	



Environmental Compliance

Veolia has an excellent environmental compliance record that reflects a high level of compliance at all projects including Rockland, MA. One of the highest priorities is complete transparency in all environmental matters at all projects. To accomplish this, the state-of-the-art Water Information Management System (Hach WIMS™) is used to monitor and track all compliance data. This data is reviewed daily, weekly, and monthly, any issues are immediately reported, investigated for root-causes, and appropriate corrective and preventive measures are implemented. This data is automatically transferred into a monthly report format for the State, thus eliminating the potential for any data transcription/calculation errors. Due to these and other compliance initiatives, the Rockland Project did not experience any missed samples or reporting deadlines during the period ending June 30, 2024. Veolia also participates in its parent company's (Paris based Veolia) annual reporting campaign. Pertinent data from all projects is reported to Paris and is benchmarked against water and wastewater treatment facilities across the world. Any deviations are noted and shared with the management team and are used to optimize plant operations for the clients we serve. This is a high-value service, which Veolia provides to all its clients at no cost to them.

The following regulatory reports and plans completed during the 2023-2024 operating period:

- Monthly DMR reports – due the 15th of the following month
- Monthly UST inspections completed by Dependable Petroleum of Plymouth, MA
- Annual EPA 503 Sludge Report
- Annual Tier II Report
- Annual DMR QA Study
- Annual IPP Report

LABORATORY

In February 2022, the Veolia laboratory no longer tests for Fecal Coliforms and now performs Escherichia Coliform (E. Coli) testing on the Effluent wastewater. So in FY 2023 the lab maintained its certification to perform in-house E. Coli's, Settable Solids, Low Level Total Residual Chlorine, and pH examinations.

The laboratory reported more than 950 National Pollutant Discharge Elimination System (NPDES) required tests and had zero missed samples. The lab also performed hundreds of other required process control analyses.



4.0 Electrical and Natural Gas usage

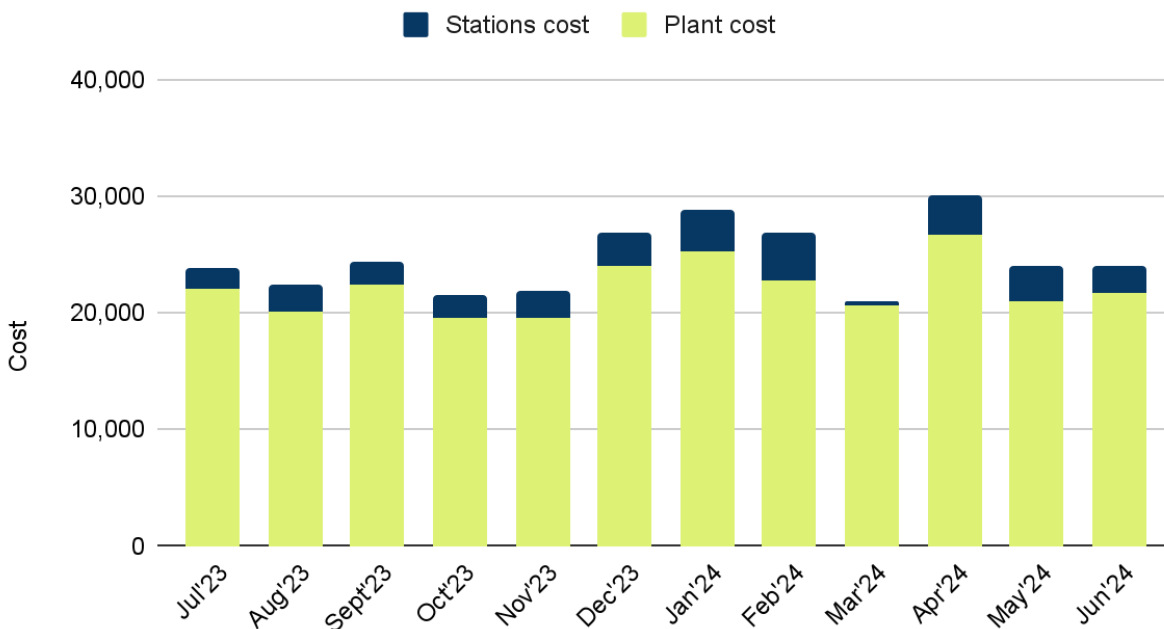
4.1 Electric Overview

The total electrical cost for FY 2023 - 2024 was **\$304,225**. The lift stations accounted for **14%** of the total cost at **\$41,675**. The electric cost for the main plant was **\$262,549**.

