

December 2021

Monthly Operating Report





January 14, 2022

Mr. David P. Taylor
Rockland Interim Sewer Superintendent
587 Rear Summer Street
Rockland, MA 02370

RE: Rockland Wastewater Facility
Monthly Report—December 2021

Dear Mr. Taylor,

Please see the enclosed December 2021 Monthly Operating Report (MOR) for the Suez Operations and Maintenance contract.

Please contact me at your earliest convenience should you have any questions regarding this report.

Sincerely,

Rick Kotouch
SUEZ Project Manager

CC: Charles Heshion
Dan Duross
Douglas Cope

DECEMBER 2021 MONTHLY OPERATING REPORT

1. SUMMARY:

- 1) The facility will be reporting **0** exceedances for the month of December 2021.
- 2) There were no lost time / first aid injuries throughout the month
- 3) The facility treated a total of **78.076** Million Gallons. The average daily flow was **2.519** MGD. The 2021 Annual Average Flow was **2.94** MGD.
- 4) The total rainfall for this reporting period was **1.94"**. The 2021 Total Precipitation was **58.8"**
- 5) I&I Work is ongoing
- 6) **208** work orders were closed in December, with **15** as corrective maintenance work orders, **4** of the 15 were emergency call outs, while **2** were related to the collection system.
- 7) New permit still pending from EPA

2. STAFFING:

Current Employee Licenses as of 11/17/2021

Employee	Title	Hoisting		Wastewater			NEWEA Collections			NEWEA Laboratory
		1C Forklift	1B Boom Truck & Forklift	4M	5C	7C	I	II	IV	I
Rick Kotouch	Project Manager					X			X	
Edwin McAuliffe	Asst. Project Manager		X			X		X		X
Steven Butts	Lab Technician					X				X
Chuck Amaral	Maintenance Foreman		X		X			X		
Megan Kelly Lynch	Operator	X				X				
Shaun Chaponis (Part Time Weekends)	Operator				X		X			
Garry Murrill	Operator				X			X		
Dan Sullivan-Xenos	Operator				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, SUEZ has implemented numerous procedures to ensure continuity of the operations. As the COVID-19 Delta variant continues and the new Omicron, SUEZ at the Rockland facility has upgraded to a Threat Level 4 guideline as follows:

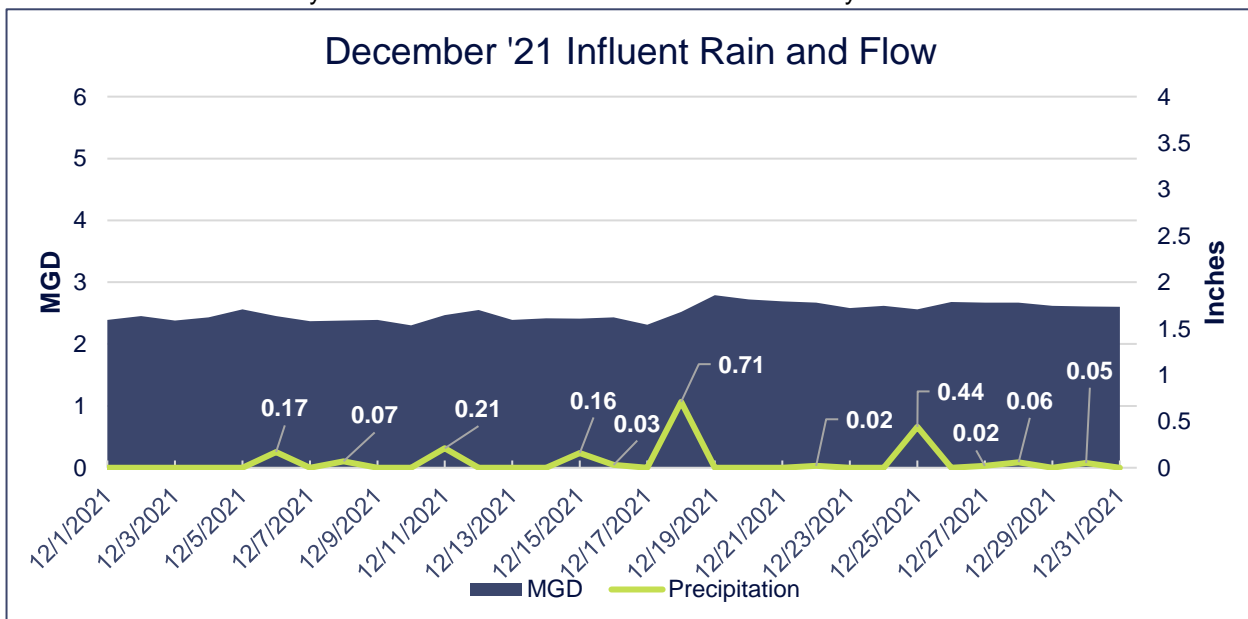
All Suez employees, visitors, and contractors will use face covering indoors except when at their assigned seat or when eating or drinking. All unvaccinated employees must wear a KN/N-95 respirator based on a risk assessment.

