



# HULL WATER POLLUTION CONTROL FACILITY

February  
2022

## MONTHLY OPERATING REPORT

NPDES NO. MA0101231

[woodardcurran.com](http://woodardcurran.com)

COMMITMENT & INTEGRITY DRIVE RESULTS

# **Table of Contents**

1	Executive Summary .....	3
2	Flows and Loadings.....	4
a.	Average effluent monthly flows – 2+ year comparison .....	5
b.	Two Month Summary of Rainfall and the Influence on Effluent Flows .....	6
3	Compliance .....	7
4	Key Performance Indicators .....	11
a.	Water Quality – February 2022 .....	11
5	Odor Control .....	14
6	Maintenance Summary .....	17
a.	Tasks Completed this Month .....	18
b.	Asset Management Accounts .....	19
7	Safety.....	20
8	Staff Development.....	21
9	Collection System .....	22
9.1	Wet Well Cleaning .....	22
9.2	Collection System Maintenance .....	22
10	Project Management & Administration .....	24
10.1	On-Going Projects and Support Items .....	24

**Cover pictures:** February Winter scenes at the Hull WPCF

# 1 EXECUTIVE SUMMARY

**Woodard & Curran sees its role not as a contractor but as an operational partner assisting the Town of Hull in operating, maintaining, and sustaining their Water Pollution Control Facility, Collection System, and ancillary equipment while prioritizing corrective measures regarding safety, compliance, and reliability.**

**This report provides a summary of the pertinent information and activities that occurred during the month of February 2022.**

- The Hull Water Pollution Control Facility had 0 NPDES effluent permit (MA 0101231) exceedances.
- Average daily effluent flow for February was 1.86 total MGD, which was slightly higher than the current 12-month effluent moving average of 1.51 MGD.
- February's rainfall was 5.88 inches, down from January's 7.18 inches. See page 6 for more information.
- There were 7 alarm calls in the month of February that needed to be responded to by W&C staff. A new on call cell phone was introduced to replace an older unit.
- All pump stations were inspected daily with run times documented
- There were no sanitary sewer overflows during the month of February.
- There were 29 Dig Safe Mark-outs completed on behalf of the Town of Hull in February.
- Generators were exercised weekly with no noted issues.
- Maintenance and repairs performed at the plant and associated grounds are documented, summarized, and included in Section (6) of the report.
- There were no accidents or incidents resulting in any near miss or lost time this month.

Mike Sullivan  
Plant Manager  
Town of Hull  
Water Pollution Control Facility

**Woodard & Curran strives to deliver a high-quality operations service and is responsive to our customers concerns. Please feel free to request any modifications to the format or content of this report.**

## 2 FLOWS AND LOADINGS

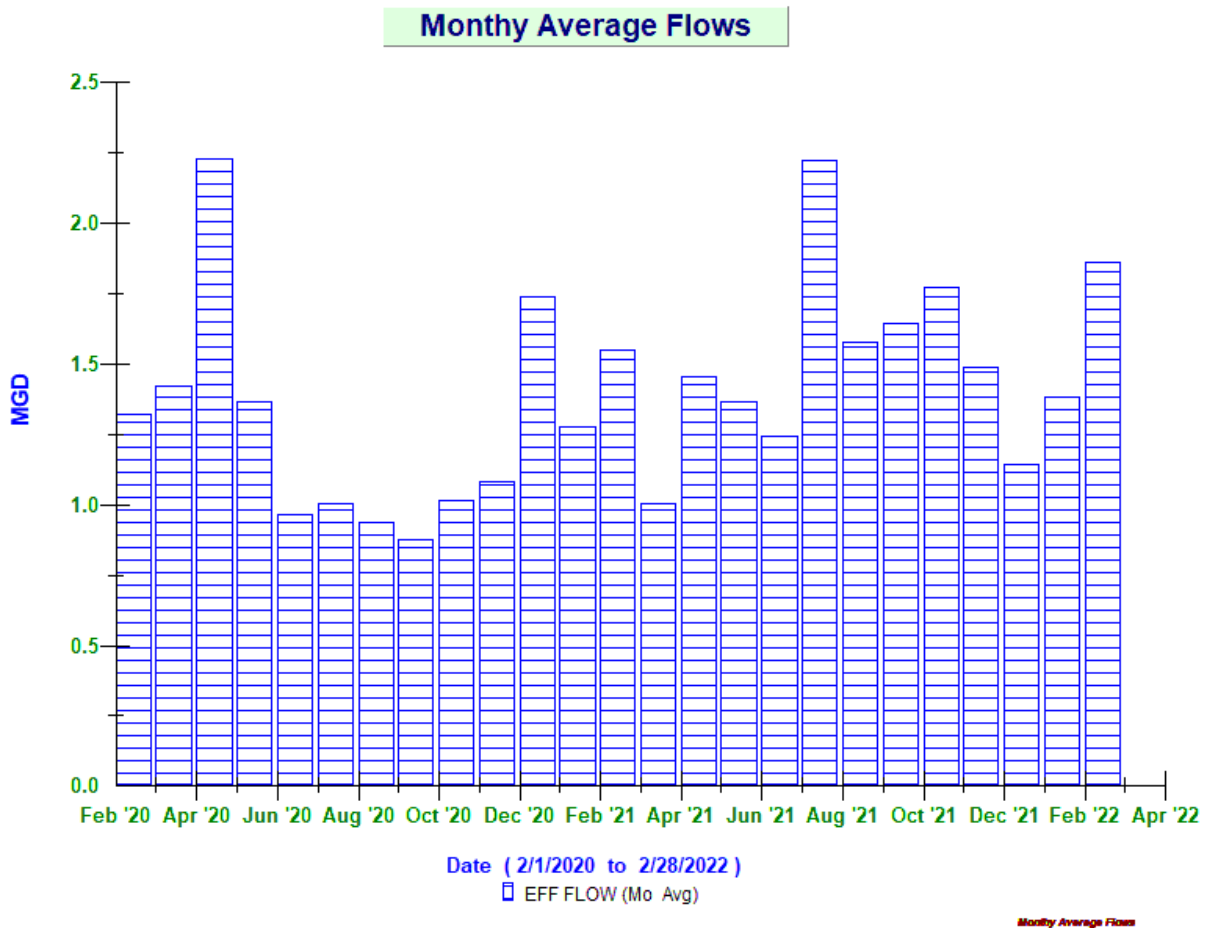


### Average Daily Flows and Loadings for the month of February

Month / Year	Eff Flow	Inf Flow	Inf BOD	Inf TSS	Eff BOD	EFF TSS
	MGD	MDG	LBS	LBS	LBS	LBS
Feb '20	1.32	1.50	1,140.22	2,001.18	30.46	80.90
Feb '21	1.55	1.79	2,888.35	3,786.84	222.05	299.77
Feb '22	1.86	1.88	1,372.10	1,571.40	71.37	146.41

