

Monthly Operating Report

DECEMBER 2022



Rockland, MA WWTP





January 13, 2023

Mr. Chuck Heshion

Rockland Sewer Commission Chairman

587 Rear Summer Street

Rockland, MA 02370

RE: Rockland Wastewater Facility

Monthly Report—December 2022

Dear Mr. Heshion,

I have enclosed December's 2022 Monthly Operating Report (MOR) for the Veolia Operations and Maintenance contract.

Please contact me soon as possible should you have any questions regarding this report.

Sincerely,

Rick Kotouch

Veolia Project Manager

CC:

Daniel Duross

Sherry Vallie

DECEMBER 2022 MONTHLY OPERATING REPORT

1. SUMMARY:

The facility will be reporting **1** exceedance for the month of December 2022

- 1) There was **0** lost time / first aid injuries throughout the month
- 2) The facility treated a total of **105,763,000** Million Gallons. The average daily flow was **3.412** MGD
- 3) The total rainfall for this reporting period was **4.81"**
- 4) I&I Work is ongoing
- 5) **202** work orders were closed in December, with **26** as corrective maintenance work order and **4** were emergency call outs
- 6) Massachusetts general wastewater permit is currently on hold.

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			

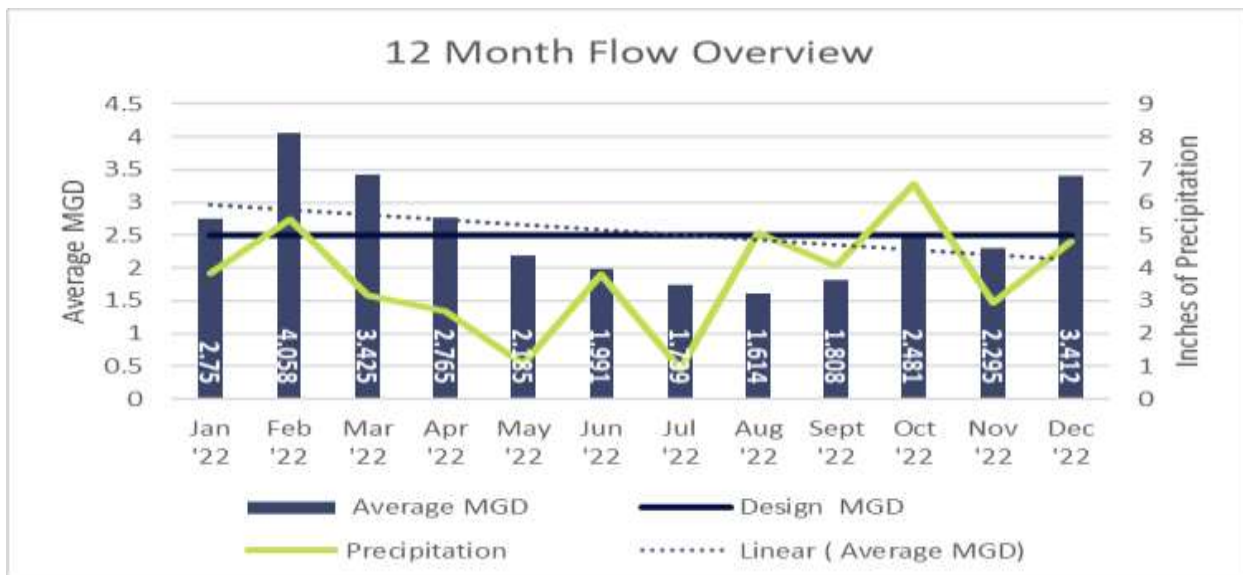
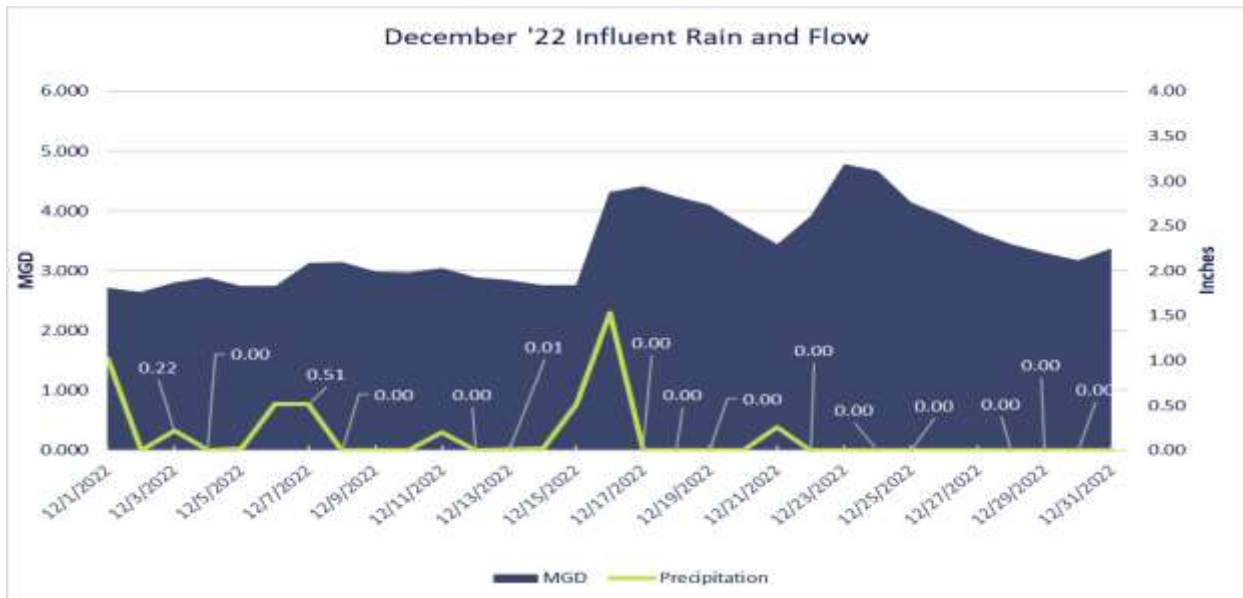
3. EMPLOYEE HEALTH AND SAFETY:

Throughout the COVID-19 (Coronavirus) pandemic in an attempt to continue to serve the Town of Rockland with reliable operations and protect the staff of the Rockland team, Veolia has implemented numerous procedures to ensure continuity of the operations. As the COVID-19 Delta variant and Omicron rates decrease, Veolia at the Rockland facility has downgraded to a Threat Level 0 guideline as follows: We ask all essential personnel, contractor's to stay home if they have Covid like symptoms or have been exposed to someone having Covid.

4 FLOWS AND LOADINGS:

4.0 FLOWS, PRECIPITATION, AND WEATHER

- The facility treated a total of 105,763,000 MG during the month. The daily average flow was **3.412** MGD. This was **0.893** MGD more than the previous December monthly average, which was recorded at **2.519** MGD. The highest daily flow was recorded on December 23rd as **4.789** MGD. The lowest daily flow was recorded on December 2nd as **2.640** MGD.
- The highest **peak** flow was recorded on December 23rd as **5.620** MGD. The lowest instantaneous flow was **0.740** MGD, recorded on December 28th.
- A total of **4.81"** of precipitation was received at the facility. The highest single day precipitation total was recorded on December 16th as **1.53"**
- The coldest day was November 21st at **10°F**. The warmest day was December 30th at **62°F**.



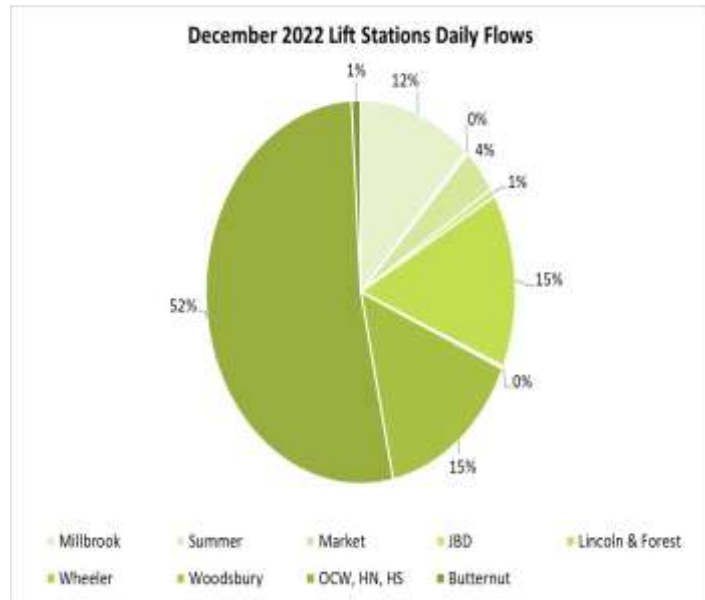
4.1 INFLUENT BOD AND TSS LOADING

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
Jan '22	2.75	3,909	3,676	2.931	3,103	3,774
Feb '22	4.058	3,910	3,913	2.993	3,158	3,755
Mar '22	3.425	3,887	4,456	3.055	3,240	3,855
Apr '22	2.765	3,907	4,051	3.024	3,299	3,891
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

4.2 LIFT STATION FLOWS

The lift stations accounted for **11,660,100** gallons throughout the month, **11%** 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.

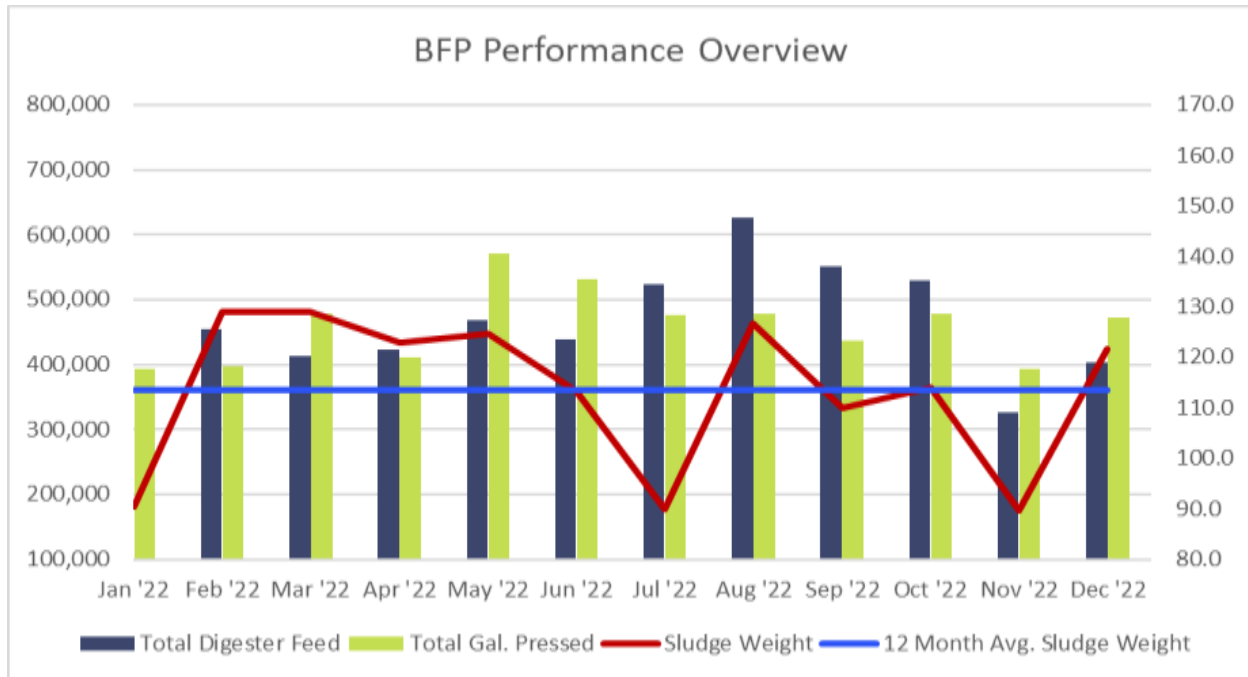
Total Flows for December 2022		
Station	Total Gallons	
Millbrook	1,422,360	
Summer	26,400	
Market	515,999	
John Burke	78,720	
Lincoln, Forest	1,690,500	
Wheeler	24,660	
Woodsbury	1,659,600	
OCW, HN, HS	6,125,760	
Butternut	116,100	
Total:	11,660,100	