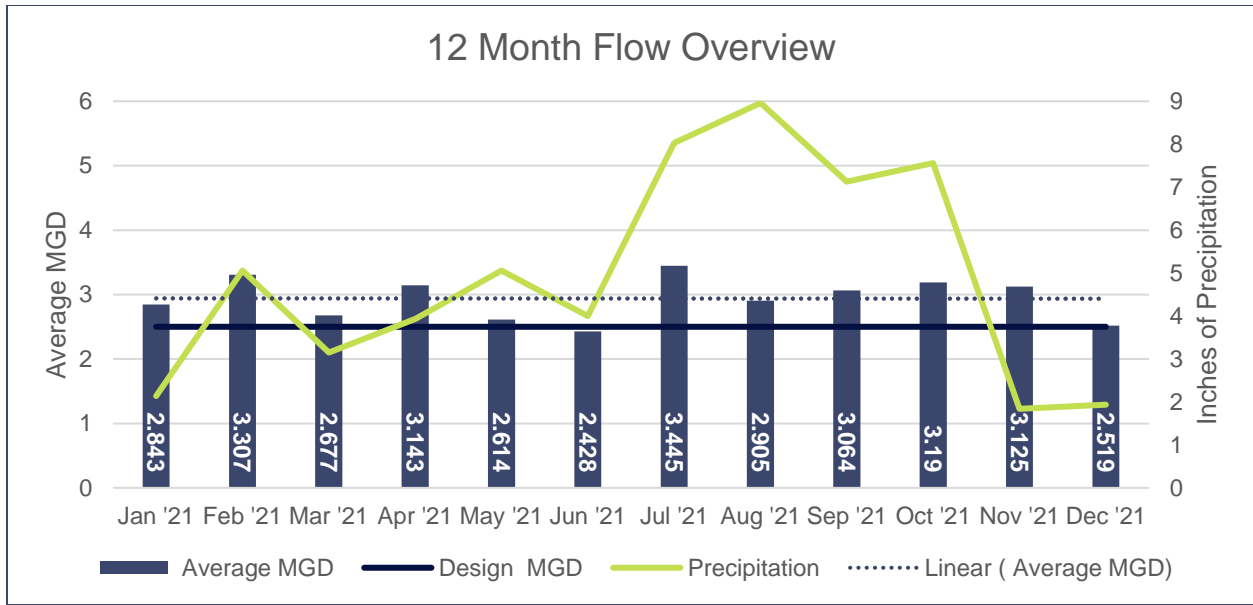
No Visitors or Contractors are allowed unless it is for essential services. All essential personnel are required to be screened before entering the premises and meet the Covid visitor guidelines.

4 FOWS AND LOADINGS:

4.0 FLOWS, PRECIPITATION, AND WEATHER

- The facility treated a total of **78.076** MGD during the month. The daily average flow was **2.519** MGD. This was **0.93** MGD less than the previous December monthly average, which was recorded at **3.444** MGD. The highest **peak** flow was recorded on December 19 as **3.52** MGD. The lowest instantaneous flow was **0.89** MGD, recorded December 10.
- The highest daily flow was recorded on December 19 as **2.79** MGD. The lowest daily flow was recorded on December 10 as **2.30** MGD.
- A total of **1.94"** of precipitation was received at the facility. The highest single day precipitation total was recorded on December 18 as **0.71"**
- The coldest day was December 20 at **20°F**. The warmest day was December 6 at **61°F**.





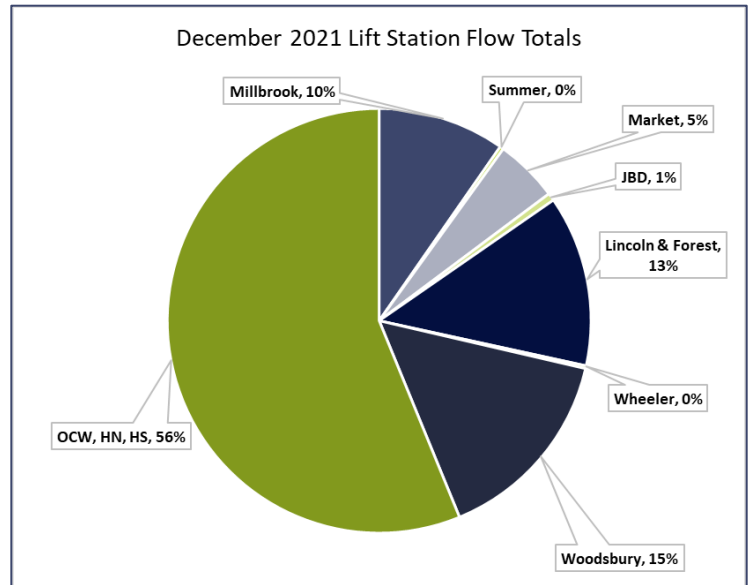
4.1 INFLUENT BOD AND TSS LOADINGS

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 '21	2.843	2,900	3,237	2.431	3,124	4,065
Feb '21	3.307	3,253	4,139	2.499	3,090	3,933
Mar '21	2.677	2,907	3,256	2.495	3,043	3,860
Apr '21	3.143	3,189	3,630	2.418	3,031	3,814
May '21	2.614	3,485	3,644	2.380	3,064	3,802
Jun '21	2.428	3,874	3,572	2.419	3,112	3,790
Jul '21	3.445	2,344	3,371	2.569	3,080	3,784
Aug '21	2.905	3,044	4,011	2.683	3,118	3,798
Sep '21	3.064	2,376	4,904	2.809	3,064	3,859
Oct '21	3.19	2,990	3,889	2.936	3,046	3,815
Nov '21	3.125	2,270	3,500	3.015	2,963	3,774
Dec '21	2.519	3,597	3,699	2.938	3,019	3,738

