

Monthly Operating Report

JULY 2023



Rockland, MA WWTP





August 14, 2023

Mr. Chuck Heshion

Rockland Sewer Commission Chairman

587 Rear Summer Street

Rockland, MA 02370

RE: Rockland Wastewater Facility

Monthly Report—July 2023

Dear Mr. Heshion,

I have enclosed July's 2023 Monthly Operating Report (MOR) for the Veolia Operations and Maintenance contract.

Please contact me if you should you have any questions regarding this report.

Sincerely,

Rick Kotouch

Veolia Project Manager

CC:

Daniel Duross

Sherri Vallie

JULY 2023 MONTHLY OPERATING REPORT

1. SUMMARY:

The facility will be reporting **0** exceedance for the month of July 2023

- 1) There was **0** lost time / first aid injuries throughout the month
- 2) The facility treated a total of **64,264,000** Million Gallons. The average daily flow was **2.073** MGD
- 3) The total rainfall for this reporting period was **5.37"**
- 4) I&I Work is ongoing
- 5) **175** work orders were closed in July, with **25** as corrective maintenance work order and **3** were emergency call outs
- 6) Massachusetts general wastewater permit began April 1st.

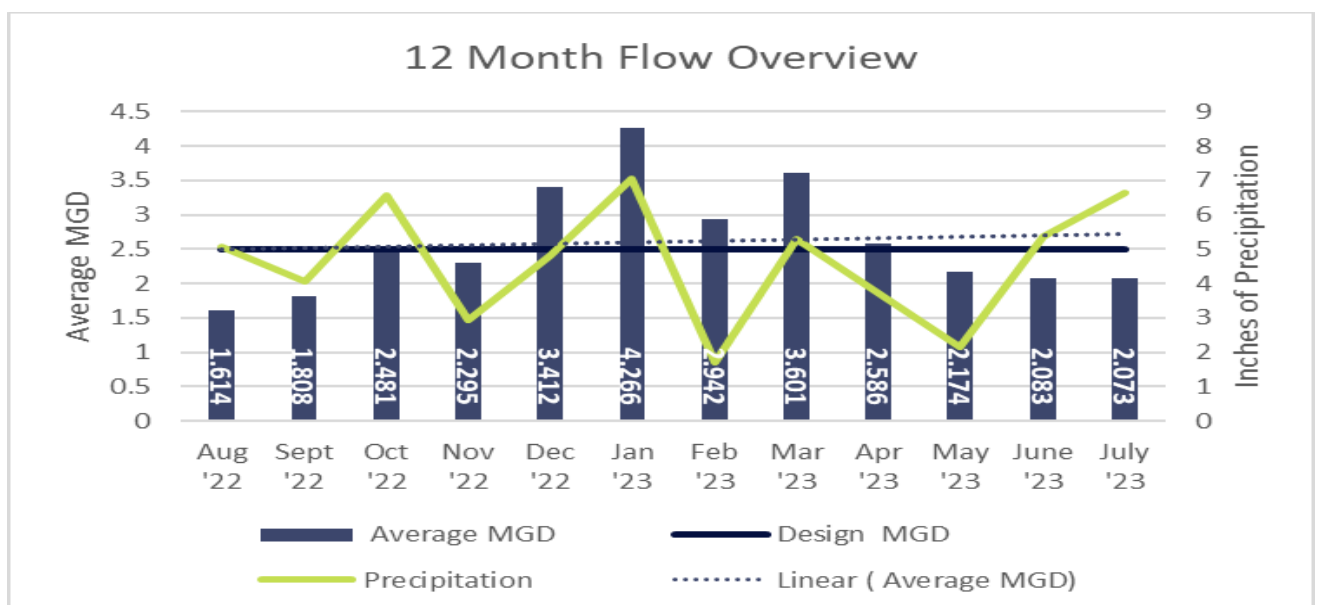
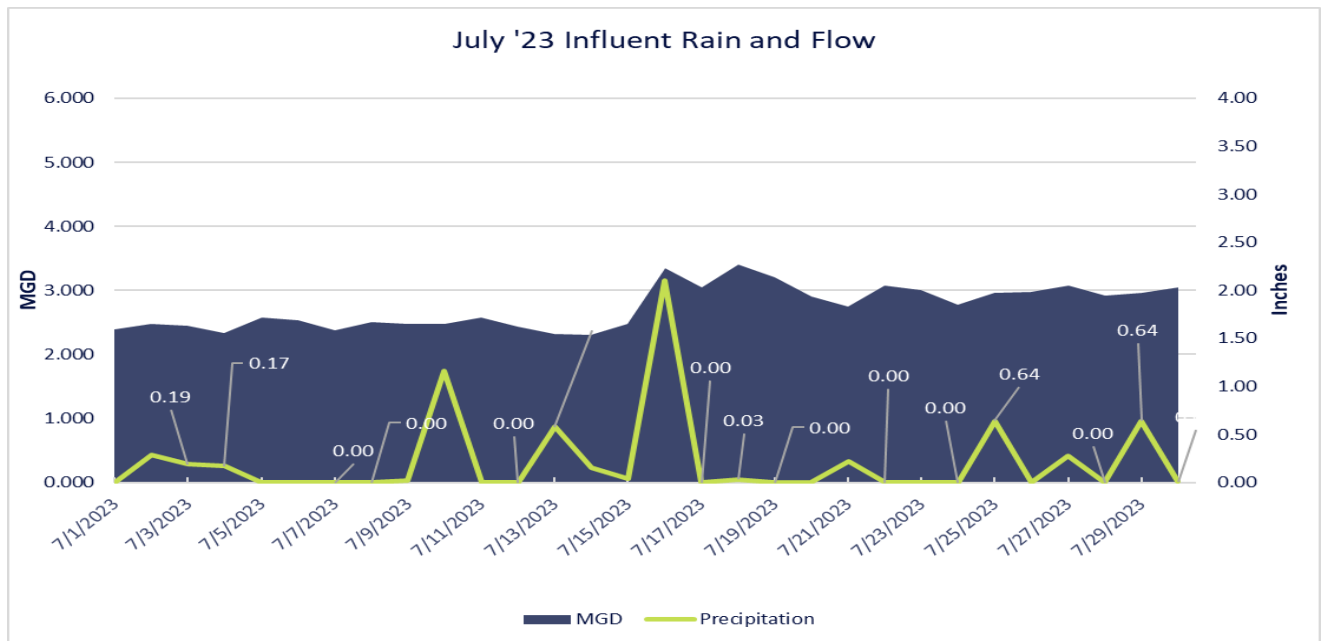
2. STAFFING:

