

March 2021

# Monthly Operating Report





April 13, 2021

Mr. David Taylor

Rockland Sewer Superintendent

587 Rear Summer Street

Rockland, MA 02370

RE: Rockland Wastewater Facility

Monthly Report—March 2021

Dear Mr. Taylor,

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

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

Sincerely,

Rick Kotouch

SUEZ Project Manager

CC: Charles Heshion

# MARCH 2021 MONTHLY OPERATING REPORT

## 1. SUMMARY:

- The facility will be reporting **1** exceedance for the month of March 2021 for Monthly Avg. Flow
- Monthly Average flow was **2.677** MGD, NPDES Limit is **2.5**
- There were no lost time / first aid injuries throughout the month
- The total rainfall for this reporting period was **1.55"**
- I&I Work is ongoing
- **202** work orders were closed in March, with **15** as corrective maintenance work orders, **3** of the 15 were emergency call outs, while **1** was related to the collection system.
- New NPDES permit still pending from EPA

## 2. STAFFING:

Current Employee Licenses as of 2/1/2021										
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					
Kevin Fennell	Operator In Training									

### 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 continues, SUEZ at the Rockland facility has downgraded to Threat Level 2 guidelines as follows:

1. Due to the COVID-19 (Coronavirus) pandemic to prevent the entire SUEZ staff from becoming infected the following measures will continue to be taken to keep the wastewater treatment plant operating, pump stations inspected and NPDES permit required samples collected
2. As the Town of Rockland COVID-19 infection rate per thousand residents has decreased, and the staff has begun to receive COVID-19 vaccinations, the SUEZ Rockland facility is back to its normal schedules. All social distancing of a minimum of 6' and mandatory mask requirements are still in place at the facility with visitors still limited by an appointment only.

There were **2** unsafe condition identified and corrected throughout the reporting period:

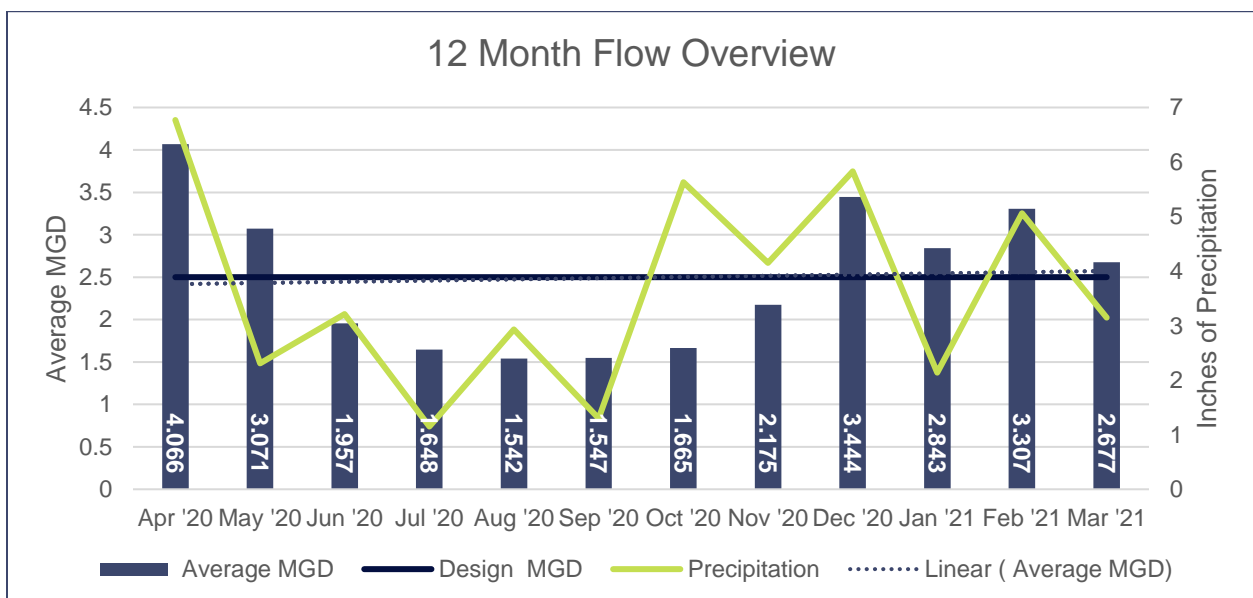
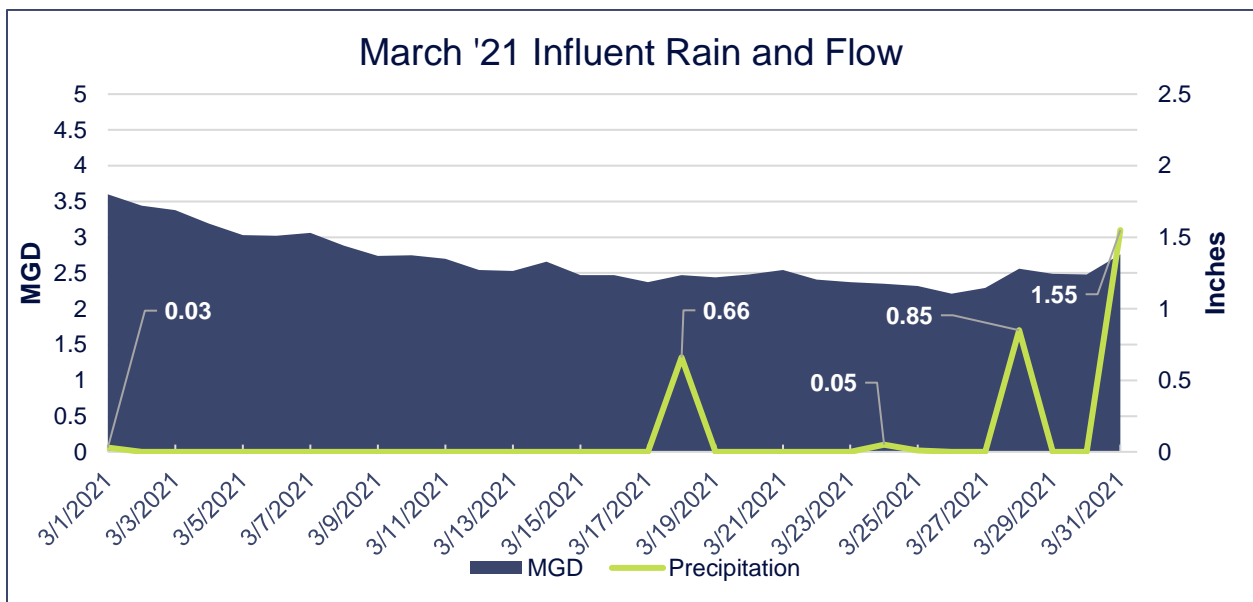
1. While receiving a Ferric Chloride delivery, the tank level indicator suddenly stopped working and showed a level of "0" gallons in the tank. This required the operator to physically inspect the level of Ferric Chloride during the deliver to ensure no overflow occurred. EIS was called in and replaced the level indicator with a new Bluetooth wireless level indicator.
2. While performing daily rounds, an operator identified a pothole in the walking path that could have resulted in a tripping hazard. The pothole was filled to prevent any injuries.