4.2 LIFT STATION FLOWS

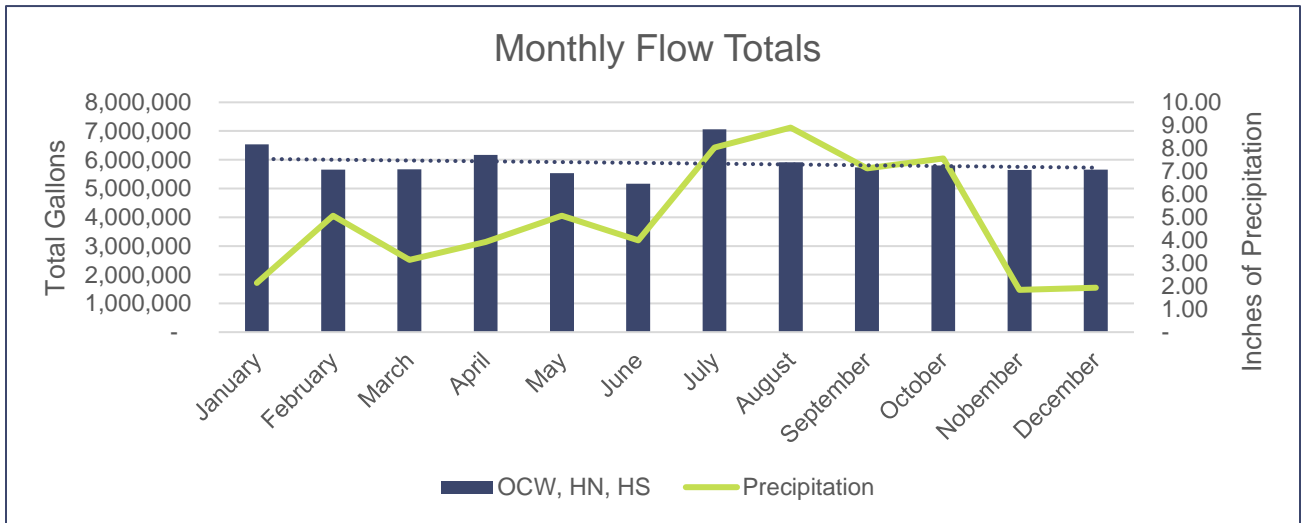
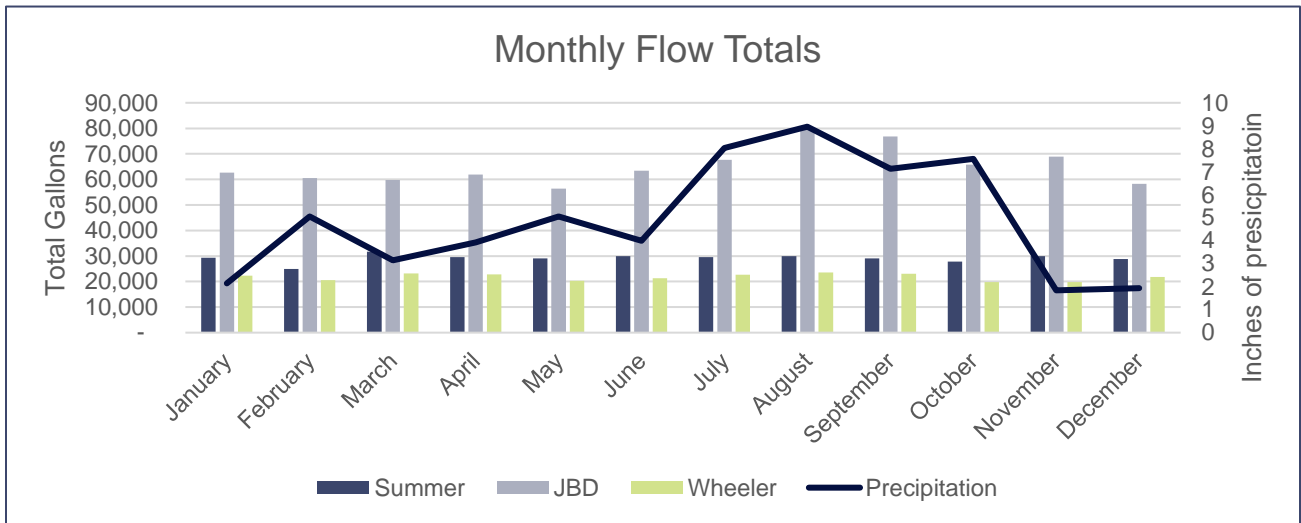
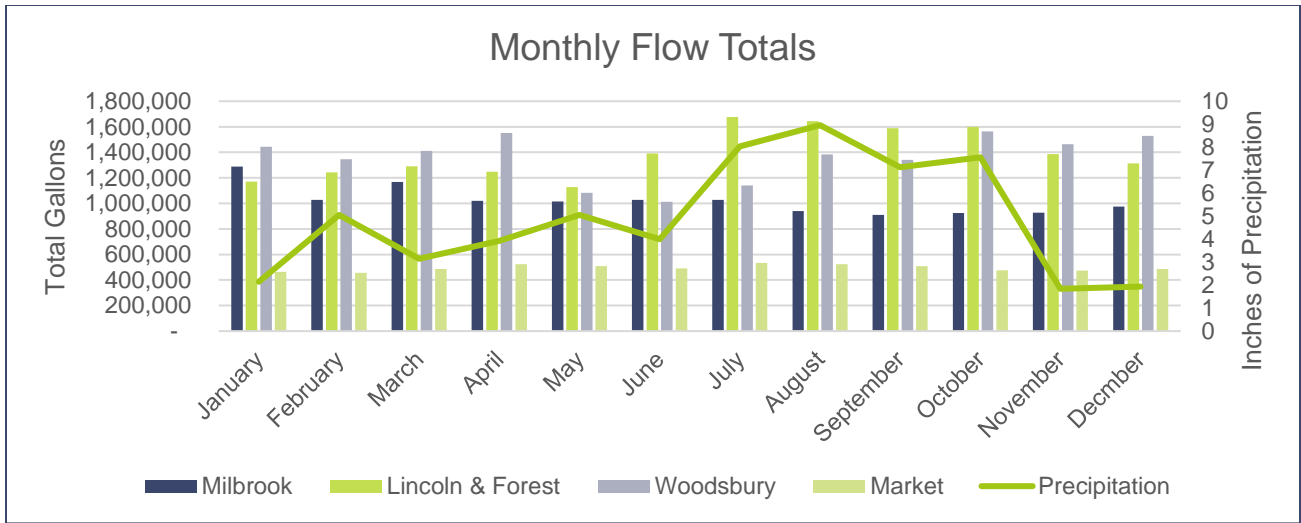
The lift stations accounted for **10,071,840** gallons throughout the month, **12.9%** the total plant flow. Please note that monthly lift station flow totals are purely estimates based off of pump run hours and estimated flow rates. Values are not intended to in any way be used as design capacity volumes for potential future rehab / replacement projects.