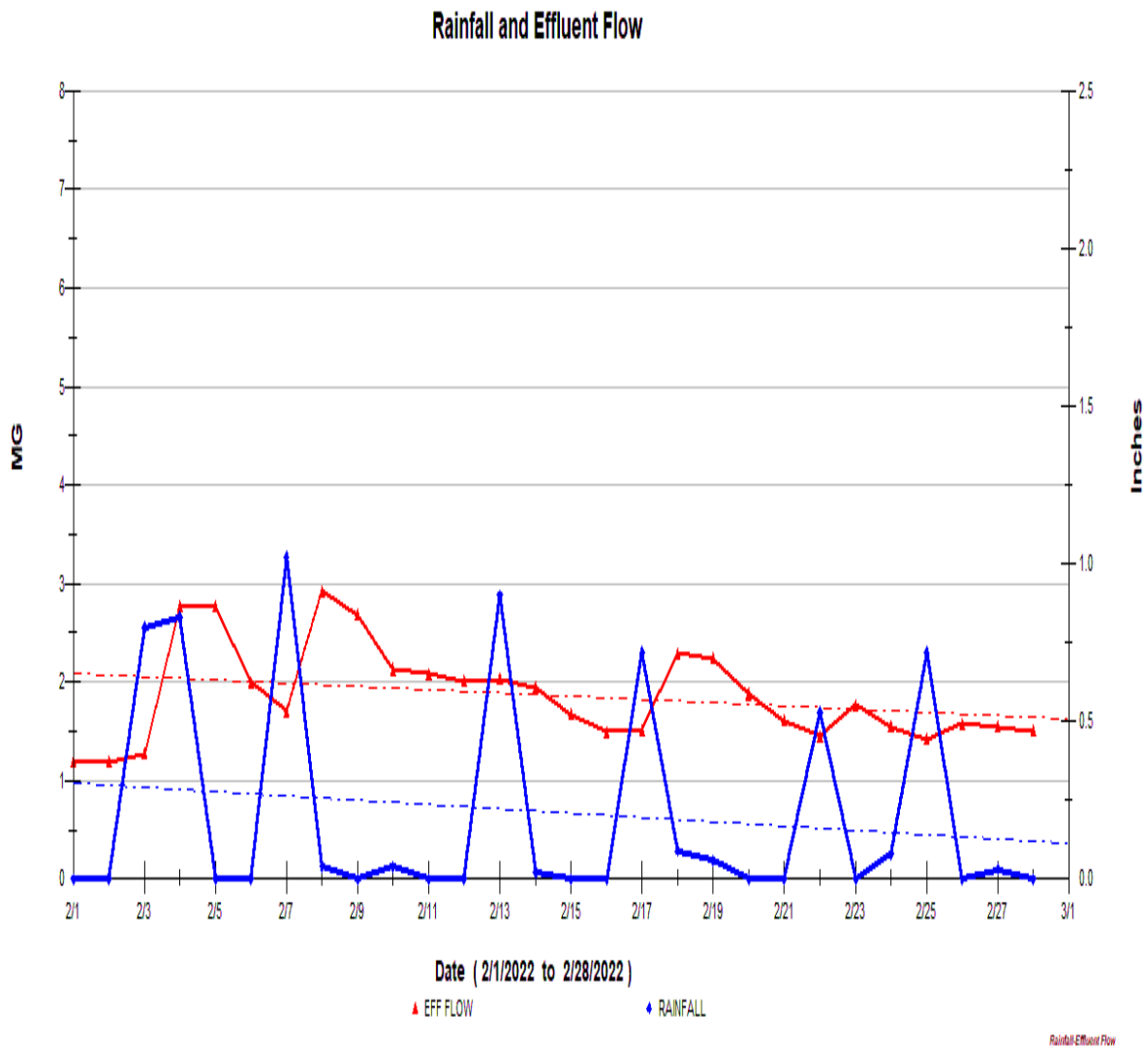
\* On-Going -The existing influent flow meters are strap-on doppler flow meters, and the existing pipe condition prevents getting a strong signal. An area velocity meter in the aeration tank inlet channel is used as well as the headworks influent Parshall Flume meter to monitor influent flows. All reported loadings are based on the effluent flow meter [new mag meter April 2021]. All meters are tied into the Scada system so that influent flows can be monitored.

## A. AVERAGE EFFLUENT MONTHLY FLOWS – 2+ YEAR COMPARISON



The monthly average flow for February was 1.86 MGD, higher than the previous month. The total precipitation for the month was 5.88 inches, slightly lower than the previous month, with 6 days where precipitation was above 0.75" per day. The graph shows the 2-plus year summary of the monthly average flows.

## B. TWO MONTH SUMMARY OF RAINFALL AND THE INFLUENCE ON EFFLUENT FLOWS



This graph shows the days where precipitation occurred [rainfall] [Blue Peaks].

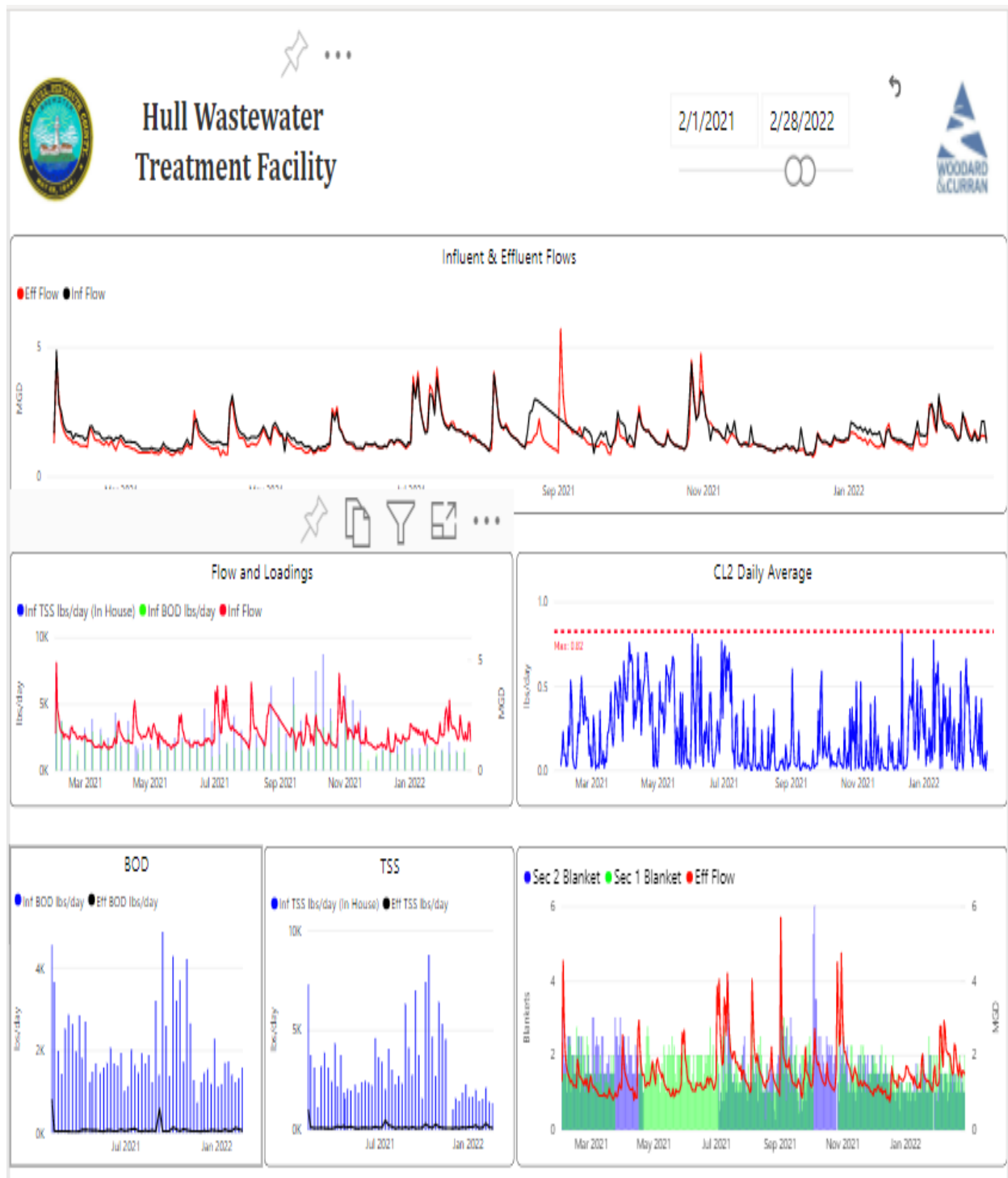


### 3 COMPLIANCE



- Plant personnel collected all plant samples and performed in-house analysis for the process control and permit parameters.
- Rhode Island Analytical [RIA] performed laboratory analyses for all other permit parameters not performed in-house except for our Fecal Coliform and Enterococci, which are sent to G&L Labs in Quincy, MA.
- Copies of the lab analytical reports are on file at the treatment facility.
- There were (0) permit exceedances in the month of February.
- A copy of the monthly NPDES report for February 2022 was submitted to the EPA & DEP.
- Hull Sewer Department received a copy of all the reports
- The services of new W.E.T. testing lab were initiated, due to the closing of the existing contract lab. The new lab provider is New England Bioassay, who has teamed up with RIAL.