## 4 FLOWS AND LOADINGS:

### 4.0 FLOWS, PRECIPITATION, AND WEATHER

- The facility treated a total of **83,000** MG during the month. The daily average flow was **2.677** MGD. This was **0.048** MGD less than the previous March monthly average, which was recorded at **2.725** MGD. The highest **peak** flow was recorded on March 1 as **3.92** MGD. The lowest instantaneous flow was **1.020** MGD, recorded on March 24.
- The highest daily flow was recorded on March 1 as **3.60** MGD. The lowest daily flow was recorded on March 26 as **2.21** MGD.
- A total of **3.15"** of precipitation was received at the facility. The highest single day precipitation total was recorded on March 31 as **1.55"**
- The coldest day was March 3 at **0°F**. The warmest day was March 11 at **71°F**.



## 4.1 INFLUENT BOD AND TSS LOADINGS

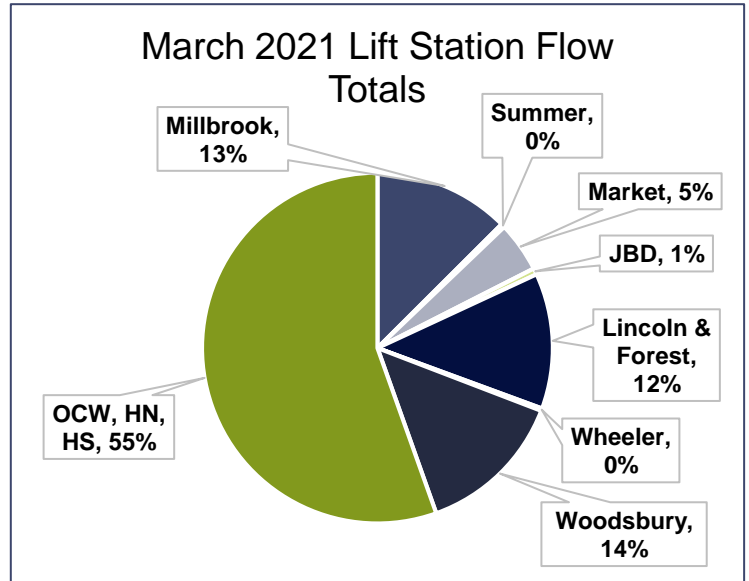
ROCKLAND FLOW AND LOADINGS TRACKING						
Month/Yr	Inf. Flow	Inf BOD	Inf. TSS	Inf. Flow Mov. Avg.	Inf. BOD Mov. Avg.	Inf. TSS Mov. Avg.
	MGD	LBS	LBS	MGD	LBS	LBS
Apr '20	4.066	3,334	4,184	2.518	3,565	5,132
May '20	3.071	3,082	3,793	2.547	3,519	5,035
Jun '20	1.957	3,297	3,717	2.532	3,562	4,970
Jul '20	1.648	2,737	3,438	2.510	3,510	4,874
Aug '20	1.542	2,583	3,845	2.505	3,449	4,876
Sep '20	1.547	3,027	4,170	2.502	3,429	4,865
Oct '20	1.665	3,200	4,417	2.485	3,423	4,973
Nov '20	2.175	3,263	4,000	2.459	3,377	4,771
Dec '20	3.444	2,929	4,128	2.421	3,166	4,358
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



