

Monthly Operating Report

APRIL 2023



Rockland, MA WWTP





May 15, 2023

Mr. Chuck Heshion

Rockland Sewer Commission Chairman

587 Rear Summer Street

Rockland, MA 02370

RE: Rockland Wastewater Facility

Monthly Report—April 2023

Dear Mr. Heshion,

I have enclosed April'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

APRIL 2023 MONTHLY OPERATING REPORT

1. SUMMARY:

The facility will be reporting **1** exceedance for the month of April 2023

- 1) There was **0** lost time / first aid injuries throughout the month
- 2) The facility treated a total of **77,570,000** Million Gallons. The average daily flow was **2.586** MGD
- 3) The total rainfall for this reporting period was **3.72"**
- 4) I&I Work is ongoing
- 5) **152** work orders were closed in February, with **6** as corrective maintenance work order and 3 were emergency call outs
- 6) Massachusetts general wastewater permit began April 1st.

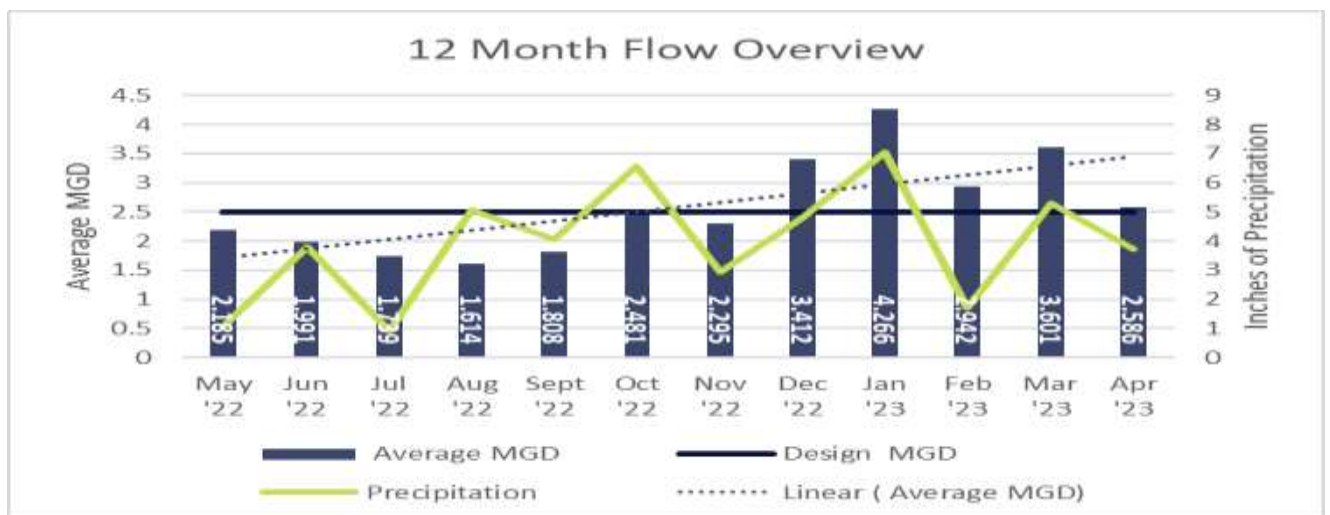
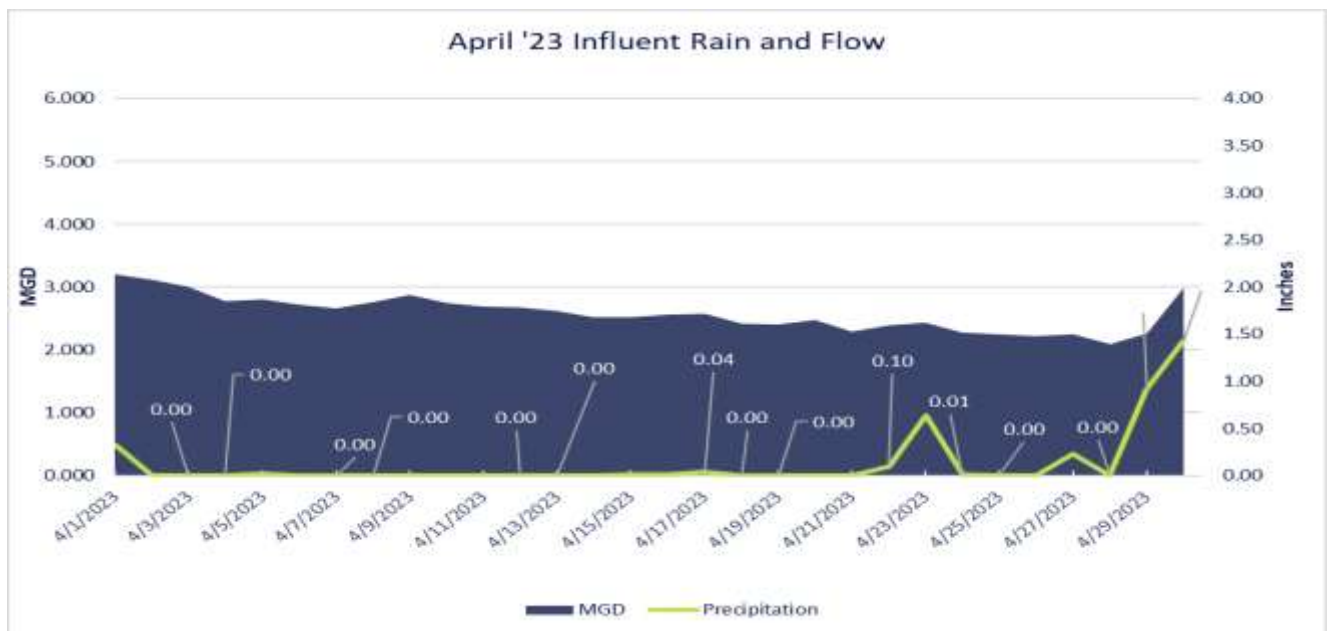
2. STAFFING:

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 **77,570,000** MG during the month. The daily average flow was **2.586** MGD. This was **0.179** MGD less than the previous April monthly average, which was recorded at **2.765** MGD. The highest daily flow was recorded on the April 1st as **3.210** MGD. The lowest daily flow was recorded on April 28th as **2.090** MGD.
- The highest **peak** flow was recorded on April 1st as **4.020** MGD. The lowest instantaneous flow was **0.760** MGD, recorded on April 26th.
- A total of **3.72"** of precipitation was received at the facility. The highest single day precipitation total was recorded on April 30th as **1.43"**
- The coldest day was April 3rd at **23°F**. The warmest day was April 13th at **88°F**.



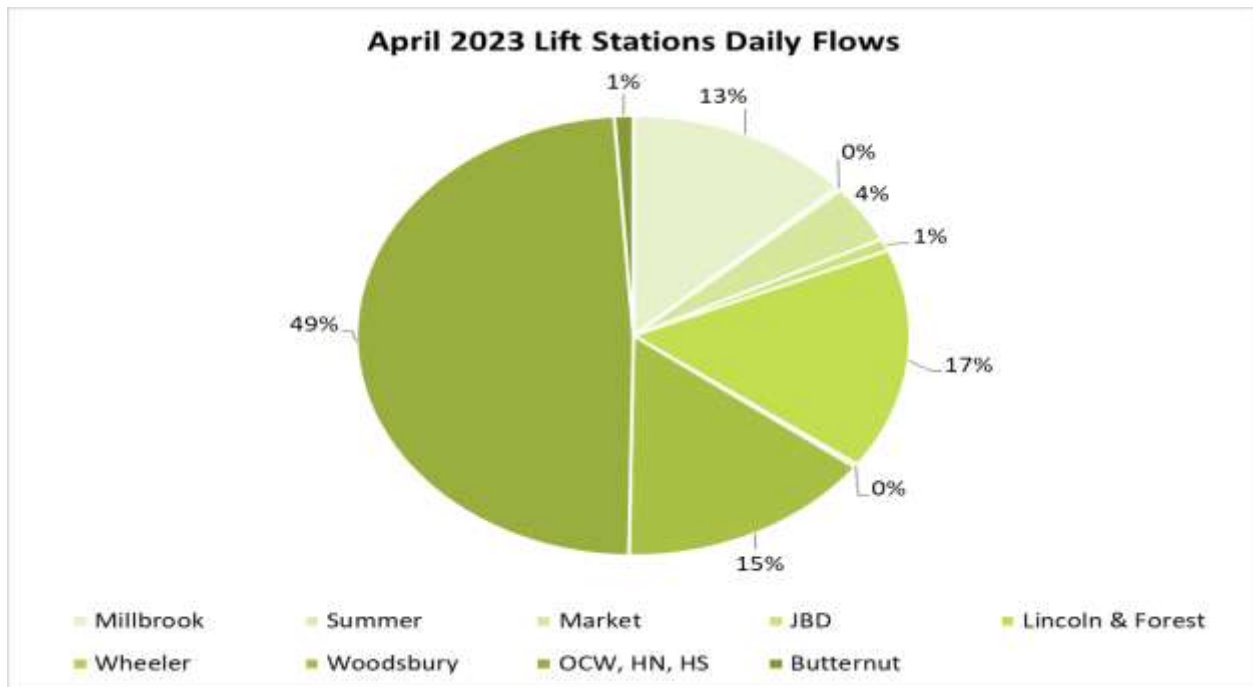
3.1 INFLUENT BOD AND TSS LOADING

ROCKLAND FLOW AND LOADINGS TRACKING						
Month/Yr	Inf. Flow	Inf BOD	Inf. TSS	Inf. Flow Mov. Avg.	Inf. BOD Mov. Avg.	Inf. TSS Mov. Avg.
	MGD	LBS	LBS	MGD	LBS	LBS
May '22	2.185	3,809	4,229	2.988	3,326	3,909
Jun'22	1.991	4,343	4,006	2.952	3,365	3,975
Jul'22	1.739	3,316	3,546	2.810	3,446	3,990
Aug'22	1.614	3,313	3,758	2.702	3,469	3,969
Sep'22	1.808	3,716	3,838	2.597	3,581	3,880
Oct'22	2.481	3,323	4,180	2.538	3,608	3,904
Nov'22	2.295	4,948	3,227	2.469	3,832	3,881
Dec'22	3.412	4,234	3,802	2.544	3,885	3,890
Jan '23	4.266	4,250	3,763	2.670	2,913	3,897
Feb '23	2.942	3,408	2,970	2.577	3,871	3,819
Mar '23	3.601	3,539	3,250	2.592	3,842	3,718
Apr '23	2.586	4,495	3,386	2.577	3,891	3,663

3.2 LIFT STATION FLOWS

The lift stations accounted for **9,814,140** gallons throughout the month, **13%** 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.