Current Employee Licenses as of 08/31/2022										
		Hoisting		Wastewater			NEWEA Collections			NEWEA Laboratory
Employee	Title	1C Forklift	1B Boom Truck & Forklift	3M	5C	7C	I	II	IV	I
Richard Kotouch	Project Manager					X			X	
Megan Kelly-Lynch	Asst. Project Manager	X				X				
Steven Butts	Lab Technician					X				X
Charles Amaral	Maintenance Foreman				X			X		
Garry Murrill	O&M Tech II				X			X		
Maxwell Jackson	O&M Tech I			X						
Cristian Ryan	Operator in Training									
Shaun Chaponis (Part Time Weekends)	O&M Tech II				X		X			

3 FLOWS AND LOADINGS:

3.0 FLOWS, PRECIPITATION, AND WEATHER

- The facility treated a total of **64,264,000** MG during the month. The daily average flow was **2.073** MGD. This was **0.334** MGD more than the previous July monthly average, which was recorded at **1.739** MGD. The highest daily flow was recorded on the July 17th as 2.571 MGD. The lowest daily flow was recorded on July 7th as **1.722** MGD.
- The highest **peak** flow was recorded on July 14th as **2.300** MGD.
- A total of **6.65"** of precipitation was received at the facility. The highest single day precipitation total was recorded on July 16th as **2.10"**
- The coldest day was July 31st at **54°F**. The warmest day was July 6th at **91°F**.