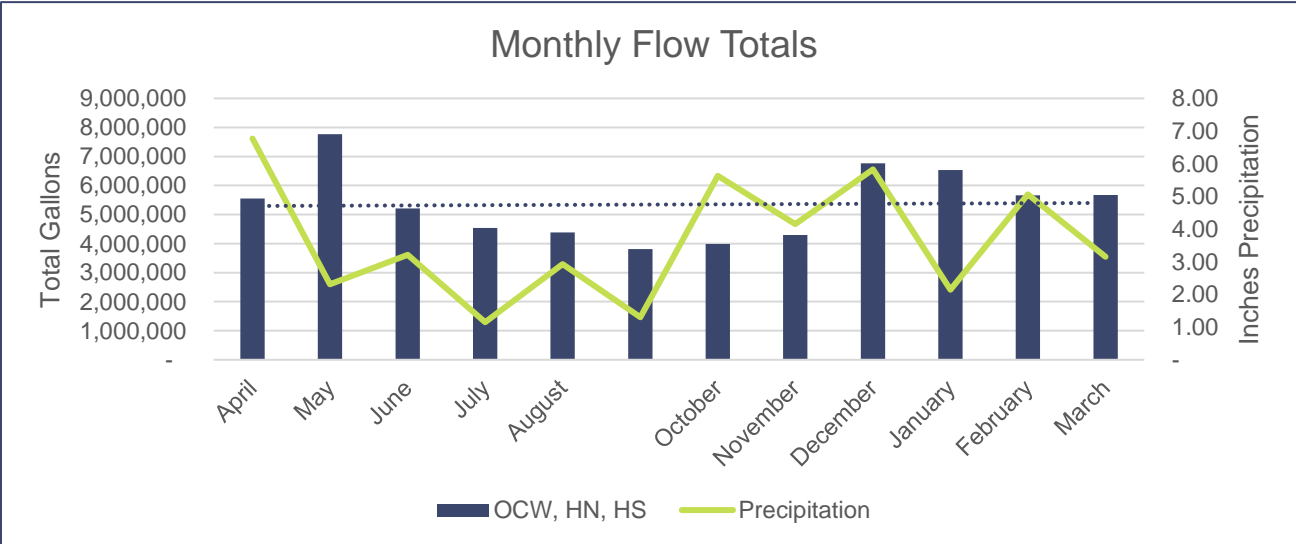
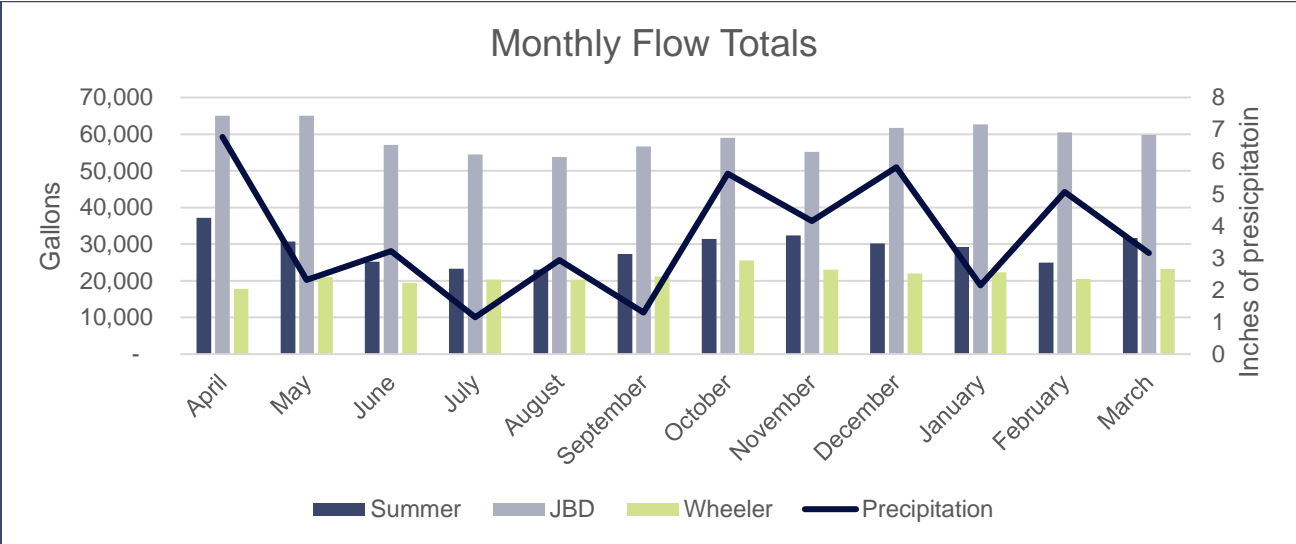
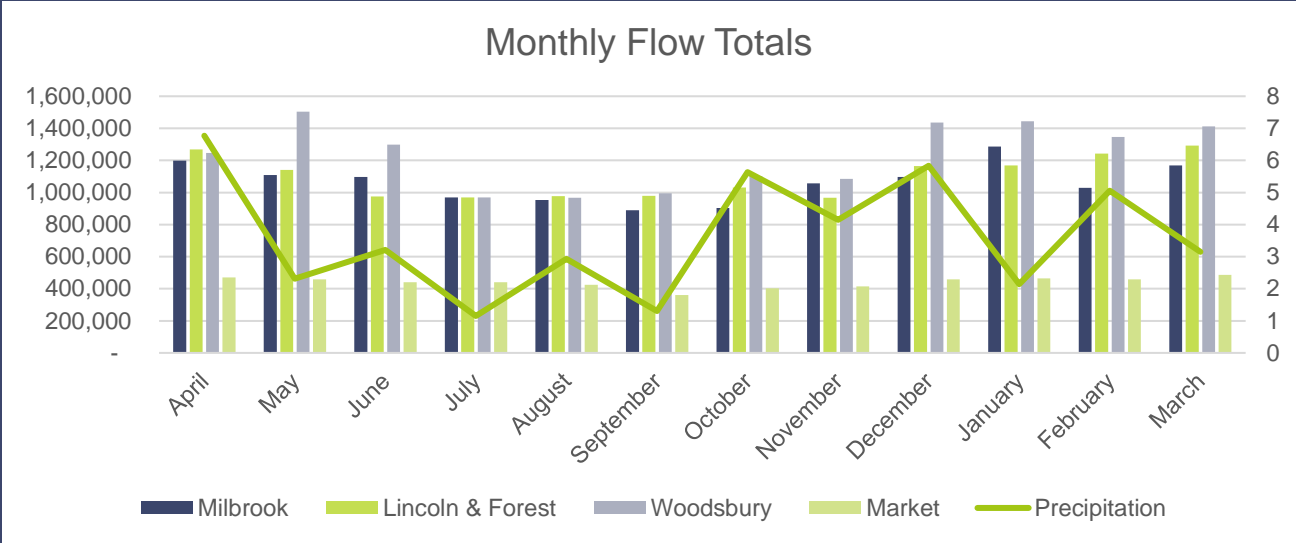
## 4.2 LIFT STATION FLOWS