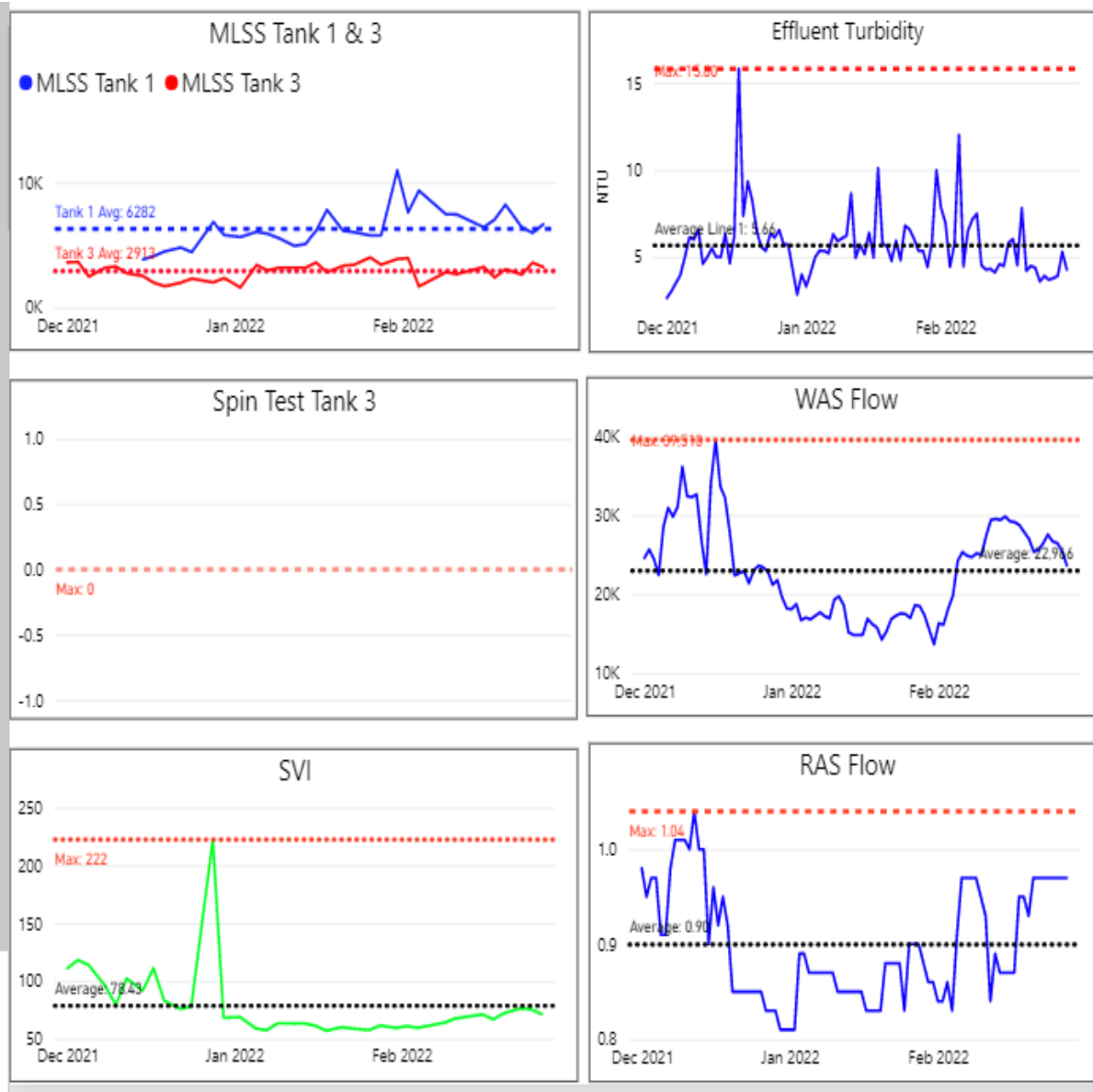
# Monthly Process Summary graphs from power BI – February 2022



## Process control tracking and trends for the month of February

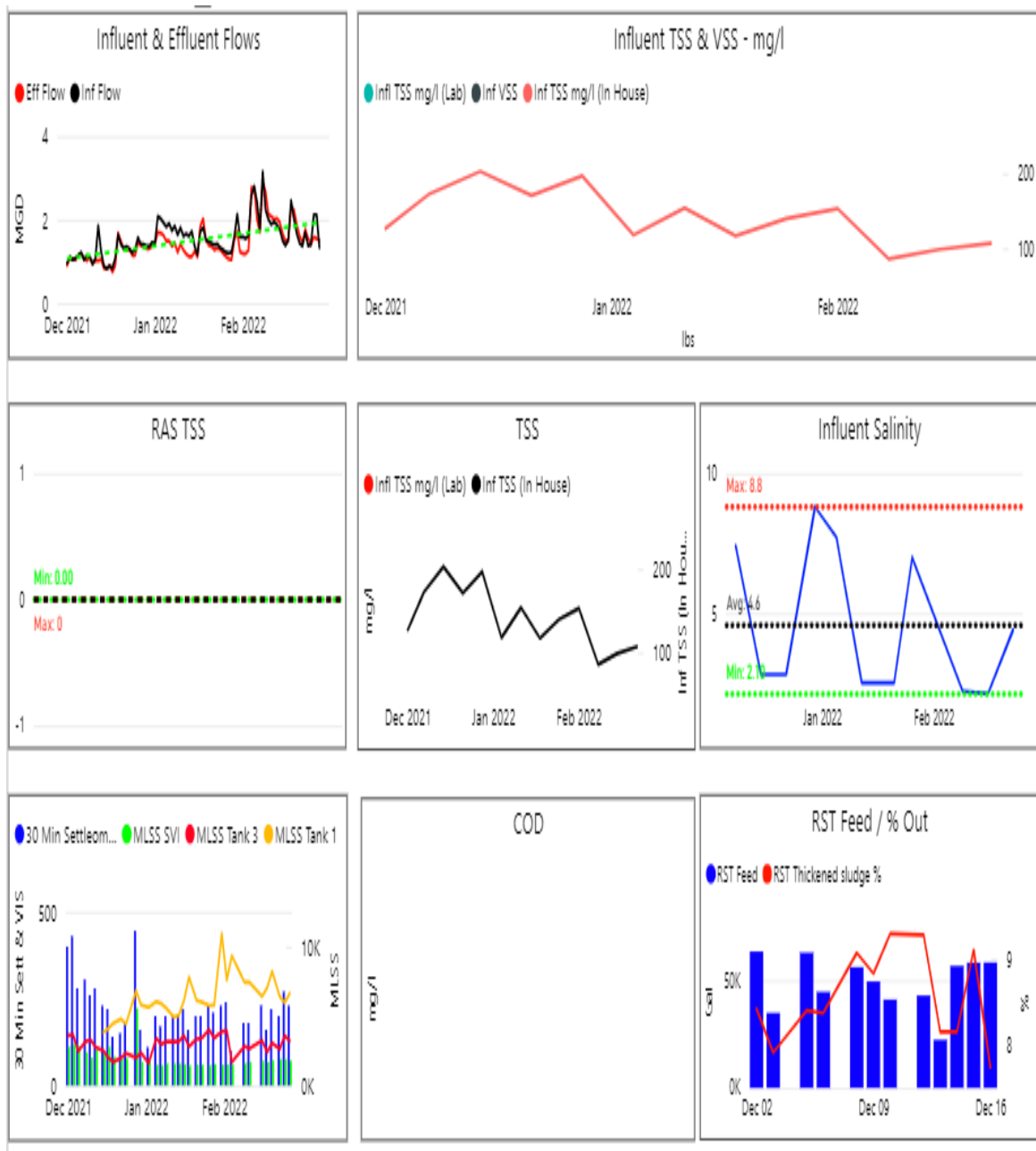


## SECONDARY PROCESSES – POWER BI GRAPHS



**3-month period ending on 2/28/22. Variable flows did have some impact on effluent turbidity at times. Process solids were consistent and sludge settleability was good.**