3.1 INFLUENT BOD AND TSS LOADING

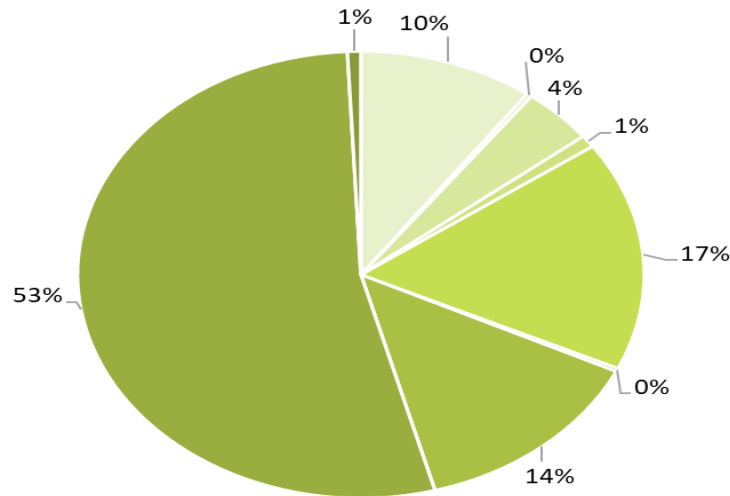
ROCKLAND FLOW AND LOADINGS TRACKING								
Month/Yr	Influent Flow	Effluent Flow	Influent Flow Moving Avg.	Effluent Flow Moving Avg.	Inf BOD	Inf. TSS	Inf. BOD Mov. Avg.	Inf. TSS Mov. Avg.
	MGD	MGD	MGD	MGD	LBS	LBS	LBS	LBS
Aug'22	1.614		2.702		3,313	3,758	3,469	3,969
Sep'22	1.808		2.597		3,716	3,838	3,581	3,880
Oct'22	2.481		2.538		3,323	4,180	3,608	3,904
Nov'22	2.295		2.469		4,948	3,227	3,832	3,881
Dec'22	3.412		2.544		4,234	3,802	3,885	3,890
Jan '23	4.266		2.67		4,250	3,763	2,913	3,897
Feb '23	2.942	2.646	2.577	2.646	3,408	2,970	3,871	3,819
Mar '23	3.601	3.601	2.592	3.123	3,539	3,250	3,842	3,718
Apr '23	2.586	2.212	2.577	2.82	4,495	3,386	3,891	3,663
May '23	2.497	2.174	2.603	2.658	4,969	2,999	3,988	3,560
June '23	2.083	1.735	2.61	2.473	5,090	3,154	4,050	3,489
July '23	2.404	2.073	2.666	2.407	4,496	3,599	4,148	3,494

3.2 LIFT STATION FLOWS

The lift stations accounted for **9,133,500** gallons throughout the month, **14%** of the total plant flow. Please note that monthly lift station flow totals are purely estimates based off of pump run hours and estimated flow rates. Values are not intended to in any way be used as design capacity volumes for potential future rehab / replacement projects.

Total Flows for July 2023		
Station	Total Gallons	
Millbrook	911,520	
Summer	26,880	
Market	373,500	
John Burke	81,120	
Lincoln, Forest	1,520,400	
Wheeler	21,780	
Woodsbury	1,247,400	
OCW, HN, HS	4,881,600	
Butternut	69,300	
Total:	9,133,500	

July 2023 Lift Stations Daily Flows



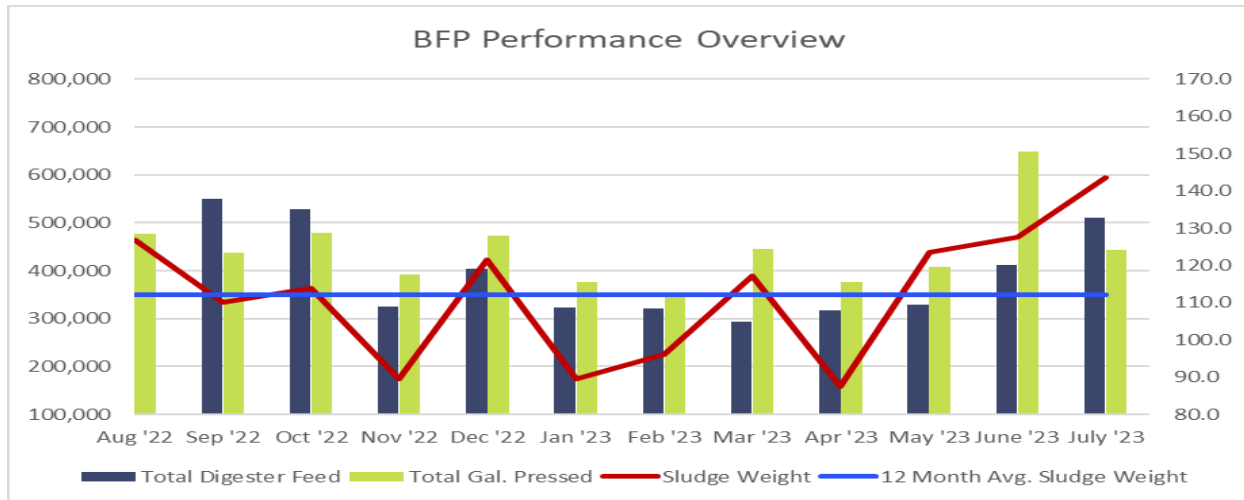
■ Millbrook
■ Summer
■ Market
■ JBD
■ Lincoln & Forest
■ Wheeler
■ Woodsbury
■ OCW, HN, HS
■ Butternut

Lift Station Monthly Average Daily Flows (GPD)