The lift stations accounted for **10,141,921** gallons throughout the month, **12.2%** 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 March 2021		
Station	Total Gallons	% Off 12 Month Avg.
Millbrook	1,168,562	11%
Summer	31,680	11%
Market	486,000	11%
John Burke	59,760	1%
Lincoln, Forest	1,291,500	20%
Wheeler	23,220	0%
Woodsbury	1,441,199	16%
OCW, HN, HS	5,670,000	7%
<b>Total:</b>	<b>10,141,921</b>	<b>10%</b>



Lift Station Monthly Average Daily Flows											
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
April '20	39,924	1,240	15,700	2,168	1,620	42,280	594	41,580	73,080	141,840	185,040
May '20	35,779	991	14,806	2,098	1,394	36,784	679	48,542	65,710	140,226	250,490
June '20	36,540	840	14,700	1,904	1,400	32,480	648	43,260	56,840	132,660	173,520
July '20	31,285	751	14,226	1,757	1,781	31,297	656	31,297	46,539	130,297	146,323
Aug '20	30,728	743	13,694	1,734	1,819	31,500	656	31,181	46,132	126,116	141,445
Sept '20	29,628	912	12,000	1,888	1,880	32,620	708	33,180	42,980	115,200	127,080
Oct '20	29,124	1,024	13,050	1,904	1,980	33,320	828	35,400	44,520	115,200	128,520
Nov '20	35,208	1,080	13,850	1,840	2,080	32,270	768	36,180	51,800	124,920	143,280
Dec '20	35,316	984	14,900	1,992	1,580	37,660	714	46,140	62,300	136,440	219,240
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
<b>Average</b>	<b>34,762</b>	<b>948</b>	<b>14,410</b>	<b>1,938</b>	<b>1,786</b>	<b>35,925</b>	<b>700</b>	<b>40,297</b>	<b>55,723</b>	<b>133,058</b>	<b>174,935</b>