Total Flows for December 2021		
Station	Total Gallons	% Off 12 Month Avg.
Millbrook	975,239	-5%
Summer	28,800	-1%
Market	486,000	-2%
John Burke	58,320	-11%
Lincoln, Forest	1,312,500	-6%
Wheeler	21,780	0%
Woodsbury	1,529,998	14%
OCW, HN, HS	5,659,203	-4%
Total:	10,071,840	-2%



Lift Station Monthly Average Daily Flows (GPD)

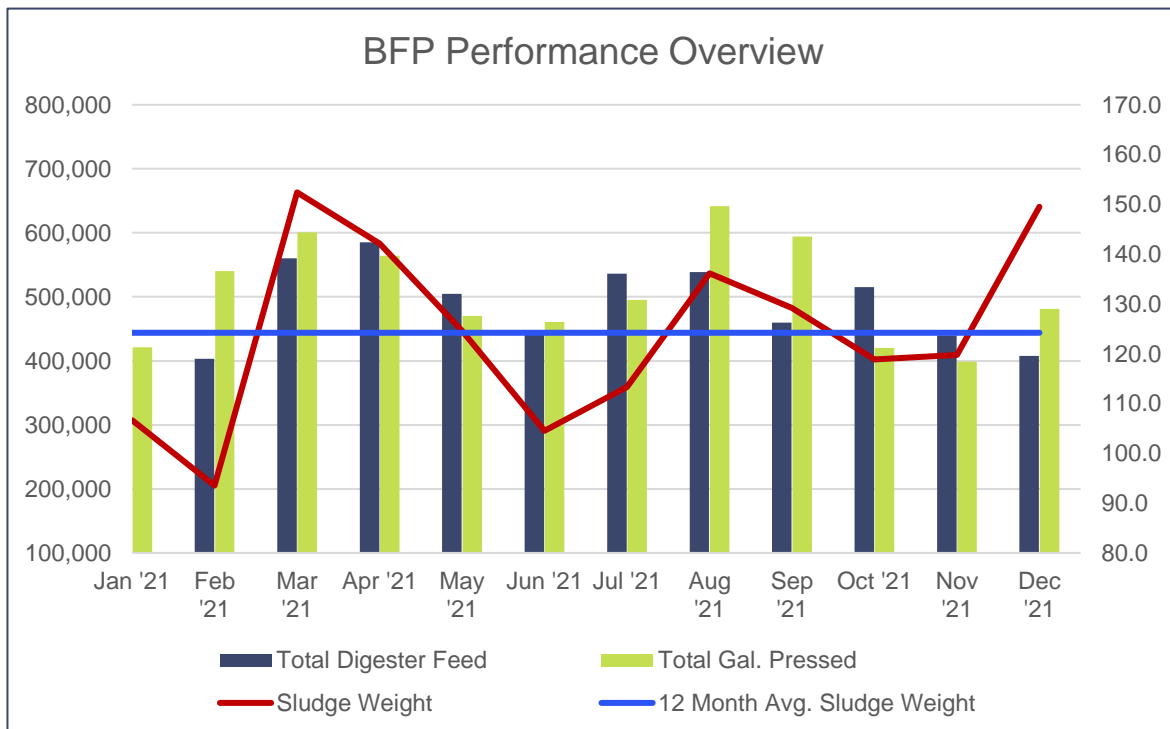
Month	Millbrook	Sumer	Market	John Burke	Lincoln	Forrest	Wheeler	Woodsbury	Old Country Way	Hingham North	Hingham South
	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD
Jan '21	41,688	952	15,050	2,024	1,540	37,800	726	46,380	60,130	136,800	211,680
Feb '21	34,272	832	15,250	2,016	2,100	41,440	684	44,880	59,850	148,500	188,640
Mar '21	37,656	1,024	15,700	1,928	2,260	41,650	738	45,540	58,800	148,500	183,960
Apr '21	34,020	984	17,450	2,064	2,280	41,580	762	51,720	63,770	160,920	205,560
May '21	33,876	968	16,950	1,880	2,160	37,590	678	36,060	59,220	152,640	184,320
June '21	34,272	1,000	16,400	2,112	5,020	46,410	708	33,720	51,240	153,360	172,080
July '21	33,166	952	17,226	2,183	4,684	54,126	732	36,813	68,894	199,974	227,845
Aug '21	30,345	968	16,887	2,563	2,826	53,042	761	44,594	62,797	169,839	190,568
Sept '21	30,348	968	17,000	2,560	2,840	52,990	768	44,700	63,070	170,460	191,160
Oct '21	29,822	898	15,339	2,121	3,252	51,552	639	50,458	65,303	163,568	187,084
Nov '21	30,924	1,000	15,800	2,296	3,600	46,200	660	48,780	62,930	159,120	188,280
Dec '21	31,459	929	15,677	1,881	3,232	42,339	703	49,355	59,206	157,994	182,555
Average	33,487	956	16,227	2,136	2,983	45,560	713	44,417	61,268	160,140	192,811