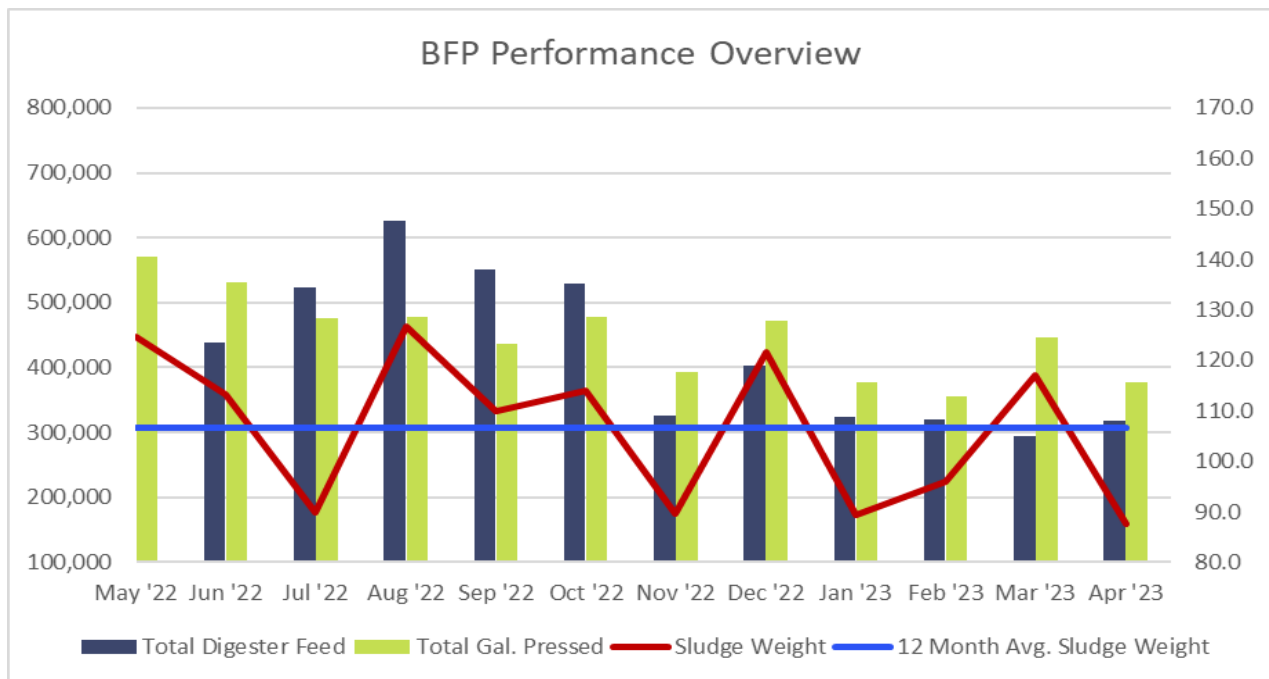
Total Flows for April 2023		
Station	Total Gallons	
Millbrook	1,293,840	
Summer	27,840	
Market	421,500	
John Burke	89,040	
Lincoln, Forest	1,600,200	
Wheeler	24,120	
Woodsbury	1,476,000	
OCW, HN, HS	4,773,600	
Butternut	108,000	
Total:	11,263,080	



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	
May '22	31,738	937	15,677	2,655	2,400	39,155	726	45,348	53,110	142,142	155,380	Old System
Jun '22	33,073	994	15,640	1,872	2,520	41,300	828	45,060	53,900	144,540	159,480	
Jul '22	27,975	1,223	14,318	1,644	2,110	36,581	586	32,865	51,755	73,335	273,484	
Aug '22	31,459	1,076	15,581	2,145	2,439	40,442	703	38,265	44,100	134,843	113,574	3,475
Sep '22	29,628	976	15,400	1,816	2,389	45,990	732	45,660	42,350	134,460	141,480	2,040
Oct '22	38,114	1,092	14,758	1,386	2,419	49,181	743	43,897	46,810	149,807	273,484	3,870
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
Average	38,320	1,006	14,902	2,489	2,677	48,160	1,120	46,914	53,394	144,562	189,381	3,403

4.0 SOLIDS HANDLING

The BFP was operated a total of **123.30** hours this month and a total of **377,424** gallons were processed producing **87.484** Wet Tons of sludge that was hauled from the facility. The average BFP feed percent solids were **2.21%** and the BFP Cake average percent solids were **20.87%**. 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
May '22	174.3	468,083	571,658	154.1	124.7	1.89	21.14	8.00	
June '22	151.3	439,371	530,756	132.9	113.3	2.26	21.92	6.00	
July '22	137.5	524,233	475,614	119.6	89.8	2.04	22.05	5.00	
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	
Annual Total	1,725	5,122,358	5,392,681	1,475	1,280	*****	*****	74	0.00
Avg.	144	426,863	449,390	123	107	2.01	21.37	6.2	*****