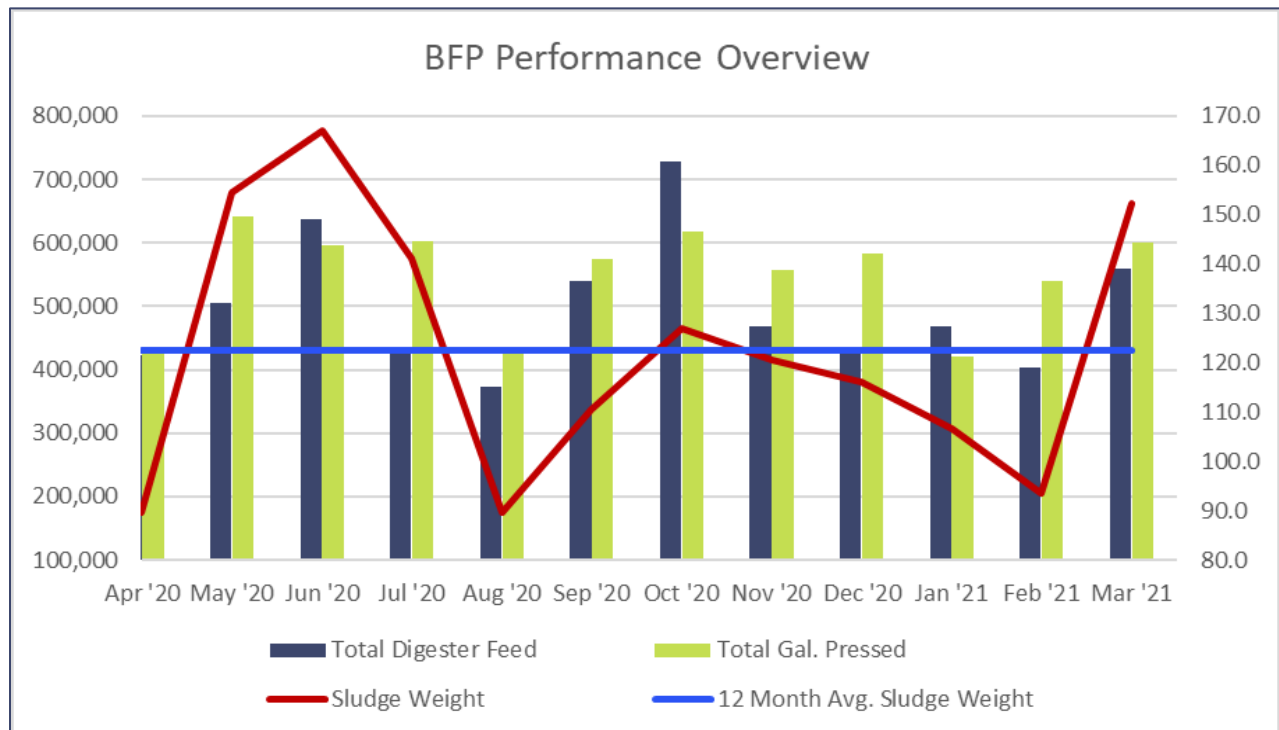




## 5.0 SOLIDS HANDLING

The BFP was operated a total of **190** hours this month and a total of **600,688** gallons were processed producing **152.4** Wet Tons of sludge that was hauled from the facility. The average BFP feed percent solids were **2.08%** and the BFP Cake average percent solids were **19.16%**. The digester feed to BFP differential was **-40,497** 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
Apr '20	131.8	422,607	424,043	103.2	89.5	2.89	18.88	6.00	
May '20	180.8	505,318	642,038	137.6	154.6	1.75	20.13	8.00	
Jun '20	170.3	636,743	596,834	123.2	166.9	3.01	20.96	9.00	
Jul '20	174.0	426,114	601,924	127.6	141.1	2.99	22.25	8.00	
Aug '20	143.8	371,974	425,400	101.6	89.7	2.92	23.20	5.00	
Sep '20	183.3	539,761	575,031	142.4	110.5	2.96	23.51	5.00	
Oct '20	161.8	728,414	617,960	134.2	127.0	2.21	22.84	8.00	9.5
Nov '20	149.8	468,303	556,363	124.0	120.6	3.24	21.62	6.00	
Dec '20	177.0	432,663	582,869	137.8	116.1	1.52	20.00	7.00	
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	
Annual Total	1,938	5,964,302	6,584,510	1,469	1,469	****	****	80	9.50
Avg.	161	497,025	548,709	122	122	2.50	20.92	6.7	****



## 6.0 ENVIRONMENTAL COMPLIANCE

### 6.1 REGULATORY REPORTING

- EPA NETDMR submitted on the CDX website on 04/08/2021
- MADEP MOR mailed on 04/08/2021

### 6.2 NPDES COMPLIANCE

The facility will be reporting (1) exceedance for the month of March 2021

- The monthly average MGD was reported as **2.667** MGD. The NPDES Permit limit is 2.5 MGD.

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				
Mon, Mar 01	3.600							7.33	27				<b>BOD</b>			
Tue, Mar 02	3.440	5.2	149	8.7	250	0.20	0.82	7.31	25	28	7.0		Oct. 1 - April 30	20 Mg/L 417 lbs/day	20 Mg/L 417 lbs/Day	30 Mg/l 626 lbs/Day
Wed, Mar 03	3.380							7.20					May 1 - Sept. 30	6 Mg/L 125 Lbs/Day	6 Mg/L 125 lbs/Day	10Mg/L 209 Lbs/day
Thu, Mar 04	3.190	4.4	117	7.0	186	0.32	0.73	7.33					<b>TSS</b>			
Fri, Mar 05	3.030							7.24					Oct. 1 - April 30	20 Mg/L 417 Lbs/Day	20 Mg/L 417 Lbs/Day	30 Mg/l 626 lbs/Day
Sat, Mar 06	3.020							7.19					May 1 - Sept. 30	10 Mg/L 209 Lbs/Day	10 Mg/L 209 lbs/Day	15Mg/L 313 Lbs/day
Sun, Mar 07	3.060							7.20	4				<b>NH3</b>			
Mon, Mar 08	2.880							7.21	22				Oct.1 - Mar. 31	3.3 Mg/L	3.3 Mg/l	5.7 Mg/L
Tue, Mar 09	2.740	3.0	69	4.0	91	0.29	0.78	7.26	22				Apr. 1 - May 31	2.5 Mg/L	2.5 Mg/l	5.7 Mg/l
Wed, Mar 10	2.750							7.14					June 1 - Sept. 30	1.0 Mg/L	1.0 Mg/L	1.5 Mg/L
Thu, Mar 11	2.700	2.8	63	4.0	90	0.20		7.20					<b>Total Phosphorus</b>			
Fri, Mar 12	2.540							7.38					Apr. 1 - Oct.31	0.2 Mg/L	*****	*****
Sat, Mar 13	2.530							7.18					Nov. 1 - Mar. 31	1.0 Mg/L	*****	*****
Sun, Mar 14	2.660							7.14	2				<b>Ph</b>			
Mon, Mar 15	2.470							7.13	7				6.5 - 8.3			
Tue, Mar 16	2.470	3.3	68	4.0	82	0.84	0.37	7.20	1				<b>Fecal</b>			
Wed, Mar 17	2.370							7.20					*****	200 CFU/100ml	*****	400 CFU/100ml
Thu, Mar 18	2.470	4.0	82	3.3	68	0.72		7.22					<b>Aluminum</b>			
Fri, Mar 19	2.440							7.26					*****	88 ug/l	*****	*****
Sat, Mar 20	2.480							7.22					<b>Copper</b>			
Sun, Mar 21	2.540							7.26	7				*****	12 ug/l	*****	*****
Mon, Mar 22	2.410							7.45	12				<b>Dissolved Oxygen</b>			
Tue, Mar 23	2.370	2.0	40	2.0	40	0.35	0.18	7.36	9				May 1 - Sept. 30	> 7.4 mg/L		
Wed, Mar 24	2.350							7.30					<b>Plant Flow</b>			
Thu, Mar 25	2.320	2.6	50	2.8	54	0.60		7.37					2.5 MGD			
Fri, Mar 26	2.210							7.32								
Sat, Mar 27	2.290							7.29								
Sun, Mar 28	2.560							7.39	2							
Mon, Mar 29	2.490							7.42	10							
Tue, Mar 30	2.480	3.0	62	2.7	56	0.94	0.22	7.41	12							
Wed, Mar 31	2.760							7.41								
Daily Max	3.600	5.20	149.19	8.70	249.60	0.94	0.82	7.45	27.00	*****	*****	*****				
Daily Min.	2.210	*****	*****	*****	*****	*****	*****	7.13	*****	*****	*****	*****				
Month Avg.	2.677	3.37	77.78	4.28	101.89	0.50	0.52	7.27	11.571	28	7.0	*****				