## Additional Power BI Graphs showing trends of various processes – February 2022.



## 4 KEY PERFORMANCE INDICATORS

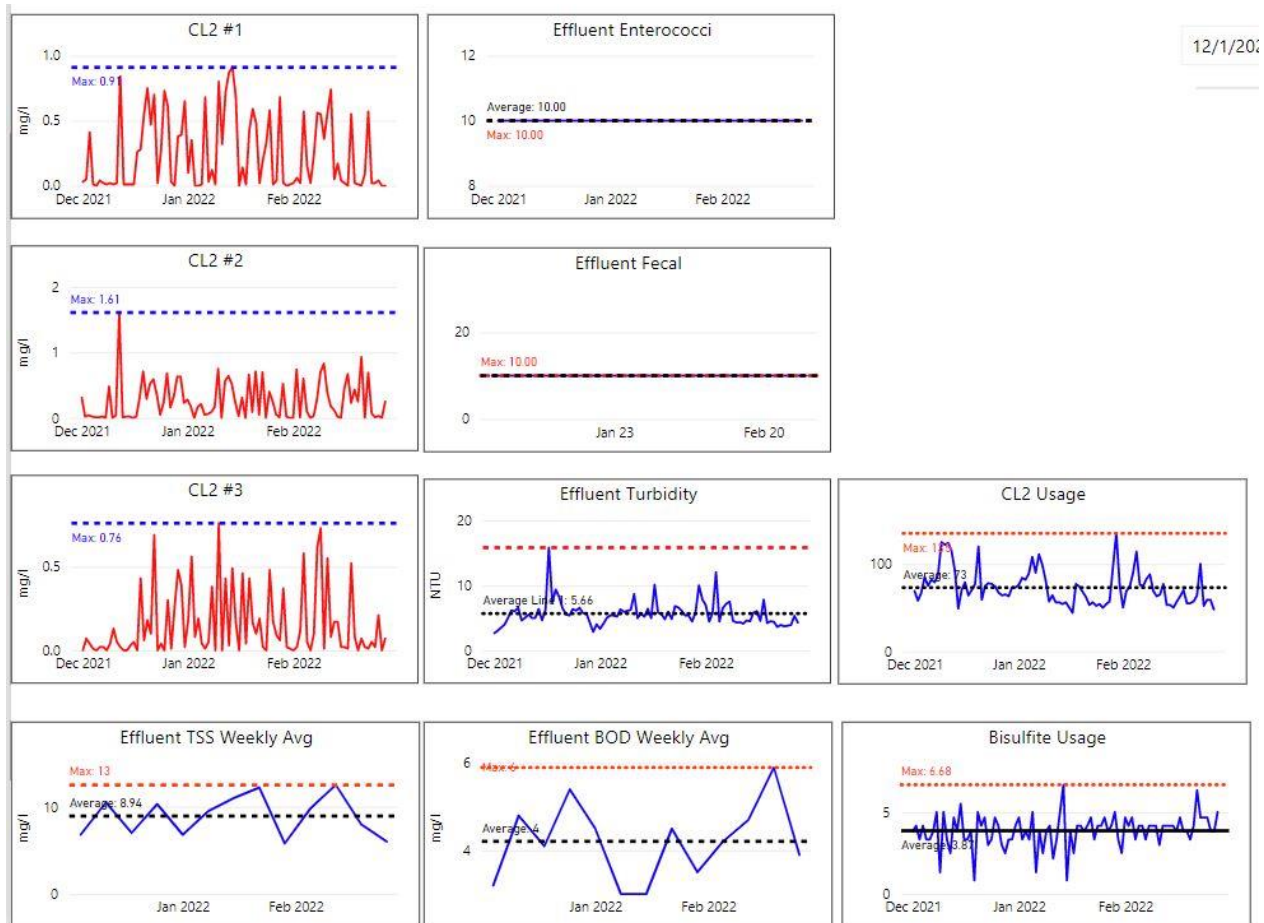


### A. WATER QUALITY – FEBRUARY 2022

Parameter Info		Permit Requirements					Results				
Parameter	Units	Daily Allowed Max in month	Min %	Weekly Avg. Max Allowed in month	Monthly Avg	Freq	Period Monthly Avg.	Period Weekly Min	Period Daily Max	# Of Samp les	# Of Violations
Eff TSS	MG/L	50		45	30	1 X Week	9.1	6.0	12.5	4	0
Eff TSS	LBS			1152	768	1 X Week	146.4	72.6	304.4		0
% TSS Rem	%		85			1 X Month		91.8			0
Eff BOD	MG/L	50		45	30	1 X Week	4.7	3.9	5.9	4	0
Eff BOD	LBS			1152	768	1 X Week	71.4	41.7	114.5		0
% BOD Rem	%		85			1 X Month		95.5			0
Eff Chlorine	MG/L	1.0			0.7	3 X Day	0.21	0.00	0.66	84	0
Eff Fecal	#/100 ML	260			88	1 X Week	10.0	10	10	4	0
Eff pH	SU	8.5	6.5			1X Daily	6.7	6.5	6.9	28	0
Enterococci	CFU/100 ML	276			35	1 X Week	10	10	10	4	0

There were **136** effluent samples taken in February.

## EFFLUENT COMPLIANCE POWER BI GRAPHS

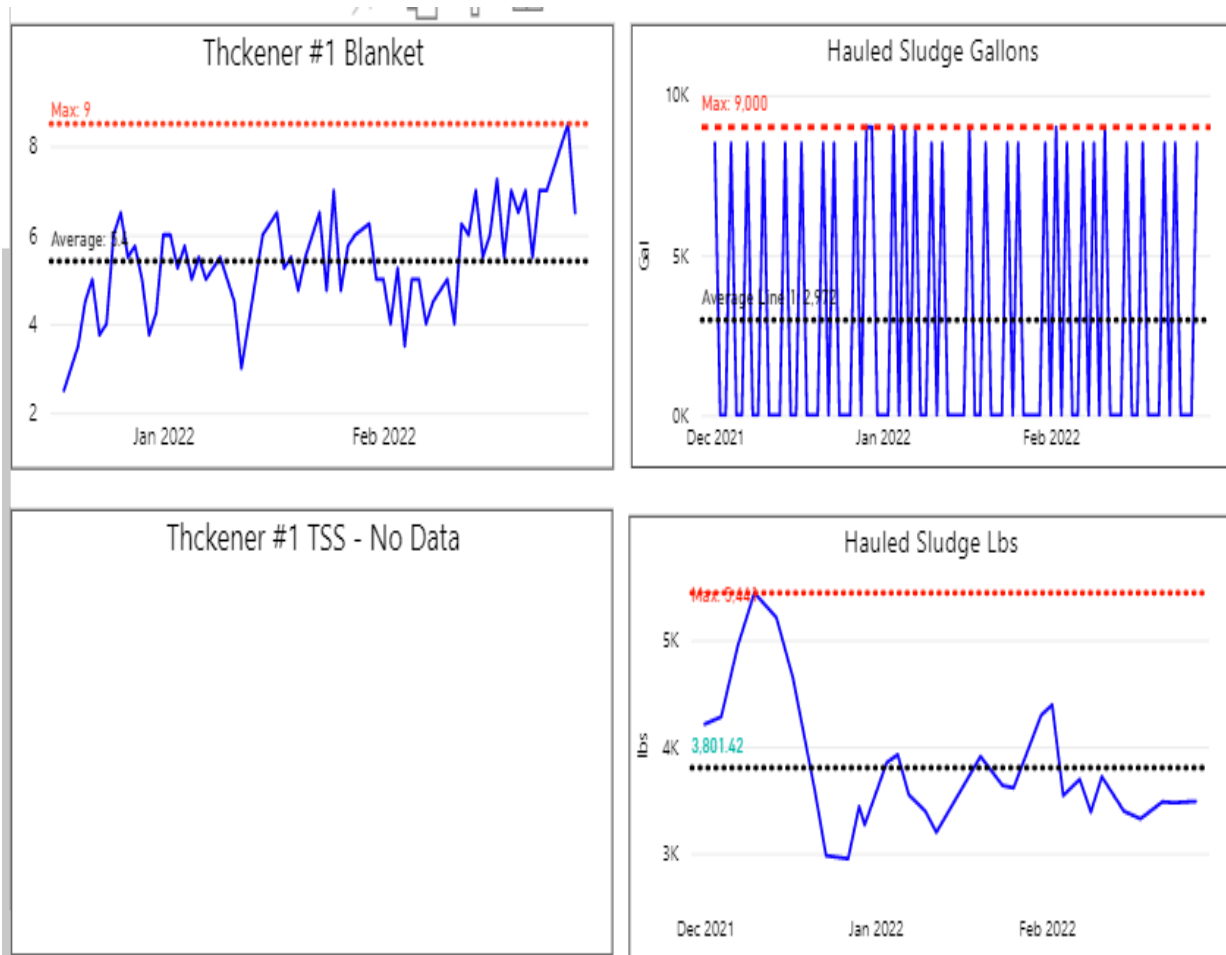


Last 3-month period ending on 2/28/22 - chlorine residuals, effluent compliance, & chemical use. Bleach [sodium hypochlorite], sodium bisulfite, and turbidity [clarity] of the effluent fluctuating, due to flow variability. Effluent remained good.