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	
Jan '22	31,738	937	15,677	2,655	2,400	39,155	726	45,348	53,110	144,540	155,380	Old System
Feb '22	33,156	920	16,150	2,456	2,600	42,980	834	46,620	57,960	151,920	172,800	
Mar '22	31,459	929	15,677	1,881	3,232	42,339	703	49,355	59,206	157,994	182,555	
Apr '22	33,156	920	16,150	2,456	2,600	42,980	834	46,620	57,960	151,920	172,800	
May '22	31,738	937	15,677	2,655	2,400	39,155	726	45,348	53,110	142,142	155,380	
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
Average	33,655	1,000	15,352	2,107	2,512	43,549	760	44,796	52,282	141,468	180,499	3,137

5.0 SOLIDS HANDLING

The BFP was operated a total of **150.5** hours this month and a total of **472,903** gallons were processed producing **121.6** Wet Tons of sludge that was hauled from the facility. The average BFP feed percent solids were **1.73%** and the BFP Cake average percent solids were **20.27%**. 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
Jan '22	141.3	433,648	392,237	101.8	90.5	1.86	18.19	6.00	
Feb '22	140.8	453,426	396,361	112.0	128.9	2.07	18.64	6.00	
Mar '22	533.0	412,533	477,919	136.1	128.9	1.79	18.32	7.00	
Apr '22	133.8	422,314	410,793	123.4	123.0	2.66	19.69	6.00	
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	
Annual Total	2,140	5,587,505	5,514,369	1,479	1,361	****	****	75	0.00
Avg.	178	465,625	459,531	123	113	2.11	21.12	6.3	****