5.0 SOLIDS HANDLING

The BFP was operated a total of **153** hours this month and a total of **481,140** gallons were processed producing **150** Wet Tons of sludge that was hauled from the facility. The average BFP feed percent solids were **1.56%** and the BFP Cake average percent solids were **20.29%**. The digester feed to BFP differential was **73,315** gallons (overflow) for the month. 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 '21	129.0	468,846	421,221	103.2	106.6	2.44	19.27	5.00	
Feb '21	146.0	403,368	540,139	92.0	93.5	2.00	19.19	6.00	
Mar '21	190.3	560,191	600,688	142.4	152.4	2.08	19.16	7.00	
Apr '21	172.5	585,402	564,039	131.3	142.1	2.48	20.23	8.00	
May '21	161.5	504,683	470,321	108.0	124.6	2.62	21.62	7.00	
Jun '21	148.3	447,325	460,923	109.1	104.5	2.16	23.59	6.00	
Jul '21	129.3	536,074	495,343	90.4	113.3	2.33	21.29	7.00	
Aug '21	154.6	538,761	641,667	128.7	136.1	1.97	21.24	7.00	
Sep '21	154.3	459,723	594,127	133.0	129.2	1.75	21.08	6.00	4.00
Oct '21	108.5	515,074	420,101	86.6	118.9	2.67	21.17	5.00	
Nov '21	120.0	439,762	398,853	90.4	119.8	2.25	20.40	7.00	
Dec '21	152.8	407,825	481,140	126.2	149.5	1.56	20.29	7.00	
Annual Total	1,767	5,867,034	6,088,562	1,341	1,491	****	****	78	4.00
Avg.	147	488,920	507,380	112	124	2.19	20.71	6.5	****



6.0 ENVIRONMENTAL COMPLIANCE

6.1 REGULATORY REPORTING

1. EPA NETDMR submitted on the CDX website on 01/11/2022
2. MADEP MOR mailed on 01/11/2022

6.2 NPDES COMPLIANCE

The facility will be reporting (0) exceedances for the month of December 2021

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				
Wed, Dec 01	2.390							7.29					BOD			
Thu, Dec 02	2.450	3.0	61	2.0	41	0.72	0.45	7.35					Oct. 1 - April 30	20 Mg/L 417 lbs/day	20 Mg/L 417 lbs/Day	30 Mg/l 626 lbs/Day
Fri, Dec 03	2.380							7.22					May 1 - Sept. 30	6 Mg/L 125 lbs/Day	6 Mg/L 125 lbs/Day	10Mg/L 209 lbs/day
Sat, Dec 04	2.430							7.35					TSS			
Sun, Dec 05	2.560							7.40	51				Oct. 1 - April 30	20 Mg/L 417 lbs/Day	20 Mg/L 417 lbs/Day	30 Mg/l 626 lbs/Day
Mon, Dec 06	2.450							7.38	82				May 1 - Sept. 30	10 Mg/L 209 lbs/Day	10 Mg/L 209 lbs/Day	15Mg/L 313 lbs/day
Tue, Dec 07	2.370	4.7	93	3.0	59	0.68	0.48	7.48	38	8	5.6		NH3			
Wed, Dec 08	2.380							7.33					Oct.1 - Mar. 31	3.3 Mg/L	3.3 Mg/l	5.7 Mg/L
Thu, Dec 09	2.390	4.5	90	2.0	40	0.81		7.39					Apr. 1 - May 31	2.5 Mg/L	2.5 Mg/l	5.7 Mg/l
Fri, Dec 10	2.300							7.32					June 1 - Sept. 30	1.0 Mg/L	1.0 Mg/L	1.5 Mg/L
Sat, Dec 11	2.470							7.31					Total Phosphorus			
Sun, Dec 12	2.550							7.32	16				Apr. 1 - Oct.31	0.2 Mg/L	*****	*****
Mon, Dec 13	2.390							7.34	40				Nov. 1 - Mar. 31	1.0 Mg/L	*****	*****
Tue, Dec 14	2.416	3.0	60	2.0	40	0.67	0.53	7.32	37				Ph			
Wed, Dec 15	2.410							7.27					6.5 - 8.3			
Thu, Dec 16	2.430	3.0	61	3.3	67	0.65		7.32					Fecal			
Fri, Dec 17	2.310							6.71					*****	200 CFU/100ml	*****	400 CFU/100ml
Sat, Dec 18	2.520							7.21					Aluminum			
Sun, Dec 19	2.790							7.25	37				*****	88 ug/l	*****	*****
Mon, Dec 20	2.720							7.32	58				Copper			
Tue, Dec 21	2.690	3.0	67	2.3	52	0.31	0.58	7.32	60				*****	12 ug/l	*****	*****
Wed, Dec 22	2.670							7.32					Dissolved Oxygen			
Thu, Dec 23	2.580	3.0	65	2.0	43	0.36		7.26					May 1 - Sept. 30	> 7.4 mg/L		
Fri, Dec 24	2.620							7.28					Plant Flow			
Sat, Dec 25	2.560							7.28					2.5 MGD			
Sun, Dec 26	2.680							7.24	11							
Mon, Dec 27	2.670							7.24	50							
Tue, Dec 28	2.670	4.1	91	3.7	82	1.50	0.55	7.23	28							
Wed, Dec 29	2.620							7.32								
Thu, Dec 30	2.610	2.0	44	3.0	65	0.66		7.29								
Fri, Dec 31	2.600							7.27								
Daily Max	2.790	4.70	92.90	3.70	82.39	1.50	0.58	7.48	82	*****	*****	*****				
Daily Min.	2.300	*****	*****	*****	*****	*****	*****	6.71	*****	*****	*****	*****				
Month Avg.	2.519	3.37	70.22	2.59	54.33	0.71	0.52	7.29	42.33	8	5.6	*****				