## Sewage Gallons Treated vs Sludge Disposed

Month	Effluent Treated, MG	Sludge Disposed, Gals
February 2020	38.38	134,000
February 2021	43.36	116,500
February 2022	52.19	86,000

**Additional Power BI graphs for sludge solids for 3-month period ending 2/28/22.**

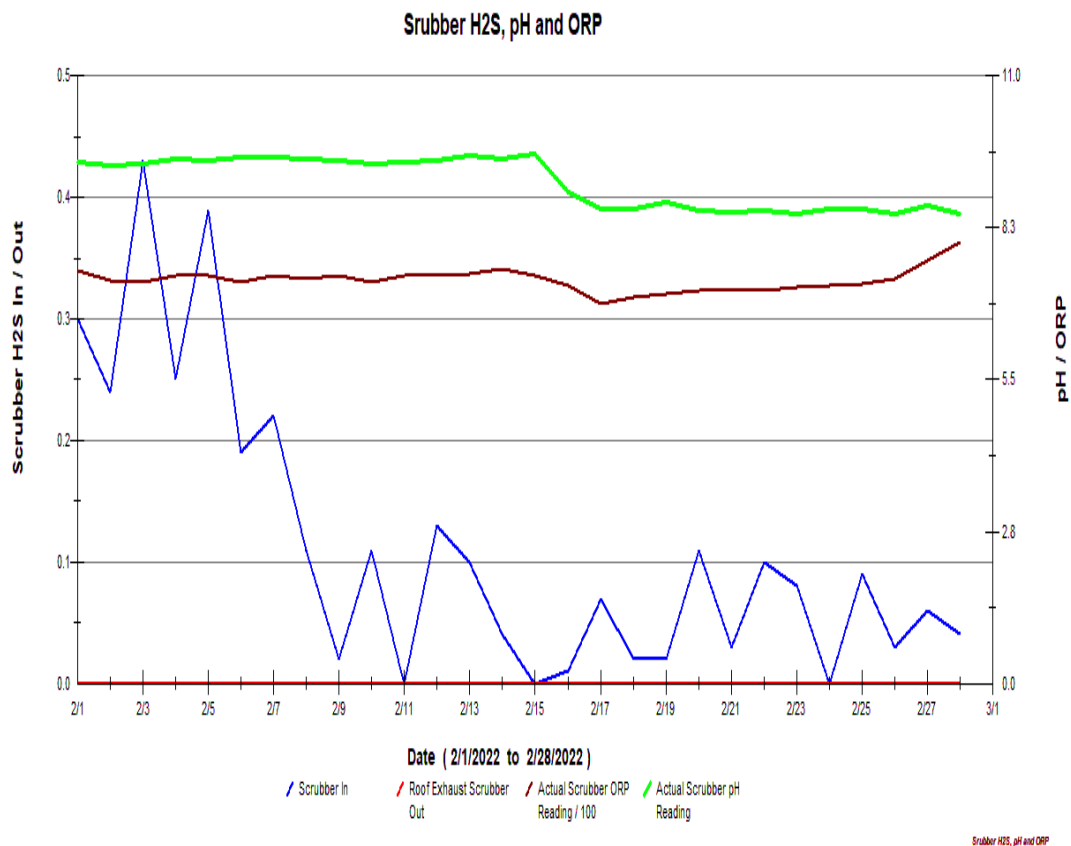


## 5 ODOR CONTROL

There were no odor complaint calls received during February for the wastewater plant.

The Bioxide system was on, and the feed rates were low. There were adjustments made as needed according to data seen at Nantasket/Water MH and XYZ/Nantasket MH. The monthly graphs are attached below. Daily average Bioxide use for February was 7.2 gallons per day. The bioxide feed was shut off for approximately one week.

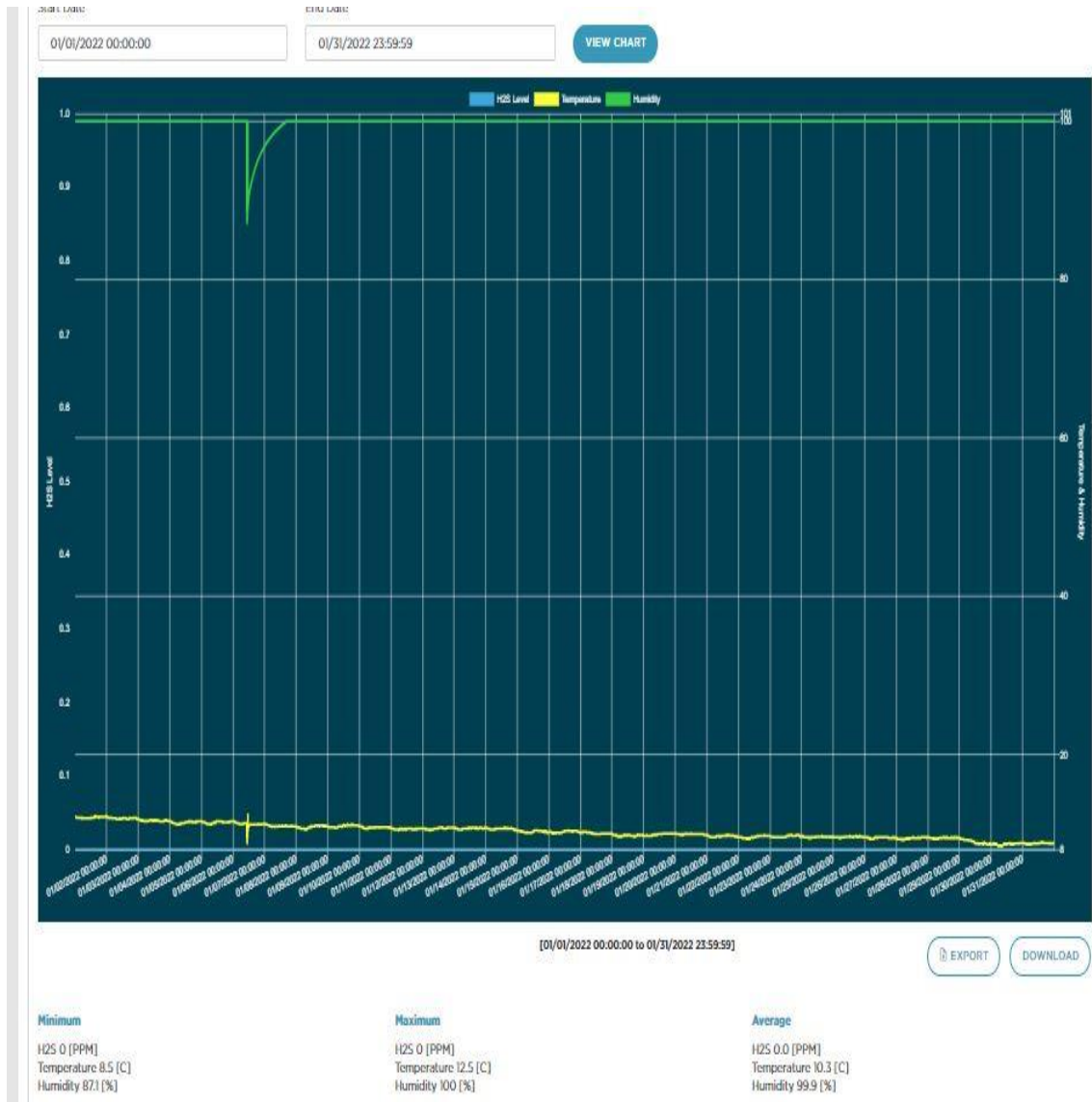
- “In-Pipe” bacteria – the 17 monthly unit changeouts were completed on 2/17, and the three bi-monthly locations were changed out on 2/24.
- No changes: on pump station mixing systems/aerators.
- No changes: Hydrogen sulfide (H<sub>2</sub>S) monitoring units were recording and trending on the odor scrubber. [inlet and outlet]. See graph below



[pictured below: Scrubber trend and trending graphs for H<sub>2</sub>S levels recorded from the vapor link system cellular at XYZ Street/Nantasket Ave and Nantasket Ave/Water Street manholes.