6.0 ENVIRONMENTAL COMPLIANCE

6.1 REGULATORY REPORTING

1. The EPA and MADEP December NETDMR was submitted on the CDX website on 1/11/2023

6.2 NPDES COMPLIANCE

The facility will be reporting (1) exceedance(s) for the month of December 2022

Date	Plant Flow	BOD	BOD	TSS	TSS	NH3	Total P	Ph	Fecal 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				
Thur Dec 1	2.720	2.8	64	6.7	152	0.77	0.31	7.37					BOD			
Fri Dec 2	2.640							7.38					Oct. 1 - April 30	20 Mg/L 417 lbs/day	20 Mg/L 417 lbs/Day	30 Mg/l 626 lbs/Day
Sat Dec 3	2.800							7.36					May 1 - Sept. 30	6 Mg/L 125 lbs/Day	6 Mg/L 125 lbs/Day	10Mg/L 209 lbs/day
Sun Dec 4	2.890							7.32	38				TSS			
Mon Dec 5	2.750	2.2	50	2.8	64	0.33	0.29	7.39	196	12	4.5		Oct. 1 - April 30	20 Mg/L 417 lbs/Day	20 Mg/L 417 lbs/Day	30 Mg/l 626 lbs/Day
Tues Dec 6	2.750							7.29	54				May 1 - Sept. 30	10 Mg/L 209 lbs/Day	10 Mg/L 209 lbs/Day	15Mg/L 313 lbs/day
Wed Dec 7	3.130	2.8	73	5.7	149	0.10	0.18	7.38					Oct.1 - Mar. 31	3.3 Mg/L	3.3 Mg/l	5.7 Mg/L
Thur Dec 8	3.140							7.25					Apr. 1 - May 31	2.5 Mg/L	2.5 Mg/l	5.7 Mg/l
Fri Dec 9	2.990							7.27					June1 - Sept. 30	1.0 Mg/L	1.0 Mg/L	1.5 Mg/L
Sat Dec 10	2.980							7.28					NH3			
Sun Dec 11	3.050							7.22	156				Oct.1 - Oct.31	0.2 Mg/L	*****	*****
Mon Dec 12	2.890							7.30	81				Nov. 1 - Mar. 31	1.0 Mg/L	*****	*****
Tues Dec 13	2.850	5.8	138	6.0	143	1.00	0.35	7.28	16				Total Phosphorus			
Wed Dec 14	2.760							7.18					Apr. 1 - Oct.31	0.2 Mg/L	*****	*****
Thur Dec 15	2.760	11.0	253	5.7	131	3.60	0.25	7.12					Nov. 1 - Mar. 31	1.0 Mg/L	*****	*****
Fri Dec 16	4.320							7.06					Ph			
Sat Dec 17	4.417							7.20					6.5 - 8.3			
Sun Dec 18	4.250							7.20	38				Fecal			
Mon Dec 19	4.098							7.23	32				*****	200 CFU/100ml	*****	400 CFU/100ml
Tues Dec 20	3.760	8.1	254	11.0	345	1.20	0.37	7.26	102				Aluminum			
Wed Dec 21	3.450							7.18					*****	88 ug/l	*****	*****
Thur Dec 22	3.920	4.2	137	4.7	154	0.87	0.42	7.25					Copper			
Fri Dec 23	4.789							7.18								
Sat Dec 24	4.669							7.10								
Sun Dec 25	4.140							7.22	64							
Mon Dec 26	3.910							7.02	47							
Tues Dec 27	3.640	2.5	76	4.7	143	0.10	0.34	7.02	81							
Wed Dec 28	3.440							7.54								
Thur Dec 29	3.310	4.0	110	2.00	55	0.28	0.30	7.60								
Fri Dec 30	3.170							7.23								
Sat Dec 31	3.380							7.41								
Daily Max	4.789	11.00	254.00	11.00	344.94	3.60	0.42	7.60	196.00	*****	*****	*****	May 1 - Sept. 30	> 7.4 mg/L		
Daily Min.	2.640	*****	*****	*****	*****	*****	*****	7.02	*****	*****	*****	*****	Plant Flow			
Month Avg.	3.412	4.82	128.33	5.48	148.44	0.92	0.92	7.26	75.417	12	4.5	*****	2.5 MGD			

7.0 ENERGY CONSUMPTION

7.1 ELECTRICAL OVERVIEW

The department used a total of **155,921 KWH** for the month of December 2022. Of this total, the lift stations accounted for **14%**, using **19,421 KWH**. The Main Plant accounted for the remaining **136,500 KWH**.

The KWH/ MG treated was **1,310** for the month, which is **3%** lower than the previous 12-month average of **1,338 KWH/MG**. The KWH/Lb. BOD Removed was **1.07 KWH/Lb.** for the month, which is **25%** lower than the previous 12-month average of **1.43 KWH/Lb.**

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
Jan '22	2.75	85.26	139,500	1,636	118,805	1.17	225	264	15,850	136,450
Feb '22	4.06	113.62	142,500	1,254	116,417	1.22	234	261	22,069	161,569
Mar '22	3.43	106.19	122,400	1,153	117,284	1.04	222	222	19,576	162,076
Apr '22	2.77	82.96	123,000	1,483	115,947	1.06	198	204	16,322	138,722
May '22	2.19	67.74	123,000	1,816	116,352	1.06	183	198	15,055	138,055
June '22	1.99	59.74	114,900	1,923	129,049	0.89	189	201	12,123	135,380
July '22	1.74	53.9	106,800	1,981	101,883	1.05	198	216	12,123	127,023
Aug '22	1.61	50.02	123,000	2,465	101,859	1.21	177	195	9,326	116,126
Sep '22	1.81	54.23	105,900	1,953	110,510	0.96	186	210	10,344	133,644
Oct '22	2.48	76.91	117,300	1,525	101,712	1.15	195	201	9,877	115,777
Nov '22	2.30	68.86	113,400	1,647	146,152	0.78	184	213	15,469	128,869
Dec '22	3.36	104.19	136,500	1,310	127,264	1.07	236	254	19,421	155,921
Average	2.54	76.97	122,350	1,679	116,936	1.06	202	220	14,796	137,468