Month	Millbrook	Summer	Market	John Burke	Lincoln	Forrest	Wheeler	Woodsbury	Old Country Way	Hingham North	Hingham South	Butternut
	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD
Aug '22	31,459	1,076	15,581	2,145	2,439	40,442	703	38,265	44,100	134,843	113,574	3475
Sep '22	29,628	976	15,400	1,816	2,389	45,990	732	45,660	42,350	134,460	141,480	2040
Oct '22	38,114	1,092	14,758	1,386	2,419	49,181	743	43,897	46,810	149,807	273,484	3870
Nov '22	35,316	1,112	14,450	1,840	2,460	46,410	918	40,740	46,970	142,920	165,599	2,640
Dec '22	47,052	888	14,750	2,480	2,580	56,070	786	57,780	60,155	169,200	199,974	3,658
Jan '23	47,052	888	14,750	2,480	2,580	56,070	786	57,780	60,155	169,200	199,974	3,658
Feb '23	44,087	866	13,554	5,186	3,000	52,950	4,899	50,207	58,650	164,565	199,029	3,182
Mar '23	48,137	1,029	14,893	3,180	3,879	56,625	868	52,650	69,450	172,221	220,629	4,243
Apr '23	46,209	994	15,054	3,180	3,343	57,150	861	52,714	53,325	137,507	170,486	3,857
May '23	36,566	874	15,321	4,226	2,786	49,800	784	40,436	52,425	145,800	180,514	2,796
June '23	32,516	831	12,964	2,983	2,250	50,100	746	34,393	49,575	33,264	178,200	2,411
July '23	32,554	960	13,339	2,897	2,721	54,300	778	44,550	54,300	151,971	174,343	2,475
Average	39,058	966	14,568	2,817	2,737	51,257	1,134	46,589	53,189	142,147	184,774	3,192

4.0 SOLIDS HANDLING

The BFP was operated a total of **128.38** hours this month and a total of **510,385** gallons were processed producing **143.55** Wet Tons of sludge that was hauled from the facility. The average BFP feed percent solids were **2.11%** and the BFP Cake average percent solids were **21.39%**. The sludge processing Dry Tons conversion sheet is attached to this report.



Date	BFP Run Hours	Total Digester Feed	Total BFP Feed	Polymer Used	Actual Sludge Weight	Average Press Feed Total Solids	Average Cake Total Solids	Sludge Pick Up	Grit Removed
	HRS	Gal.	Gal.	Gal.	Wet Tons	%	%	Dumpster	Tons
Aug '22	152.6	626,023	477,850	132.8	126.8	2.15	23.45	7.00	
Sep '22	140.6	550,718	436,908	118.4	110.0	2.46	24.43	7.00	
Oct '22	154.3	528,474	478,215	142.4	114.0	2.48	22.86	6.00	
Nov '22	130.0	325,410	393,155	90.4	89.6	1.96	22.45	5.00	
Dec '22	150.5	403,272	472,903	115.2	121.6	1.73	20.27	6.00	
Jan '23	129.2	324,034	377,362	119.2	89.4	1.72	19.24	6.00	
Feb '23	134.3	320,572	355,441	115.5	96.1	1.59	18.77	6.00	
Mar '23	147.1	293,999	445,395	128.8	117.1	1.62	18.98	6.00	
Apr '23	123.3	318,169	377,424	105.6	87.5	2.21	20.87	6.00	
May '23	125.6	329,820	407,350	114.4	123.5	2.08	21.52	6.00	
June '23	183.7	411,781	649,427	155.6	127.6	1.88	22.32	8.00	
July '23	128.4	444,319	510,385	109.6	143.6	2.11	21.39	7.00	4.00
Annual Total	1,699	4,876,591	5,381,815	1,448	1,347	*****	*****	76	4.00
Avg.	142	406,383	448,485	121	112	2.00	21.38	6.3	*****