ELECTRIC BILLS	
	TOTALS
	FY2024
Plant National Grid	\$262,549.75
Total Plant	\$262,549.75
HINGHAM NORTH	\$6,216.98
HINGHAM SOUTH	\$13,443.18
SPRUCE	\$874.88
BUTTERNUT	\$323.63
OLD CO. WAY	\$3,348.55
MARKET	\$2,105.92
WOODSBURY	\$3,640.36
LINCOLN	\$849.46
FOREST	\$5,824.70
WHEELER	\$299.42
SUMMER	\$296.37
MILLBROOK	\$3,826.25
JOHN BURKE	\$625.89
TOTAL P. STATIONS	\$41,675.59
	TOTAL ELEC
Total Electric cost	\$304,225.34



Plant Vs Station Cost FY24



The **total combined** KWH usage throughout FY 2023 - 2024 was **1,603,397** KWH. The lift stations accounted for **10%** of total KWH using 159,617 KWH. The main plant used **1,428,000** KWH.



Kwh Plant and stations Totals FY24			
Kwh	plant	Stations	combined
Jul'23	118,200.00	12,127	130,327.00
Aug'23	108,300.00	10,113	118,413.00
Sept'23	120,600.00	10,893	131,493.00
Oct'23	105,300.00	10,331	115,631.00
Nov'23	104,700.00	13,297	117,997.00
Dec'23	129,300.00	15,313	144,613.00
Jan'24	135,600.00	18,956	154,556.00
Feb'24	122,400.00	21,708	144,108.00
Mar'24	111,000.00	16,633	127,633.00
Apr'24	143,700.00	17,451	161,151.00
May'24	112,800.00	16,066	128,866.00
Jun'24	116,100.00	12,509	128,609.00
sum=	1,428,000.00	175,397.00	1,603,397.00
Avg=	119,000.00	14,616.42	133,616.42

4.2 Natural Gas Overview

The total Natural gas cost for FY 2023-2024 year was **\$9,339**. The lift stations accounted for **30%** of the total cost at **\$2,803**. The total cost for gas usage at the main plant was **\$6,536**.

Total therms used in the FY 2023-2024 year was **3,058**.



5.0 Maintenance

5.1 Work Order Overview

Veolia staff completed **1991** maintenance work orders this year; of this amount, **204** were corrective maintenance work orders, the remaining amount of **1,787** were preventative maintenance work orders. **0** work orders were skipped during the reporting period. Of the **204** corrective work orders, **55** were due to emergency call outs.

1700 maintenance related work hours were recorded this year. Veolia staff accounted for 1100 hours, while sub-contractors accounted for **35%** with **600** hours.

Work orders and staff hours			
FY->		this year 2024	last year 2023
hours		1700	1658
labor / veolia		1100	1009
work orders		1991	1960
c/o		204	156
emergency call		55	43
mark outs		758	720
back ups		3	2

5.2 Significant Repairs, Replacements, and Installations with cost.

JUL

1. Semedo Cleaning Services Deep cleaned floors in office building: \$1,950.00
2. Purchased a Top Belt for the Belt Filter Press through Micronics: \$1,475.00
3. Cranes 101 conducted the annual crane and forklift inspection: \$646.00
4. Pioneer Electric replaced the Influent VFD Motor Overload Relay: \$549.00



AUG

1. Purchased Chemical Tubing from Fluorostore for \$2,060.10
2. Apollo Safety annual influent gas meter calibration contract \$1,375.00
3. Apollo Safety annual anaerobic digester gas meter calibration contract \$1,375.00
4. EIS replaced SCADA Router - \$945.00

SEPT

1. Appollo Safety Replaced Headworks Methane Sensor \$1,740.00
2. Applied Dynamics annual OSHA chain fall inspections \$1,560.00
3. Economy Lab Services annual lab calibration \$1,160.00
4. Pioneer Electric installed Hingham South mixer \$1,098.00

OCT

1. Seacoast Supply removed Digester Recirculation Pump #1 \$2,363.05
2. John Hoadley & Sons jetted lime room floor drain \$1,600.00
3. Ordered a BFP Polymer Pump from Grainger \$1,177.61