5.0 ENVIRONMENTAL COMPLIANCE

5.1 REGULATORY REPORTING

1. The EPA and MADEP April NETDMR was submitted on the CDX website on 5/12/2023

5.2 NPDES COMPLIANCE

The facility will be reporting (1) exceedance(s) for the month of April 2023

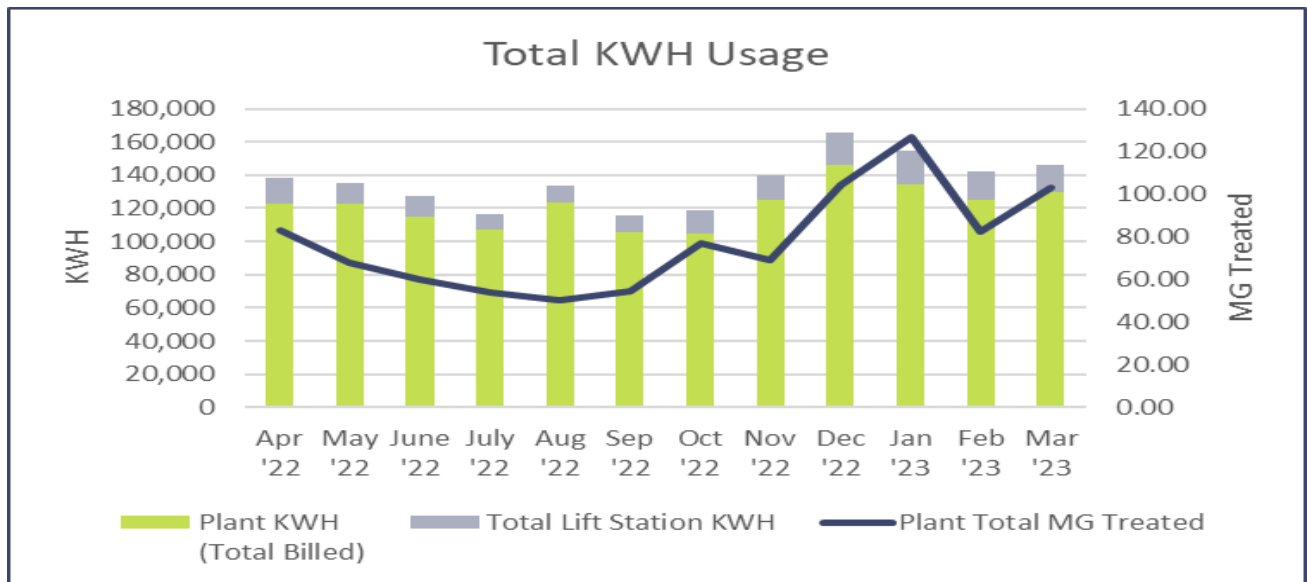
Date	Plant Flow	BOD	BOD	TSS	TSS	NH3	Total P	Ph	E. Coli Coliform	Aluminum	Copper	Dissolved Oxygen	Limits	Monthly Avg.	Weekly Avg.	Daily Max
	MGD	Mg/L	Lbs./Day	Mg/L	Lbs./Day	Mg/L	Mg/L	Ph	CFU/100 ml	Ug/L	Ug/L	Mg/L	BOD			
Sat, Apr 1	3.210							7.19					Oct. 1 - April 30	20 Mg/L 417 lbs/day	20 Mg/L 417 lbs/Day	30 Mg/l 626 lbs/Day
Sun, Apr 2	3.120							7.27								
Mon, Apr 3	3.000							7.38					May1 - Sept. 30	6 Mg/L 125 lbs/Day	6 Mg/L 125 lbs/Day	10Mg/L 209 lbs/day
Tue, Apr 4	2.770	10.0	231	11.0	254	2.40	0.07	7.31	3	5	4.0					
Wed, Apr 5	2.810							7.33					TSS			
Thur, Apr 6	2.720							7.03					Oct. 1 - April 30	20 Mg/L 417 lbs/Day	20 Mg/L 417 lbs/Day	30 Mg/l 626 lbs/Day
Fri, Apr 7	2.660					1.00		7.33								
Sat, Apr 8	2.760							7.20					May1 - Sept. 30	10 Mg/L 209 lbs/Day	10 Mg/L 209 lbs/Day	15Mg/L 313 lbs/day
Sun, Apr 9	2.870							7.23								
Mon, Apr 10	2.740							7.41					NH3			
Tue, Apr 11	2.690	5.0	112	5.0	112	0.20	0.09	7.42	9				Oct.1 - Mar. 31	3.3 Mg/L	3.3 Mg/l	5.7 Mg/L