5.0 ENVIRONMENTAL COMPLIANCE

5.1 REGULATORY REPORTING

1. The EPA and MADEP July NETDMR was submitted on the CDX website on 7/4/2023

5.2 NPDES COMPLIANCE

The facility will be reporting (0) exceedance(s) for the month of July 2023

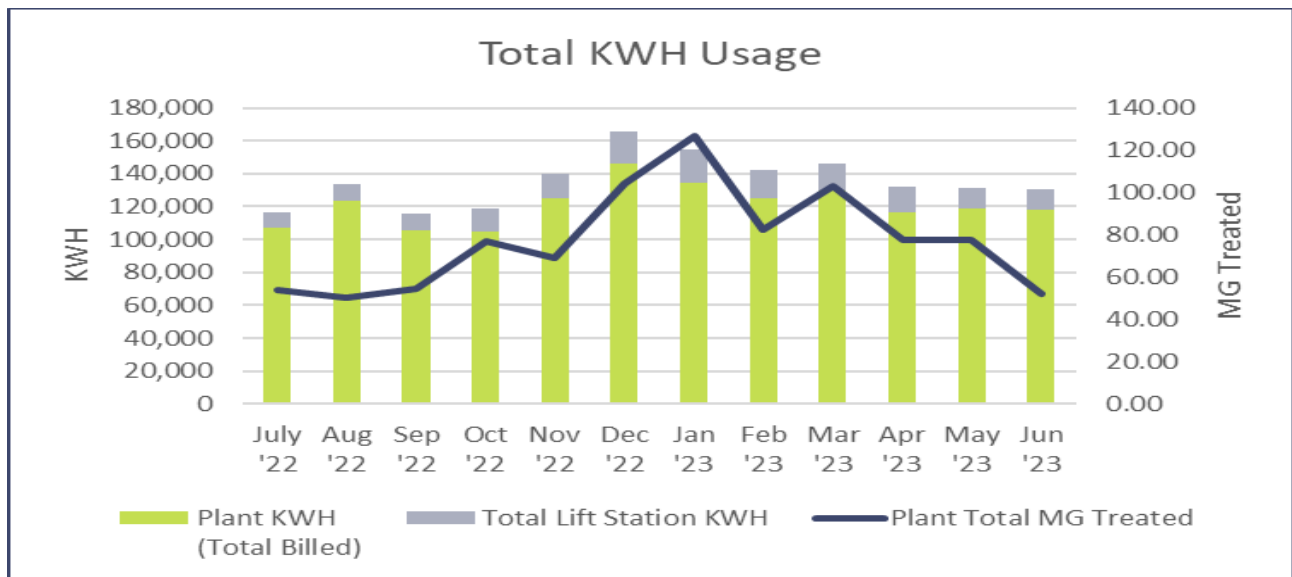
Date	Plant Flow	BOD	BOD	TSS	TSS	NH3	Total P	Ph	E. Coli Coliform	Aluminum	Copper	Dissolved Oxygen	Limits	Monthly Avg.	Weekly Avg.	Daily Max
	MGD	Mg/L	Lbs./Day	Mg/L	Lbs./Day	Mg/L	Mg/L	Ph	CFU/100 ml	Ug/L	Ug/L	Mg/L	BOD			
Sat, Jul 1	1.756							7.36				8.4	Oct. 1 - April 30	20 Mg/L 417 lbs/day	20 Mg/L 417 lbs/Day	30 Mg/l 626 lbs/Day
Sun, Jul 2	1.844							7.66				8.3				
Mon, Jul 3	1.794							7.67				8.3	May1 - Sept. 30	6 Mg/L 125 lbs/Day	6 Mg/L 125 lbs/Day	10Mg/L 209 lbs/day
Tue, Jul 4	1.879							7.62	39			8.1				
Wed, Jul 5	1.878	4.0	72	7.0	126	0.10	0.09	7.58		15	4.00	8.4	TSS			
Thu, Jul 6	1.826							7.54				8.0	Oct. 1 - April 30	20 Mg/L 417 lbs/Day	20 Mg/L 417 lbs/Day	30 Mg/l 626 lbs/Day
Fri, Jul 7	1.722							7.78				8.7				
Sat, Jul 8	1.786							7.76				8.5	May1 - Sept. 30	10 Mg/L 209 lbs/Day	10 Mg/L 209 lbs/Day	15Mg/L 313 lbs/day
Sun, Jul 9	1.775							7.66				8.3				
Mon, Jul 10	1.882							7.76				8.4	NH3			
Tue, Jul 11	1.872	3.0	54	4.0	72	1.00	0.08	7.69	260			8.8	Oct.1 - Mar. 31	3.3 Mg/L	3.3 Mg/l	5.7 Mg/L
Wed, Jul 12	1.800							7.64				8.6				
Thu, Jul 13	1.850							7.44				9.2	Apr. 1 - May 31	2.5 Mg/L	2.5 Mg/l	5.7 Mg/l
Fri, Jul 14	1.757							7.33				8.1				
Sat, Jul 15	1.766							7.35				8.5	June1 - Sept. 30	1.0 Mg/L	1.0 Mg/L	1.5 Mg/L
Sun, Jul 16	2.380							7.12				8.5				
Mon, Jul 17	2.536							7.46				8.5	Total Phpsphorus			
Tue, Jul 18	2.571	3.0	74	2.0	49	0.20	0.11	7.58				8.6	Apr.1 - Oct.31	0.2 Mg/L	*****	*****
Wed, Jul 19	2.454							7.55	387			8.5				
Thu, Jul 20	2.282							7.49	71			8.9	Nov. 1 - Mar. 31	1.0 Mg/L	*****	*****
Fri, Jul 21	2.222							7.41				9.0				
Sat, Jul 22	2.376							7.14				8.1	Ph			
Sun, Jul 23	2.195							7.12				8.5	6.5 - 8.3			
Mon, Jul 24	2.106							7.08	50			8.2	E. Coli			
Tue, Jul 25	2.147	2.0	42	2.0	42	0.10	0.09	7.50				8.9	*****	126 CFU/100ml	*****	409 CFU/100ml
Wed, Jul 26	2.297							7.63				8.3				
Thu, Jul 27	2.285							7.59				8.9	Aluminum			
Fri, Jul 28	2.136							7.55				8.3	*****	88 ug/l	*****	*****
Sat, Jul 29	2.440							7.36				8.6		Copper		
Sun, Jul 30	2.377							7.30				8.2				
Mon, Jul 31	2.273							7.37				8.3				
Daily Max	2.571	4.00	74.06	7.00	126.10	1.00	0.11	7.78	387	*****	*****	*****	May 1 - Sept. 30	> 7.4 mg/L		
Daily Min.	1.722	*****	*****	*****	*****	*****	*****	7.08	*****	*****	*****	8.00		Plant Flow		
Month Avg.	2.073	3.00	60.50	3.75	72.25	0.35	0.09	7.49	107	15	4.0	*****	2.5 MGD			