7.0 ENERGY CONSUMPTION

7.1 ELECTRICAL OVERVIEW

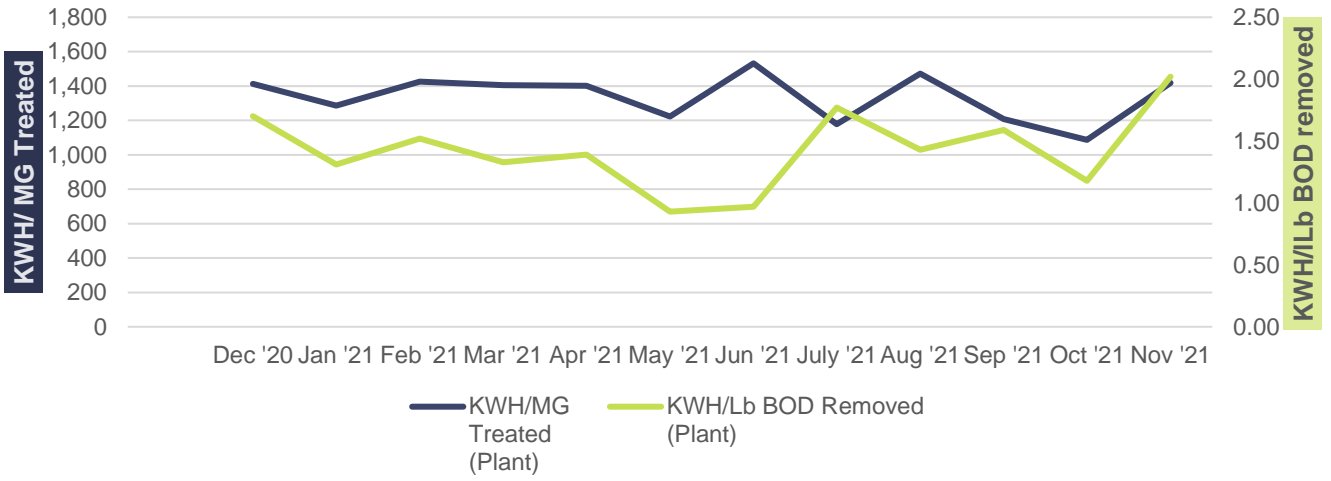
Due to billing cycle timing, all electrical data in the MOR will be one month behind. The following data is for electrical consumption during the **November 2021** operating period.

The department used a total of **150,064 KWH** for the month of Nov. 2021. Of this total, the lift stations accounted for **11.4%**, using **17,164 KWH**. The Main Plant accounted for the remaining **132,900 KWH**. The KWH/ MG treated was **1,418** for the month, which is **2.52%** lower than the previous 12-month average of **1,383 KWH/MG**. The KWH/Lb. BOD Removed was **2.02 KWH/Lb.** for the month, which is **47%** higher than the previous 12-month average of **1.37 KWH/Lb.**