Wed, Apr 12	2.680							7.38								
Thur, Apr 13	2.620							7.36					Apr. 1 - May 31	2.5 Mg/L	2.5 Mg/l	5.7 Mg/l
Fri, Apr 14	2.520							7.12								
Sat, Apr 15	2.520							7.23					June1 - Sept. 30	1.0 Mg/L	1.0 Mg/L	1.5 Mg/L
Sun, Apr 16	2.560							7.15								
Mon, Apr 17	2.570							7.30					Total Phpsphorus			
Tue, Apr 18	2.420	4.0	81	8.0	161	0.10	0.13	7.34	29				Apr.1 - Oct.31	0.2 Mg/L	*****	*****
Wed, Apr 19	2.400							7.19								
Thur, Apr 20	2.480							7.16					Nov. 1 - Mar. 31	1.0 Mg/L	*****	*****
Fri, Apr 21	2.290							7.10								
Sat, Apr 22	2.390							7.05					Ph			
Sun, Apr 23	2.440							6.98					6.5 - 8.3			
Mon, Apr 24	2.270							7.09					E. Coli			
Tue, Apr 25	2.250	7.0	131	2.0	38	0.30	0.15	7.35	19				*****	126 CFU/100ml	*****	409 CFU/100ml
Wed, Apr 26	2.220							7.16								
Thur, Apr 27	2.250							7.04					Aluminum			
Fri, Apr 28	2.090							7.44					*****	88 ug/l	*****	*****
Sat, Apr 29	2.260							7.44					Copper			
Sun, Apr 30	2.990							7.47								
Daily Max	3.210	10.00	231.02	11.00	254.12	2.40	0.15	7.47	29	*****	*****	*****	May 1 - Sept. 30	> 7.4 mg/L		
Daily Min.	2.090	*****	*****	*****	*****	*****	*****	6.98	*****	*****	*****		Plant Flow			
Month Avg.	2.586	6.50	138.75	6.50	141.25	0.80	0.11	7.25	15	5	4.0	*****	2.5 MGD			