## XYZ – Nantasket Ave [closest to plant]



The odor data logging unit at XYZ monitoring the overall H2S levels close to the plant. ZERO H2S present. No spikes seen during the month.

# Nantasket Ave/Water Street [ at end of PS 3 force main and PS 4 discharge]



Pump station #3 - H2S is monitored at the end of the force main at the MH at Nantasket Ave & Water Street. Bioxide is added to allow for any excess nitrate concentration in the sewage system to treat the additional H2S added from other parts of the system – such as PS #4, contributions from lines feeding the interceptor, PS #5, PS #6, PS #9, Spinnaker Island, etc. all the way into the plant.

## 6 MAINTENANCE SUMMARY



### Maintenance History Report

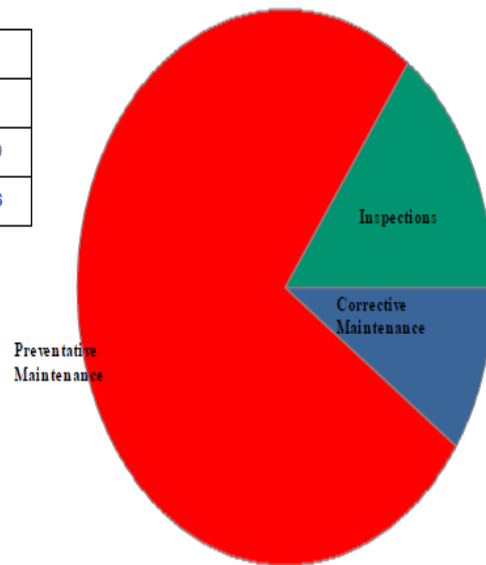
Start Date: 2/1/2022

End Date: 2/28/2022

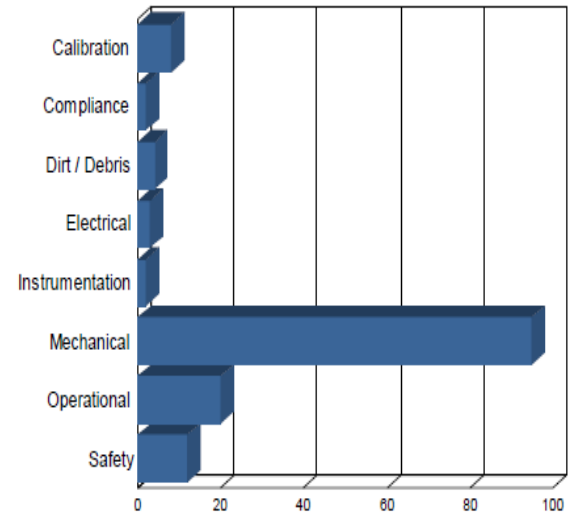
#### Hull Wastewater

Work Order History By Type

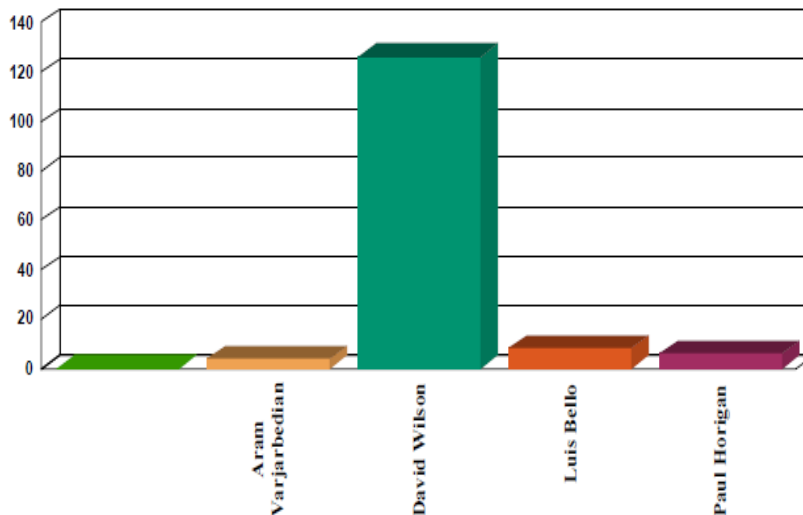
Corrective Maintenance	14
Inspections	22
Preventative Maintenance	110
<b>Total Work Orders</b>	<b>146</b>



Work Order History by Reason



Work Order History By Employee



Employee	WO Count	Labor Hours
Aram Varjarbedian	4	15
David Wilson	126	37
Luis Bello	8	1
Paul Horgan	8	3
Unassigned	2	3
<b>Totals</b>	<b>146</b>	<b>59</b>

## A. TASKS COMPLETED THIS MONTH

The SEMS & Utility cloud monthly work order summaries for February are attached for review.

Additional key items of note are listed below:

- February 3 the Hull Municipal Light Plant replaced the transformer bridge on the utility pole allowing power into the plant which was damaged by high winds during January's "Storm Bobby." The plant was under emergency generator power for 3 hours.
- The external radio hardware installation for the pump stations and the plant was completed. Pictured: Electricians installing the last antenna for the system.



- As noted in the SEMS report, the flex-rake screening unit drive motor was replaced. This motor service is considered severe, as the headworks environment has moisture and H2S issues. The previous motor lasted 3 years. There is always a spare motor in inventory.



- Resolved a number of pump room sump pump and sump discharge line issues at several of the pump stations. This included pump replacement, check valve replacement, and repairing discharge piping.
- In late February, the #2 influent pump had a noise issue that was investigated more. The findings indicated that the impeller had dropped within the pump volute, due to a corroded impeller bolt. The bolt corrosion was due to sewage and grit. Fortunately, the bolt was replaced, and the pump was reassembled and returned to service.
- The recently installed [new] sludge transfer pump was put into service and is operating well.



## B. ASSET MANAGEMENT ACCOUNTS

- Please see the attached summary totals and planned expenditures for the Asset Management accounts for contract year (7). Most recent through **5/3/22**.
- The planned expenditure list was updated. Monthly review & update. Some items that are delayed, may be moved to post in year #8.

## 7 SAFETY



It is Woodard & Curran's policy to maintain a safe and healthy work environment for every employee and to comply with all applicable occupational health & safety regulations.

- There were no lost time incidents reported for February.
- Monthly PM's, Emergency eyewash & shower inspections, fire extinguishers, and emergency lighting inspections completed.
- Monthly calibrations were performed on all MX4 & Max XT11 gas meters.
- On-going Coronavirus Covid-19 awareness and updates- daily reviews & as needed. Discuss covid protocol changes, site specific safety policies for sub-contractors, and safety tailgate meetings. Pure Safety topic for February was Back Injury Awareness.
- The monthly W&C staff safety meeting was held on February 23rd.
  - a. Major topics discussed and safety plans updated.
  - b. Emergency Action Plan, proper use of fire extinguishers, and safety in using hand tools.



## 8 STAFF DEVELOPMENT

**Training is an important part of any operation to ensure employee health and safety is assured, quality standards are supported, staff skills are improved, career opportunities become available, and higher productivity is achieved.**

**Listed is a general outline of training that the staff received over the course of the month:**

- Monthly staff Safety training completed – Pure Safety and the W&C monthly safety meeting- including a review of “near-miss” safety incidents at all W&C projects for month of January.
- Regular (usually daily) operational updates and process control discussions, pump station operations, especially with construction projects going on at the plant. Safety Covid-19, dig-safes, etc.