6.0 ENERGY CONSUMPTION

6.1 ELECTRICAL OVERVIEW

The department used a total of **130,327 KWH** for the month of July 2023. Of this total, the lift stations accounted for **936%**, using **12,127 KWH**. The Main Plant accounted for the remaining **118,200 KWH**. The KWH/ MG treated was **2,271** for the month and the KWH/Lb. BOD Removed was **0.79 KWH/Lb.** for the month.

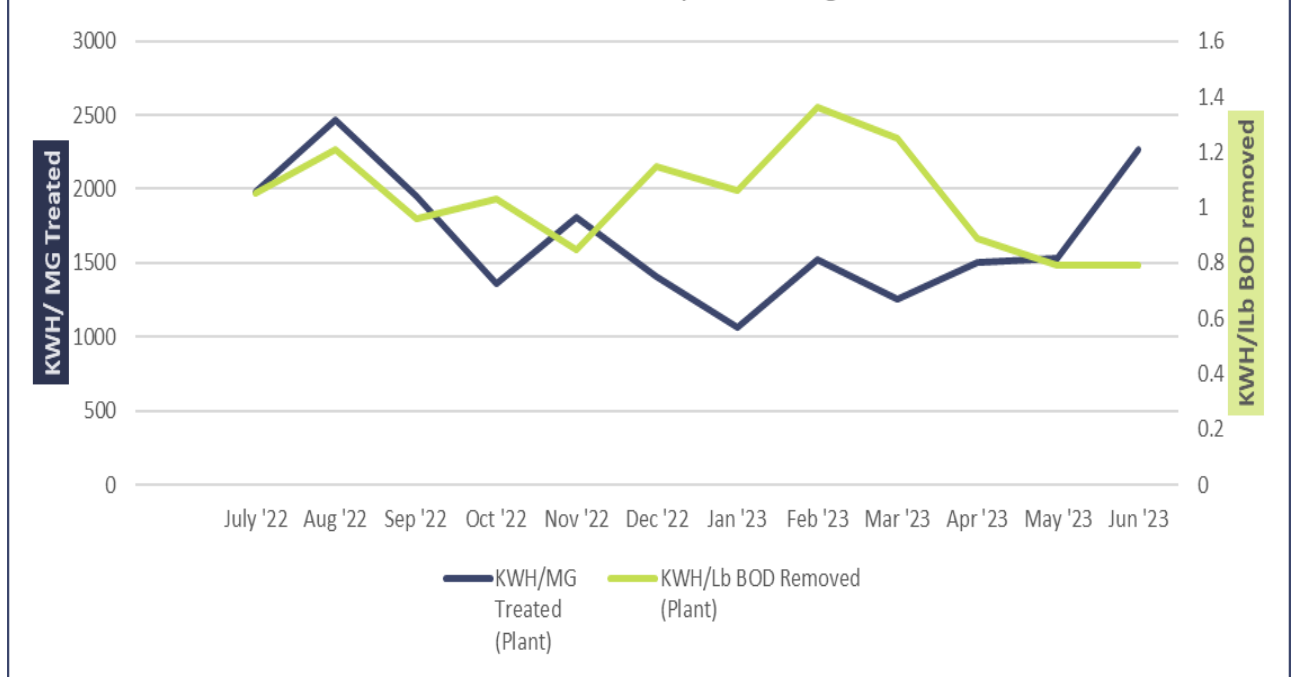
Monthly Energy Consumption										
Month	Plant Average Daily Flow (NO HFMP)	Plant Total Influent Flow	Plant KWH (Total Billed)	KWH/MG Treated (Plant)	Plant Lbs BOD Removed	KWH/Lb BOD Removed (Plant)	Off Peak Demand (Plant)	Peak Demand (Plant)	Total Lift Station KWH	Total KWH (Plant & Stations)
	MGD	MG	KWH	KWH/MG	Lbs	KWH/Lb	KW	KW	KWH	KWH
July '22	1.74	53.90	106,800	1,981	101,883	1.05	198	216	9,326	116,126
Aug '22	1.61	50.02	123,300	2,465	101,859	1.21	177	195	10,344	133,644
Sep '22	1.81	54.23	105,900	1,953	110,510	0.96	186	210	9,877	115,777
Oct '22	2.48	76.91	104,700	1,361	101,712	1.03	195	201	14,276	118,976
Nov '22	2.3	68.86	124,800	1,812	146,152	0.85	186	213	15,469	140,269
Dec '22	3.36	104.19	146,400	1,405	127,264	1.15	243	258	19,421	165,821
Jan '23	4.08	126.55	134,400	1,062	126,998	1.06	252	258	20,049	154,449
Feb '23	2.94	82.38	125,400	1,522	92,522	1.36	213	210	16,712	142,112
Mar '23	3.33	103.31	129,600	1,254	103,530	1.25	204	213	16,322	145,922
Apr '23	2.59	77.57	116,400	1,501	130,686	0.89	198	210	15,893	132,293
May '23	2.50	77.4	118,800	1,535	151,100	0.79	183	189	12,637	131,437
Jun '23	1.73	52.04	118,200	2,271	149,709	0.79	183	201	12,127	130,327
Average	2.54	77.28	121,225	1,677	120,327	1.03	202	215	14,371	135,596