6.0 ENERGY CONSUMPTION

6.1 ELECTRICAL OVERVIEW

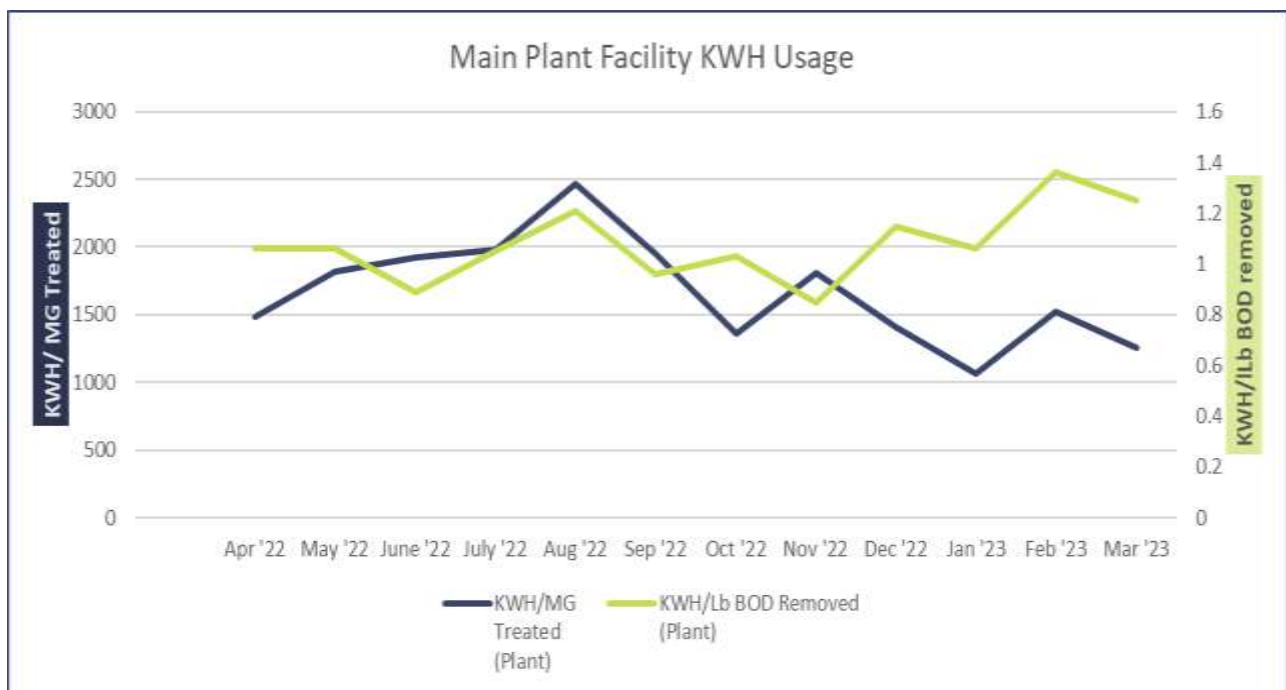
The department used a total of **145,922 KWH** for the month of April 2023. Of this total, the lift stations accounted for **12.6%**, using **16,322 KWH**. The Main Plant accounted for the remaining **129,600 KWH**. The KWH/ MG treated was **1,670** for the month, which is **80%** higher than the previous 12-month average of **1,342 KWH/MG**. The KWH/Lb. BOD Removed was **1.25 KWH/Lb.** for the month, which is **9%** lower than the previous 12-month average of **1.32 KWH/Lb.**