## 7.0 ENERGY CONSUMPTION

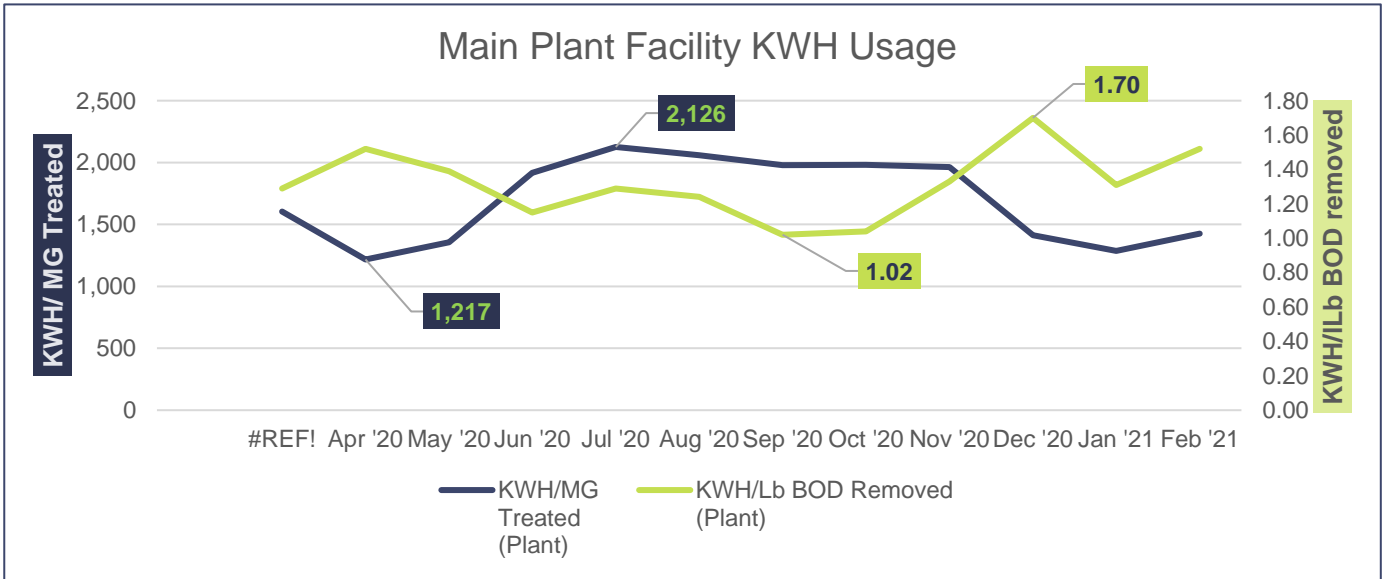
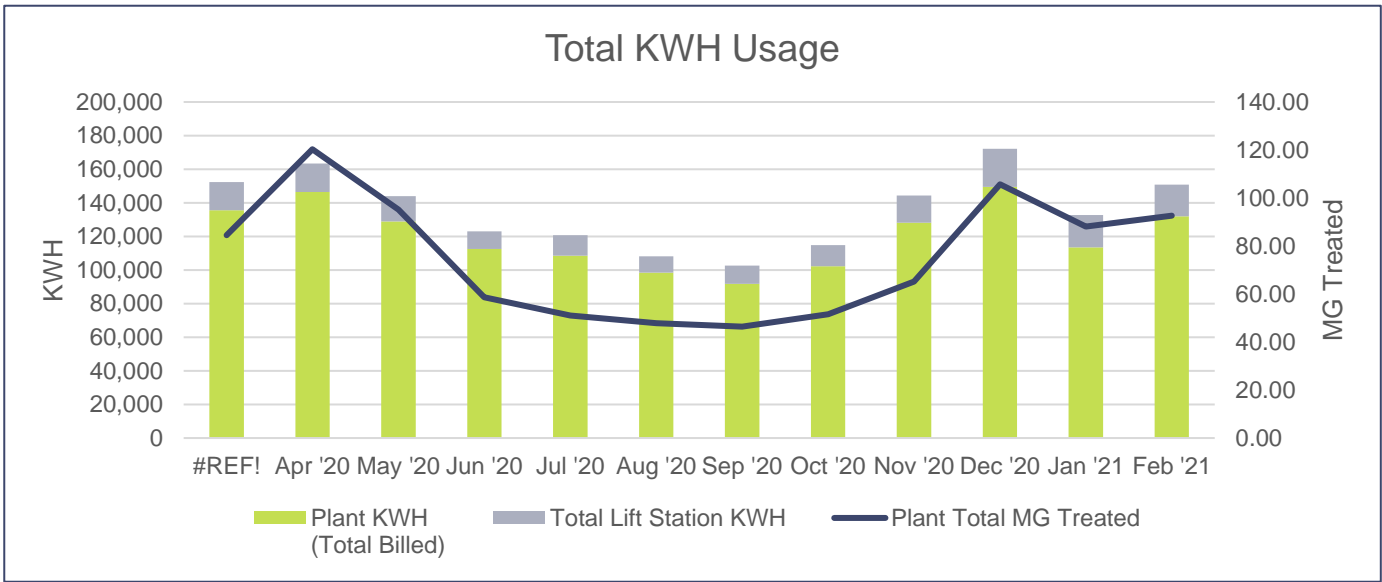
### 7.1 ELECTRICAL OVERVIEW