Monthly Lift Station KWH

Month	Hingham North	Hingham South	Spruce	Butternut	Old Country Way	Market	Woodsbury	Lincoln	Forest	Wheeler	Summer	Milbrook	John Burke	Total
July '22	2,119	2,900	110	49	741	337	685	134	1,202	49	69	832	89	9,326
Aug '22	2,293	3,200	102	54	871	334	820	153	1,337	54	68	967	91	10,344
Sept '22	2,094	2,900	110	48	807	348	928	172	1,269	48	56	1,015	82	9,877
Oct '22	2,943	4,100	195	73	952	887	1,308	260	1,942	69	80	1,325	142	14,276
Nov '22	2,907	4,600	218	66	1,184	832	1,240	308	2,043	63	67	1,734	207	15,469
Dec '22	3,575	6,100	156	83	1,427	957	1,841	352	2,515	63	63	2,026	263	19,421
Jan '23	3,577	6,500	145	90	1,802	924	1,848	341	2,466	123	62	1,863	308	20,049
Feb '23	3,039	5,000	141	70	1,281	862	1,440	325	2,187	227	59	1,749	332	16,712
Mar '23	2,995	5,100	246	434	1,260	851	1,353	283	1,915	58	67	1,524	236	16,322
Apr '23	3,531	4,100	176	0	1,174	781	1,447	311	2,179	82	65	1,922	125	15,893
May '23	2,373	3,800	114	69	956	695	1,034	201	1,587	57	59	1,459	233	12,637
Jun '23	2,040	4,200	145	62	887	409	1,116	186	1,714	65	63	1,064	176	12,127
Average	2,791	4,375	155	92	1,112	685	1,255	252	1,863	80	65	1,457	190	14,371

Main Plant Facility KWH Usage



7.0 MAINTENANCE

7.1 WORK ORDER OVERVIEW

WO Type	Total This Month	Total This Year
Preventative Maintenance	175	175
Corrective Maintenance	25	25
Emergency Call Outs Total	3	3

7.2 EMERGENCY CALL OUTS FOR THE MONTH

Type	Total this Month	Total this Year
Sewer Back Up / Collection System	0	0
Pump Station	1	1
Plant	2	2
Odor	0	0
Power Outages	0	0
Total:	3	3

7.3 INSPECTIONS / ANNUAL PMS COMPLETED DURING THE MONTH

1. All pump station alarms checked
2. Spruce probe cleaned weekly
3. Eye wash inspections completed weekly
4. Fire extinguisher inspections completed monthly
5. Depedable Petroleum monthly UST Inspection