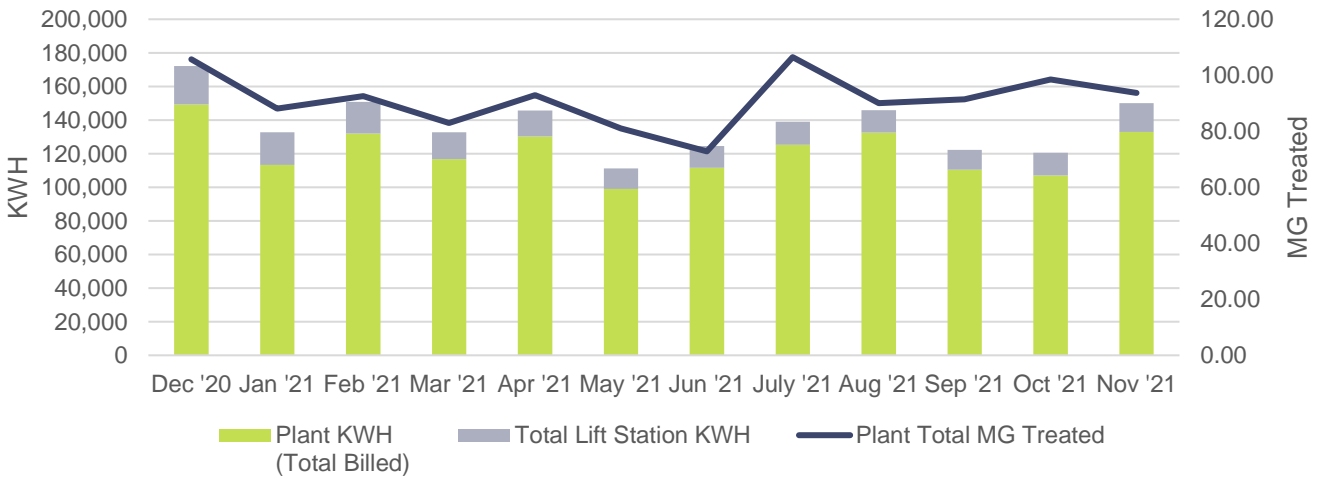
Monthly Energy Consumption										
Month	Plant Average Daily Flow (NO HFMP)	Plant Total Influent Flow	Plant KWH (Total Billed)	KWH/MG Treated (Plant)	Plant Lbs BOD Removed	KWH/Lb BOD Removed (Plant)	Off Peak Demand (Plant)	Peak Demand (Plant)	Total Lift Station KWH	Total KWH (Plant & Stations)
	MGD	MG	KWH	KWH/MG	Lbs	KWH/Lb	KW	KW	KWH	KWH
Dec '20	3.41	105.75	149,400	1,413	87,985	1.70	246	246	22,735	172,135
Jan '21	2.84	88.12	113,400	1,287	86,723	1.31	222	240	19,293	132,693
Feb '21	3.31	92.59	132,000	1,426	86,598	1.52	216	228	18,800	150,800
Mar '21	2.68	83.00	116,700	1,406	87,712	1.33	198	216	16,048	132,748
Apr '21	3.1	92.87	130,200	1,402	93,957	1.39	219	219	15,528	145,728
May '21	2.61	81.02	99,000	1,222	106,715	0.93	186	189	12,161	111,161
Jun '21	2.43	72.83	111,600	1,532	114,694	0.97	219	228	12,858	124,458
July '21	3.43	106.47	125,400	1,178	70,944	1.77	222	249	13,555	138,955
Aug '21	2.91	90.06	132,600	1,472	92,787	1.43	249	255	13,316	145,916
Sep '21	3.05	91.41	110,400	1,208	69,519	1.59	204	231	11,923	122,323
Oct '21	3.18	98.51	107,100	1,087	90,595	1.18	231	234	13,538	120,638
Nov '21	3.12	93.74	132,900	1,418	65,739	2.02	201	216	17,164	150,064
Average	3.01	91.36	121,725	1,338	87,831	1.43	218	229	15,577	137,302

Monthly Lift Station KWH														
Month	Hingham North	Hingham South	Spruce	Butternut	Old Country Way	Market	Woodsbury	Lincoln	Forest	Wheeler	Summer	Milbrook	John Burke	Total
Dec '20	4,677	8,300	235	626	1,225	1,061	1,456	361	2,386	65	79	2,011	253	22,735
Jan '21	4,504	6,100	202	541	1,243	987	1,318	312	2,173	57	61	1,577	218	19,293
Feb '21	3,994	6,000	180	540	1,550	935	1,400	308	2,060	55	55	1,508	215	18,800
Mar '21	2,749	4,900	190	482	1,234	907	1,669	288	1,813	62	61	1,520	173	16,048
Apr '21	2,812	5,000	191	459	1,088	910	1,297	272	1,725	63	65	1,490	156	15,528
May '21	2,384	3,800	144	319	1,027	665	858	175	1,330	52	57	1,247	103	12,161
Jun '21	2,809	4,300	177	335	887	362	901	253	1,719	65	62	883	105	12,858
July '21	2,969	4,800	159	415	987	347	1,112	152	1,454	54	62	914	130	13,555
Aug '21	2,740	4,700	170	486	1,044	344	892	159	1,630	58	62	908	123	13,316
Sep '21	2,648	3,900	150	421	885	397	836	185	1,395	52	53	892	109	11,923
Oct '21	2,754	4,000	179	529	908	697	1,142	225	1,667	49	57	1,215	116	13,538
Nov '21	3,279	4,900	188	654	1,244	970	1,416	363	2,116	61	70	1,666	237	17,164
Average	3,193	5,058	180	484	1,110	715	1,191	254	1,789	58	62	1,319	162	15,577

Main Plant Facility KWH Usage



Total KWH Usage



8.0 MAINTENANCE

8.1 WORK ORDER OVERVIEW

WO Type	Total This Month	Total This Year
Preventative Maintenance	192	1,712
Corrective Maintenance	15	135
Emergency Call Outs Total	4	45

8.2 SIGNIFICANT CORRECTIVE WORK ORDERS FOR THE MONTH

CM Description	WO #
1. WAS Pump Mechanical Seal	19467
2. Offline Tank Cleaning	20652
3. Hingham South New Pump Installation	20653
4. Chlorine Contact Chamber Cleaned	20654
5. Summer St. SCADA Modem Replaced	20645
6. Secondary Clarifiers Cleaned	20646 & 20647
7. Milbrook Pump 1 Cleaned	20649
8.	