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 **February 2021** operating period.

The facility used a total of **150,800 KWH** for the month of February 2021. Of this total, the lift stations accounted for **12.5%**, using **18,800 KWH**. The Main Plant accounted for the remaining **132,000 KWH**. The KWH/ MG treated was **1,426** for the month, which is **16%** lower than the previous 12-month average of **1,706 KWH/MG**. The KWH/Lb. BOD Removed was **1.52 KWH/Lb.** for the month, which is **19%** higher than the previous 12-month average of **1.28 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
Mar '20	2.73	84.48	135,600	1,605	104,853	1.29	270	270	16,713	152,313
Apr '20	4.01	120.31	146,400	1,217	96,567	1.52	237	267	16,939	163,339
May '20	3.07	95.21	129,000	1,355	92,608	1.39	231	231	14,938	143,938
Jun '20	1.96	58.70	112,500	1,917	97,906	1.15	183	195	10,488	122,988
Jul '20	1.65	51.09	108,600	2,126	84,003	1.29	174	195	12,168	120,768
Aug '20	1.54	47.79	98,400	2,059	79,230	1.24	171	186	9,781	108,181
Sep '20	1.55	46.42	91,800	1,978	89,861	1.02	162	186	10,919	102,719
Oct '20	1.66	51.60	102,300	1,983	98,117	1.04	174	216	12,588	114,888
Nov '20	2.17	65.24	128,100	1,964	96,589	1.33	231	246	16,289	144,389
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
Average	2.49	75.61	120,625	1,694	91,753	1.32	210	226	15,138	135,763

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 '20	3,270	5,100	190	581	1,398	869	1,365	277	1,817	48	72	1,527	199	16,713
May '20	3,341	5,500	196	596	1,408	853	1,320	243	1,711	55	69	1,476	171	16,939
Jun '20	2,995	5,100	173	450	1,066	687	1,229	191	1,422	59	63	1,380	123	14,938
Jul '20	2,242	3,200	119	350	1,139	319	829	127	1,048	53	51	922	89	10,488
Aug '20	2,835	4,100	111	444	805	379	905	140	1,223	57	58	1,017	94	12,168
Sep '20	2,161	3,000	97	434	829	311	771	135	1,035	50	51	829	78	9,781
Oct '20	3,200	2,306	106	347	870	553	910	175	1,197	56	58	1,043	98	10,919
Nov '20	2,673	3,700	110	292	930	784	1,013	236	1,322	59	62	1,272	135	12,588
Dec '20	3,274	5,000	271	454	1,097	928	1,232	300	1,731	65	74	1,679	184	16,289
Jan '21	4,677	8,300	235	626	1,225	1,061	1,456	361	2,386	65	79	2,011	253	22,735
Feb '21	4,504	6,100	202	541	1,243	987	1,318	312	2,173	57	61	1,577	218	19,293
Mar '21	3,994	6,000	180	540	1,550	935	1,400	308	2,060	55	55	1,508	215	18,800
Average	3,264	4,784	166	471	1,130	722	1,146	234	1,594	57	63	1,353	155	15,138



## 8.0 MAINTENANCE

### 8.1 WORK ORDER OVERVIEW

WO Type	Total This Month	Total This Year
<b>Preventative Maintenance</b>	<b>187</b>	<b>497</b>
<b>Corrective Maintenance</b>	<b>15</b>	<b>46</b>
<b>Emergency Call Outs Total</b>	<b>3</b>	<b>16</b>