### **Staffing related items:**

- The regular staffing labor was primarily supplemented by O&M Specialist Paul Horigan, who sometimes covers the added shift left open by Aram V, and any other maintenance project needs as needed.
- Continued to have Saturday & Sunday staff coverage supplemented with part-time staff. Sunday licensed coverage rotation continued with Aram, Roger, Mike, and Joe.
- Intern Joel Terrio continued in a part-time capacity working Saturdays & Sundays and weekdays when he was off from school. This arrangement allows for the regular staff to be on site more during the week.
- Through February the staffing levels were not affected due to the Covid-19 virus pandemic.

## 9 COLLECTION SYSTEM

### 9.1 WET WELL CLEANING

The actual schedule for wet well cleaning: May 2021 to April 2022:

(X-Cleaned) - (Orange – Inspected) - (Green – See notes) - (blank – no work done)

Frequency of cleaning	Pump Station							
	A	1	3	4	5	6	9	D
May, 2021								
June, 2021	X							
July, 2021								
Aug., 2021	X			X				
Sept. 2021								
Oct., 2021								
Nov, 2021								
Dec., 2021								
Jan., 2022								
Feb., 2022								
March 2022								
April 2022								

All pump stations except for Pump Station 3 and Station D have an aerator/mixer in the wet wells.

### 9.2 COLLECTION SYSTEM MAINTENANCE

Collection system work is documented and tracked in Utility Cloud and a summarized report for October has been included as an attachment with the Monthly Operating Report.

Woodard & Curran assisted/conducted camera work and sewer system support in the Hull collection system at the following areas during the month of February. Ongoing backup and blockage call outs requiring an increase in labor and time to support. Below summarizes W&C's efforts at the various call out locations.

- Other Collection System Callouts:
  - 2/16: Fellows Electric repair E-1 pump cord
- Grinder pump summary:
  - Feb 14: 50 Nantasket Ave
  - Feb 22: 96 N. Truro [multiple calls to check on]

- In-Pipe units – ongoing maintenance of the dosing units as needed. Staff conducted board troubleshooting, dosing pump repairs, and replacements as needed.
- Pump station emergency generator runs completed- weekly no load and monthly loaded runs.
- All Pump station wet wells were inspected in February. Monthly Pump Station Inspections are completed and combined with monthly station PM's.
- Uploading new or updated tie-cards to the UC as required.
- There were 29 Dig-Safe mark outs in February. These are completed throughout the Town of Hull to assist/facilitate scheduled and emergency gas repairs, broken water mains, upcoming roadway paving projects, and other residential and town projects- all are listed in the UC summary.

# 10 PROJECT MANAGEMENT & ADMINISTRATION



## 10.1 ON-GOING PROJECTS AND SUPPORT ITEMS

### February updates:

- Due to the unpredictable and severe weather that can occur during the winter months, there were several periods during the month where additional preparations and monitoring were needed to ensure consistent plant operations.
- On-going work in many areas in the operations building to move, consolidate & discard items, since the building HVAC project will require access, etc.
- W&C O&M continued to work with the engineering group and D&C Construction for the hypochlorite storage tank replacement and containment plan. Reviewed room access, room dimensions, and temporary system options.
- Ongoing support of engineering projects with review and feedback provided – PS9, secondary& influent systems upgrade project, aeration tanks, bypass options during the upgrade, PS 4 pumps, energy grants & funding, and capital planning.
- With the phasing out of 3G cellular service, the text messaging back-up callout device for SCADA needed an upgrade. Working with WC SCADA group to obtain a new modem.
- Assisting the HSD as requested with the Straits Pond gatehouse support.
- A new spare 20HP submersible effluent pump was delivered. With the current supply chain issues and delays, the pump was received after the order was placed 20 weeks ago.



Asset Management Accounts - Year 7							
	FOR February M.O.R.	Actual to date			Projected for Final Estimate		
Account		Budgeted Amount	Spent to Date	Delta	Projected costs and incl PO's	Final est	Delta
07M-101A	Preventive Maint	\$213,028.73	\$139,688.34	\$73,340.39	\$0.00	\$139,688.34	\$73,340.39
07M-102B	Capital and Major Repairs	\$140,000.00	\$151,180.04	(\$11,180.04)	\$0.00	\$151,180.04	(\$11,180.04)
07M-103A	Major Sub Contractors	\$180,465.81	\$250,101.26	(\$69,635.45)	\$0.00	\$250,101.26	(\$69,635.45)
blank							
	Asset Management	\$533,494.54	\$540,969.64	(\$7,475.10)	\$0.00	\$540,969.64	(\$7,475.10)

(\$7,475.10)

Budget expended	Time Status	
	NOW=	5/3/2022
	Start	5/1/2020
65.6%	200.7%	135.2%
108.0%	200.7%	92.7%
138.6%	200.7%	62.1%
101.4%	200.7%	99.3%

07S	D Street	\$7,500.00	\$7,681.09	(\$181.09)	\$0.00	\$7,681.09	(\$181.09)
-----	----------	------------	------------	------------	--------	------------	------------

102.4%	200.7%	98.3%
--------	--------	-------

07C	Odor Control Chemicals	\$100,000.00	\$84,914.68	\$15,085.32	\$0.00	\$84,914.68	\$15,085.32
-----	------------------------	--------------	-------------	-------------	--------	-------------	-------------

84.9%	200.7%	115.8%
-------	--------	--------

Estimated total  
remaining 07M,  
07C \$7,610.22



Hull 2021-2022 - 07M Projects, Tasks, and Needs - (AV)								
Maintenance Account - Year 7 - 05_01_21 to 04_30_22								
FOR FEBRUARY 2021 MOR					\$0.00			5/3/2022 15:48
Priority [1=high]	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
1	Mechanical Work Labor by O&M specialists	On Going		101A				Jody St. George, Paul Horigan & WC Support Staff - Total budget \$25,000; incl annual scrubber cleaning, remove old blowers [mech];other items as needed. Adj budget down to \$9,000 - 11/22. Adjust 12/19;adj placeholder \$\$ 1/3/22; adj to zero 2/8/22
1	Pump and Motor Repairs [invoiced and pcard]	On Going		101A				to keep existing equipment running - utilize various outside contractor repair shops, new purchases. orig budget \$20,000; adjust to 6000 11/22, <b>adjust on 2/8/22; adjust to zero 4/4/22</b>
1	Lubricants	On Going		101A				Various Suppliers for oil and grease. Budgeted \$3500. delete \$\$ on 2/2 & move to gen repairs
1	Generator Repairs	On Going		101A				General Repair Work - Original <b>Placeholder</b> \$3,000; pending invoice for water solenoed main gen oct 2020; Adj 11/22 to \$2000. Will have rental \$\$, and repair \$\$ for PS6 generator. Main Gen #2 also eval-repairs. Budget at \$3,500. 3/8- Incl with PO issued to SSGen
1	Fire Alarm Inspections and Service	On Going		101A				Semi Annual - Hart Security [October & April , central station, & Service]Orig budget \$3000. Adjust to zero 4/4/22
2	Universal waste disposal	Pending		101A				Placeholder - \$500; zero the budget, will incur if needed. Veolia ES in for January services.
1	Service the Forklift	Pending		101A				Placeholder \$400 - Annual cost - outside vendor, <b>will be under 08M</b>
1	Overhead Hoist Inspection	Pending		101A				Annual task - Applied Dynamics - PO is usually issued for April. \$1500 <b>Will be an 08M</b>
1	Flow meter verification and calibration	Pending		101A				Placeholder - Annual - Ray Ferland 1 visit annually [orig budget \$1,000]; <b>Will be under 08M</b>
1	Facility Building - Roof Inspection	Pending		101A				\$2800 Annual Placeholder - Established contract with Tecta America. <b>Spril 2022 services may be delayed due to HVAC project. Not going to happen under 07M, will put into 08M</b>
1	Pump Station #9 - Repairs Immediate	completed		101A		\$6,900.00		Costs from D&C to be charged to budget Oct 2021
2	Jerome H2S Meter Inspection	Pending		101A				\$1100 - Placeholder for Annual Inspection - sent out includes annual service \$1100; not done in year #6 [remove placeholder 10/25
1	Janitorial Supplies	On Going		101A				Estimated annual expenditures - Orig budget \$4,000; adj 12/19;adj to \$1,000 on 2/2/22
1	Manhole Inspections	Pending		101A				As required,and/or scheduled
2	General mechanical and electrical items/supplies	On Going		101A				Grainger, FWWebb, EJP,Hoadley, McMasterCarr, etc; orig budget \$18,000, adjust to \$9,000 on 10/20; adjust to 6500 on 11/22; adj 12/19 to \$5000; adj to \$2000 on 2/2/22. Zero out on 3/8.
1	IR Survey	completed		101A				Done in 2021 [September]
2	Hoses	completed		101A				Replacements and/or Service - On-Going - As Needed; Purchased three 6-inch hoses, close out budget Oct 2021
1	Replace UPS batteries - plant and pump stations & town trailer	completed		101A				in process - started Oct 2021; Readjust budget to \$4,500.on 11/22. Completed 12/19
1	Spare A-C pump rotating assembly repair	completed		101A		\$4,400.74		10/18 - currently in shop for repairs at Seacoast Supply. No PO issued. Repaired unit received back.