8.3 SIGNIFICANT OPEN WORK ORDERS

Open CM Description	WO #
3. Woodsbury Pump 2 Inspect and Repair	14917
4. Hingham South Pump #1 Repair / Replacement	17427
5. WAS Pump 1 Mechanical Seal Replacement	19467
6. Digester Sludge Transfer Pump 3 Installation	19651
7. Fire Alarm LED Outside Main MCC Replacement	20241
8. Men Restroom Fire Alarm Strobe Replacement	20240
9. Influent Pump 1 Rebuild	20248

8.4 EMERGENCY CALL OUTS FOR THE MONTH

Type	Total this Month	Total this Year
Sewer Back Up / Collection System	2	5
Pump Station	1	22
Plant	1	16
Odor	0	0
Power Outages	0	12
Total:	4	65

8.5 INSPECTIONS / ANNUAL PMS COMPLETED DURING THE MONTH

1. All pump station alarms checked
2. Spruce and Butternut probes cleaned weekly
3. Eye wash inspections completed weekly
4. Fire extinguisher inspections completed monthly

8.6 COLLECTION SYSTEM AND IPP ASSISTANCE PERFORMED BY SUEZ

COLLECTION SYSTEM ASSISTANCE:

Type	Total This Month	Total This Year
Sewer Inspection / Tie-Ins	0	0
Sewer Location mark Outs	42	44
Sewer Back Up	2	2

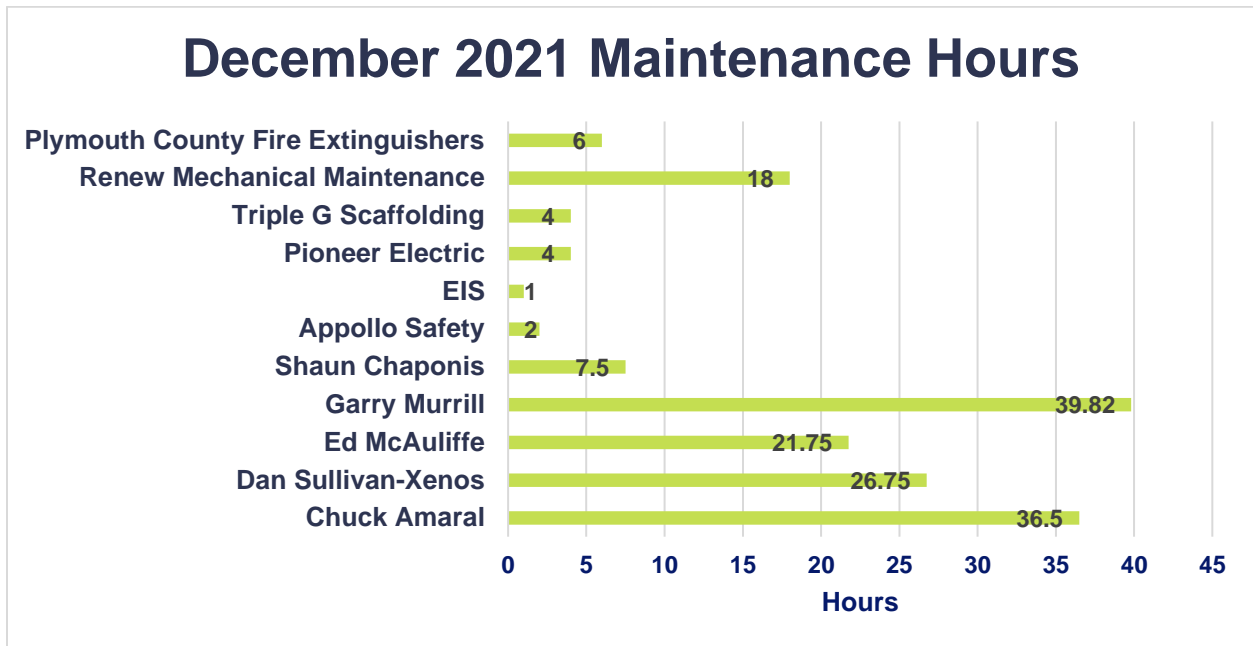
- 12/12 – Marked out 10 Laterals at Leisurewoods
- 12/1 – Marked 6 Laterals and 6 Mains at Leisurewoods
- 12/7 – Marked 12 Laterals and 8 Mains at Leisurewoods
- 12/24 – Call in for sewer back up at 36 George St.
- 12/8 – Called out to 198 Spring St. for sewer odor complaint

INDUSTRIAL PRE TREATMENT ASSISTANCE:

Parameter	Monthly Total	Annual Total
Grease Trap Inspections	0	0
Bi-Annual Permit Renewals	0	0
Bi-Annual Permit Issuance	0	0
Annual IPP Final/Raw Sampling	0	0
EPA IPP Audit / Inspection	0	0

8.7 WORK ORDER STATISTICS

There were **167** total reported maintenance hours during the month. Of this total, outside contractors accounted for **21%** with **35** hours recorded.



9.0 ATTACHED REPORTS

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