### 8.2 SIGNIFICANT CORRECTIVE WORK ORDERS FOR THE MONTH

CM Description	WO #
1. BFP Repairs: New Steering Valve, New Scraper, Washbox Cleared	18860
2. New Nite Ferric Storage Tank Level Indicator Installed	18863
3. Tank Maintenance – Secondary Clarifier Cleaning	18866,18867
4. Timers Installed on Aerators 1-1 and 2-1	18868,18869
5. Digester Recirculation Pump #3 Coupling Replaced	18870
6. Nite Ferric Pump #2 Tube Replaced	18871
7. Facility LED Lighting Upgrade Completed by Guardian Energy	18872
8. Methane Sensors Replaced on Influent and Digester Gas Meters	18874,18875

### 8.3 SIGNIFICANT OPEN WORK ORDERS

Open CM Description	WO #
1. Woodsbury Pump 2 Inspect and Repair	14917
2. Hingham South Repair / Replacement	17427
3. OCW Mixer Starting Relay Replacement	14917
4. Lime Unloader # 3 shaft repair	13568
5. Primary Scum Mixer Blade Replacement	10091
6. Main Plant Generator Water Pump	18658
7. Effluent Pumps “HAND” control repair	14840
8. OCW, Woodsbury, and Lincoln valve exercising	

#### 8.4 EMERGENCY CALL OUTS FOR THE MONTH

Type	Total this Month	Total this Year
<b>Sewer Back Up / Collection System</b>	0	2
<b>Pump Station</b>	2	4
<b>Plant</b>	0	5
<b>Odor</b>	0	0
<b>Power Outages</b>	1	6
<b>Total:</b>	<b>3</b>	<b>17</b>

1. Butternut Road 3/1/21
  - a. DS called in for loss of air at 5 PM. Cleaned probe, station back online.
2. Loss of Power 3/1/21
  - a. DS called in for loss of power at Hingham North, Woodsbury, and Lincoln. Monitored through SCADA and reset all stations.
3. Butternut Road 03/08/21
  - a. Gm called in at 930 PM for high wet well. Pot #1 could not build up air pressure due to firing contact not releasing. EM out to assist, placed Pot #2 in service. Pioneer Electric out on 3/10 to replace all firing contacts in panel with new.

#### 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
5. Quarterly Gas Meter Inspection Completed by Apollo Safety on 3/16/21
6. UST Inspection completed on 3/22

#### 8.6 COLLECTION SYSTEM AND IPP ASSISTANCE PERFORMED BY SUEZ

##### **COLLECTION SYSTEM ASSISTANCE:**

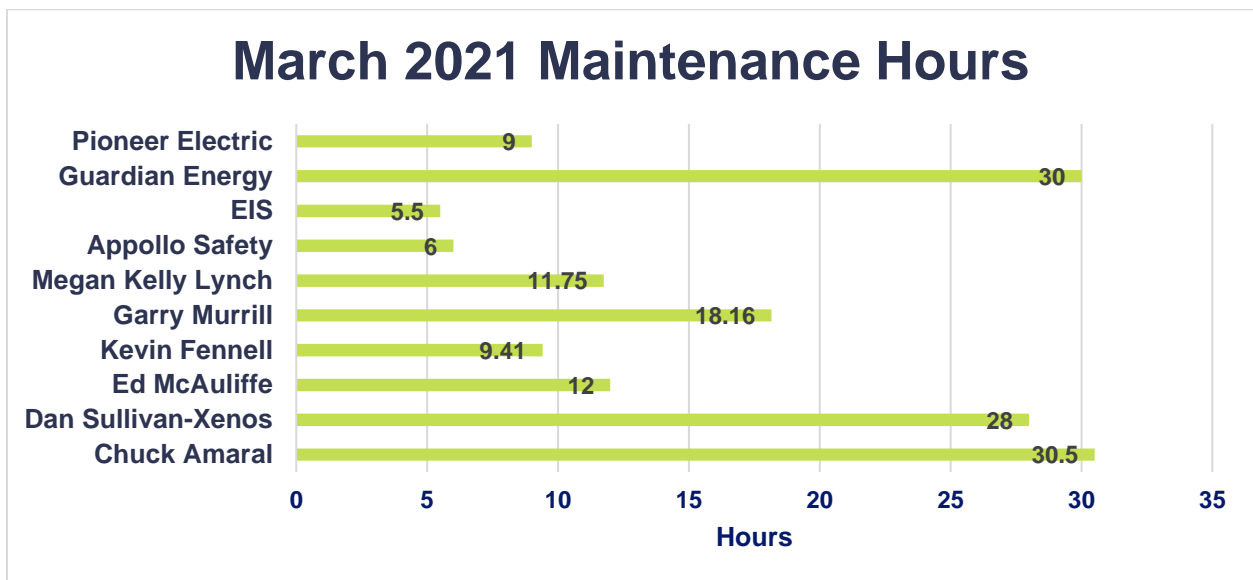
Type	Total This Month	Total This Year
<b>Sewer Inspection / Tie-Ins</b>	0	0
<b>Sewer Location mark Outs</b>	0	0
<b>Sewer Back Up</b>	1	1

## 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 **160.32** total reported maintenance hours during the month. Of this total, outside contractors accounted for **31%** with **50.5** hours recorded.



## 9.0 ATTACHED REPORTS

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