Monthly Lift Station KWH														
Month	Hingham North	Hingham South	Spruce	Butternut	Old Country Way	Market	Woodsbury	Lincoln	Forest	Wheeler	Summer	Milbrook	John Burke	Total
Jan '22	3,246	4,600	187	554	1,270	854	1,264	309	1,742	56	58	1,501	209	15,850
Feb '22	5,072	6,800	230	438	1,573	1,185	1,605	373	2,434	59	68	1,989	243	22,069
Mar '22	3,783	6,200	194	515	1,647	946	1,683	319	2,259	55	61	1,717	197	19,576
Apr '22	2,995	5,100	246	434	1,260	851	1,353	283	1,915	58	67	1,524	236	16,322
May '22	3,149	5,000	215	161	257	964	1,332	280	1,809	72	69	1,562	185	15,055
June '22	2,429	4,100	111	58	1,001	667	930	176	1,418	57	61	1,256	116	12,380
July '22	2,540	4,300	109	63	863	347	892	168	1,371	59	74	1,234	113	12,123
Aug '22	2,119	2,900	110	49	741	337	685	134	1	49	69	832	89	9,326
Sept '22	2,293	3,200	102	54	871	334	820	153	1,337	54	68	967	91	10,344
Oct '22	2,094	2,900	110	48	807	348	928	172	1,269	48	56	1,015	82	9,877
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
Average	3,017	4,650	166	210	1,075	719	1,214	252	1,459	58	65	1,446	169	14,818

8.0 MAINTENANCE

8.1 WORK ORDER OVERVIEW

WO Type	Total This Month	Total This Year
Preventative Maintenance	202	2126
Corrective Maintenance	26	146
Emergency Call Outs Total	4	46

8.2 SIGNIFICANT CORRECTIVE WORK ORDERS FOR THE MONTH

CM Description	WO #
Wilkinson Electrical working on Digester boiler replacement	23057
Pioneer Electric installed new pump at Lincoln Station	23058
Wilkinson Electrical removed asbestos in boiler building	23059
Wilkinson Electrical removed asbestos in boiler building	23060
Over Head Doors troubleshoot maintenance garage door	23069
Wilkinson Electrical working on Digester boiler replacement	23070
Pioneer Electric troubleshoot OCW for pump 2 failure	23071
EIS replaced the relay at OCW	23072
Wilkinson Electrical working on Digester boiler replacement	23073
N.E. Environmental Calibrated the Effluent Flow meter	23074
N.E. Generator installed rebuilt water pump for the plant generator	23075
N.E. Generator troubleshoot Millbrook on High Engine Temp	23076
Wilkinson Electrical working on Digester boiler replacement	23077
EIS replaced the box that the mechanical relay goes into	23078
Apollo Safety inspected all the gas meters at the plant	23151
Plymouth County Fire Extinguishers Annual Inspection of extinguishers	20438
Westin Sampson Back Flow Preventer Inspection	19959 – 19970, & 20439
Dependable Petroleum – Digester Boiler / Plant Generator Oil Inspection	23152 & 23153

8.3 EMERGENCY CALL OUTS FOR THE MONTH

Type	Total this Month	Total this Year
Sewer Back Up / Collection System	3	16
Pump Station	1	14
Plant	2	6
Odor	0	0
Power Outages	1	13
Total:	7	49

8.4 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

8.5 COLLECTION SYSTEM AND IPP ASSISTANCE PERFORMED BY VEOLIA

COLLECTION SYSTEM ASSISTANCE:

Type	Total This Month	Total This Year
Sewer Inspection / Tie-Ins	0	1
Sewer Location mark Outs	12	326
Sewer Back Up	3	16

8.6 WORK ORDER STATISTICS

There were **378** total reported maintenance hours during the month. Of this total, outside contractors accounted for 46% with **174** hours recorded.