NOV

1. EIS Troubleshoot & Reprg Hingham St. North and Hingham St. South \$1,230.00
2. Renew Mechanical installed new lime pump \$1,795.00
3. ESI connected the Chlorine Sensor to SCADA \$1291.50

DEC

1. Purchased a polymer pump motor from Blanchard Electric \$1,010.00
2. Annual support fee for Linko Technology CMMS Program \$1,371.00
3. 10' step rolling ladder from Grainger \$1,775.29

JAN

1. Purchased Bisulfite Flow Meter from TI Sales \$1,017.00
2. Hannigan Enterprise repaired Godwin Pump Serpentine Belt \$1,451.79
3. 400 Amp Breaker Tripped that Pioneer Electric rerouted to fix \$1,317.00
4. Fork Lift was to repaired through Lift Trucks & Services \$1,147.77

FEB

1. EIS upgraded the RAS/WAS and Final to SCADA \$1,656.25
2. Sousa Electric repaired LED lights and switches \$1,390.00
3. Apollo Safety replaced the oxygen sensor for the Headworks Building \$1,140.

MAR

1. EIS upgraded the RAS/WAS and Final to SCADA \$1,656.25
2. Sousa Electric repaired LED lights and switches \$1,390.00
3. Apollo Safety replaced the oxygen sensor Headworks Building \$1,140.



APR

1. Hannigan Enterprises performed annual maint HSS Godwin Pump - \$2,319.27
2. Purchased,Pully Air Compressor/ Fleet Products HSS Godwin Pump - \$1,943.94
3. Hanover Lock replaced two Door Locks at the Plant – \$1,446.00
4. Cranes 101 replaced Truck Reel & Switch on the Boom Truck – \$1,383.91
5. Economy Lab Services performed annual Lab Equipment Calibrations – \$1,160.00

MAY

1. Purchased a Manhole Cover Lifter from Grainger – \$2,177.26
2. Annual Flow Chart Calibrations completed by EIS – \$973.75
3. Purchased a Ultrasonic Level Transmitter for Lime Tank/ Amazon \$628.29
4. HQI Overhead Doors replaced Sensor on Maintenance Garage Door – \$405.00

JUNE

1. Sousa Electric Installed Controls for Generator Louvers \$850.00
2. Ebay Water Flow Meter for Lime Tank \$558.82
3. Dependable Petroleum 3rd Party UST Inspection \$675.00

R & M (Project) +\$100,000.00: (Spent) \$103,126.04: Remainder \$(-3,126.04).

5.3 Inspections & Calibrations

- Monthly UST inspections completed
- Annual laboratory equipment calibrations completed
- Annual Process Meter calibrations completed
- Quarterly gas detector calibrations completed
- Quarterly back flow inspections completed
- Annual flow meters completed
- Annual OSHA hoist inspections completed
- Annual fire extinguisher inspections completed
- Annual Main Facility fire alarm inspection completed
- Annual Generator Preventative Maintenance and inspections completed by M&S Electric



5.4 Emergency Generators

Veolia's staff tracked generator test and emergency run hours for all generators throughout FY 2024. The staff also continued to monitor and maintain the eight emergency backup generators throughout FY 2024. Daily visual inspections were completed on all generators as well as weekly no load test runs. Per EPA and MADEP all generators were operated monthly under load. M&S Electric Services completed the annual Preventative Maintenance and Inspections.

The Main Facility generator run hours in FY '24 with a total of **10** hours.

New Generator online projection 2025 Jan. Tilton and Wright Pierce.

5.5 Upcoming Projects in 2024-2025

- Wright Pierce Engineering and planning for upgrades
- Replace or Rebuild Critical spares
- Upgrade controls
- New Cake / sludge removal contractor
- Rebuild Belt Filter Press
- Possible secondary upgrade starts / testing
- New Generator Online

Financial Review

R&M 2023-2024 Account Overview

Item	Budget	Spent FY 2023	Remaining
R & M (Project)	\$100,000	\$103,126	-3,126



Manager's 2024-2025 Goals

1. Continue to promote the safe work culture at the facility through leadership, communication, and training to have zero injuries in 2024-2025
2. Continue to excel at producing high quality effluent while striving for zero unavoidable NPDES violations
3. Continue to work with the Town of Rockland Sewer Department and its selected engineering firms on developing and executing an upgrade of significant processes at the facility through the CWMP
4. Continue to work on operating the project as efficiently as possible and to maintain or reduce the usage of electricity based on a KWH per Million Gallons treated baseline