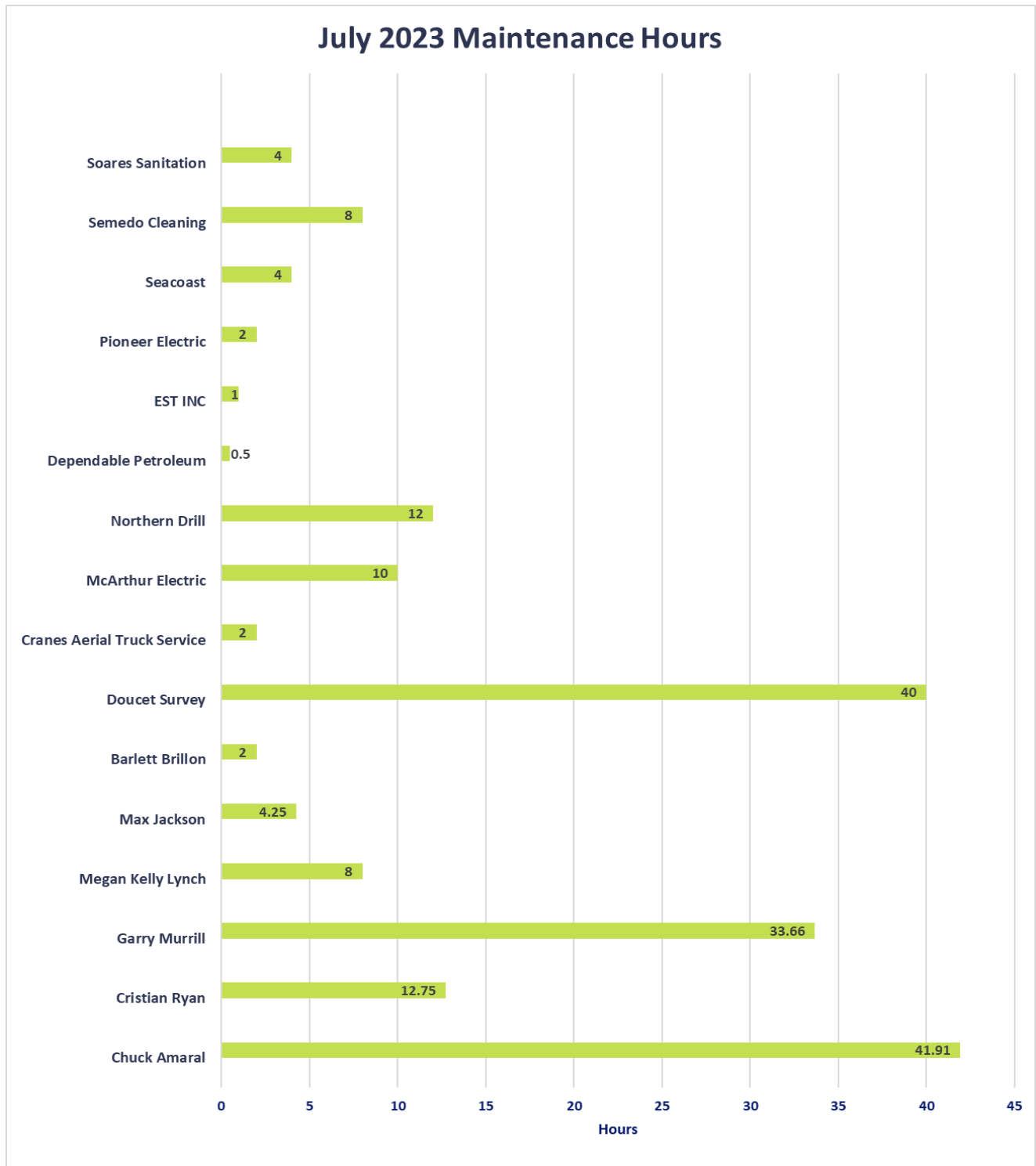
7.4 COLLECTION SYSTEM AND IPP ASSISTANCE PERFORMED BY VEOLIA

COLLECTION SYSTEM ASSITANCE:

Type	Total This Month	Total This Year
Sewer Inspection / Tie-Ins	0	0
Sewer Location mark Outs	169	169
Sewer Back Up	0	0

7.5 WORK ORDER STATISTICS

There were **186.07** total reported maintenance hours during the month. Of this total, outside contractors accounted for 46% with **85.5** hours recorded.



8.0 FINANCIAL ACCOUNTING- REPAIR / MAINTENANCE (JULY '23 – JUNE '24)

Item	Budget	Spent Month	Spent Year	Remaining
R & M (Project)	\$100,000.00	\$8,655.59	\$8,655.59	\$91,344.41

8.1 SIGNIFICANT R&M PURCHASES

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

9.0 ATTACHED REPORTS

- Discharge Monitoring Report
- HACH Wims Data Reports
- Cumulative and Monthly Violation Reports
- Financial Reports
- Solids Removal Summary