Monthly Lift Station KWH														
Month	Hingham North	Hingham South	Spruce	Butternut	Old Country Way	Market	Woodsbury	Lincoln	Forest	Wheeler	Summer	Milbrook	John Burke	Total
Apr '22	3,149	5,000	215	161	1,332	964	1,332	280	1,809	72	69	1,562	185	15,055
May '22	2,429	4,100	111	58	930	667	930	176	1,418	57	61	1,256	116	12,380
June '22	2,540	4,300	109	63	853	347	892	168	1,371	59	74	1,234	113	12,123
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
Average	2,805	4,483	155	104	1,120	693	1,218	246	1,790	79	66	1,424	180	14,280



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
Apr '22	2.77	82.96	123,000	1,483	115,947	1.06	198	204	15,055	138,055
May '22	2.19	67.74	123,000	1,816	116,352	1.06	183	198	12,380	135,380
June '22	1.99	59.74	114,900	1,923	129,049	0.89	189	201	12,123	127,023
July '22	1.74	53.9	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
Average	2.55	77.57	121,850	1,670	114,482	1.08	202	215	14,280	136,130



7.0 MAINTENANCE

7.1 WORK ORDER OVERVIEW

WO Type	Total This Month	Total This Year
Preventative Maintenance	176	672
Corrective Maintenance	9	58
Emergency Call Outs Total	7	22

7.2 SIGNIFICANT CORRECTIVE WORK ORDERS FOR THE MONTH

CM Description	WO #
Soares pumped out Hingham North & Old Country Way	23550 & 23552
New mixer put in at Hingham North Station	23548
Apollo Safety Replaced RKI in Digester Building	23722

7.3 EMERGENCY CALL OUTS FOR THE MONTH

Type	Total this Month	Total this Year
Sewer Back Up / Collection System	0	7
Pump Station	0	6
Plant	2	7
Odor	0	0
Power Outages	0	1
Total:	2	21

7.4 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

7.5 COLLECTION SYSTEM AND IPP ASSISTANCE PERFORMED BY VEOLIA

COLLECTION SYSTEM ASSISTANCE:

Type	Total This Month	Total This Year
Sewer Inspection / Tie-Ins	0	0
Sewer Location mark Outs	69	205
Sewer Back Up	0	5

7.6 WORK ORDER STATISTICS

There were **128.32** total reported maintenance hours during the month. Of this total, outside contractors accounted for 46% with **59.5** hours recorded.