Hull 2021-2022 - 07M Projects, Tasks, and Needs - (AV)								
Maintenance Account - Year 7 - 05_01_21 to 04_30_22								
FOR FEBRUARY 2021 MOR					\$0.00			<a href="#">5/3/2022 15:48</a>
Priority [1=high]	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
2	Misc. Materials	On Going		101A				Hardware Store - \$200.00 per month - reoccurring expense; orig budget \$2,400; Adjust to zero 4/4/22
4	Install a flow meter on the generator cooling water system - plant water	Pending		101A				Have an estimate [Oct 2018]; possible after 5/1/20
1	Lab Equip Calibration	completed		101A				Annual service \$600- usually Jan/Feb. Last done May 2021; process invoice Oct 2021
1	Mech seal[s] for RAS pumps ! & 2	completed		101A		\$4,648.39		P1 repairs in progress as of 10/1/21; estim cost \$5,000. No PO issued.
2	Tecta Roof Repairs - proposed per 2021 inspection	Pending		102B				TBD
2	yard hydrants - installation	Pending		102B				sub-contractor labor - pending; Have materials on hand. To be put on hold until spring 2022 [\$5,000] 2/2/22
1	Pump Station #4 - purchase two new pumps	Completed		102B				Cost: On a PO with MSI - # estim \$35,000 - by AEPump
1	Pump Station #4 - install new pumps	pending		102B				Most likely by D & C. 3/8 - Date pushed out to April & bill to hit in May ? - <b>\$10,000</b>
1	Effluent Pump #3 - repairs	On Going		102B				Currently the 60HP pump is at Flygt Repair shop - estimated repairs and new power cord - \$25,000; Pump still at shop - Dec 2021; <b>No PO was issued. Parts due in for late March. April update: Pump still at the shop, therefore repair costs will go on 08M</b>
1	Sanitaire hardware purchase for aer tk 1	Completed		102B		\$12,776.00		Purchase more hardware - done June/July 2021 [not billed yet]
1	Additional Sanitaire hardware/equip needs	completed		102B		\$2,612.00		Additional 350 membrane diffusers for aeration tank #1 [ordered 10/19/21
3	Replace 6" potable water valve in basement and misc. valves	Pending		102B				While doing project check/replace 1 1/4 valves as needed - Requires a water shutdown, on hold until after HVAC project completed. Orig planned cost \$3,000.
2	New 6" portable trash pump - changed to new effluent P3 - Flowserve	On Going		102B				Purchase from either Sourcewell or other -best estimate: <b>Update 2/8 to AquaSolutions - purchase of new effluent pump #3 - 60HP pump. On an issued PO 104175.</b>
1	New Effluent Flygt Pump #4	completed		102B				20 HP pump ordered October 2021. on a PO Estim cost: <b>\$17,000 plus freight</b>
3	New 4-inch valves for pri building between the tanks Installation	Pending		102B				Valves - cost: \$2500, sub-contracted labor - either WC or outside co.\$4,000 - <b>totl estim \$6,500</b>
3	Odor log data loggers & calibr kit	Pending		102B				Current units obsolete and not supported by company, possibly look at under 05C if funds avail; remove the \$6,000 on 2/6/20 - 06C or 06M
3	Jerome meter replacement	Pending		102B				replace unit, if done \$11,000
3	Gravity Thickener #1 sandblasting/painting	Pending		102B				Estimate \$45,000+ - would need to go out for competitive bid request, Target late spring/early summer 2022 ?
2 of 42	5/3/2022 AUMA spare electric actuator	Pending		102B	2020_05_01_07M_Checkbook_YTD draft			one spare unit, for inventory - Quoted by A&N. PO requested.& on order.#103652, unit delivered April 18th

Hull 2021-2022 - 07M Projects, Tasks, and Needs - (AV)								
Maintenance Account - Year 7 - 05_01_21 to 04_30_22								
FOR FEBRUARY 2021 MOR					\$0.00			5/3/2022 15:48
Priority [1=high]	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
1	Grit classifier system parts	On Going		102B				No spare parts - tail shft housing, tail shaft, bushing, retainer plate, etc.Estimate from DGMarshall, HE Moore and Envirodyne. Parts purchasing initiated Dec 2021. Estimated total \$9,000
2	Replacement Pumps LS A	Pending		102B				Pump efficiency lower than desired - new pumps may be needed. Estimate ?
1	Electrical Work	On Going		103A				Electricians: Glen Fellows, HiVoltage, other; remv old blowers.lighting, sec bldg elec outlets - \$2,000/month; orig budget \$25,000; adjust down to \$4,000. Adjust down & zero out on 12/19.
1	SCADA Work	On Going		103A				Steve Rose and the SCADA Support Team; orig budget \$25,000; adj Dec 2021. Adjust budget remaining from 11K down to 6K; adjust budget down 2/8/22 to - \$2,500; REDUCE TO ZERO, due to April service visits
1	E-One Repairs and Replacement	On Going		103A				Based on historical costs. E1 repairs where cost-effective & new replacement pumps; control panels, other equip; Orig budget \$25,000; More replacement pumps versus repairs. Reduce budget to 15K on 10/6; adj to 12K on 10/25; Adjust budget on 11/22 to \$3000. Adjust budget to Zero 12/19. 1/2/22 YTD costs \$28K. 2/2/22 - ongoing repairs & increased costs.
1	Annual Generator inspection	On Going		103A				placeholder 2021 Annual \$4,900 - MSElectrical Power - Generator PM/Service work - due in November, Early Dec target completion. 2/2/22 New Contractor will be in place for 2022. SSGEn - incl with PO issued to SSGEn
1	Automatic Transfer Switch inspection and servicing	Pending		103A				\$2400 - Annual Service planned for April Highland Power - NETS - Transfer Switch; Part of Gen Svc PO. Maypush this to after May 1st 2022 [2/2/22]
1	Wetwell Inspections and Cleaning - Plant/Pump Stations	On Going		103A				As required, plant or pump stations; orig budget \$10,000; adj 12/19 down to \$5000. 3/8 - adj placeholder down to \$3,000. Adjust to zero [4/4/22]
1	Sewer Line Cleaning - Emergencies	On Going		103A				Placeholder - As required for various sub-contractors; could be Hoadley, Truax, WindRiver, BMC, or other, collection system & plant; orig budget \$10,000; adj budget down to \$5,000 10/20; adjust down 1/3/22; Reduce to zero for Hoadley and Next Level work in late March/early April
1	Collection System and plant - emerg & unplanned calls - Jetting & CCTV work - various contractors	On Going		103A				Budget - 15,000, adj down to 10K on 10/20; Reverse budget to Zero after PS9 Pump & Haul in January for FM evaluation. [2/2/22]
1	Mersino 6" pump rental	On Going		103A				approx \$2600 per month; adj budget down due to payments 11/22; adj 12/19
1	Aer tank repairs [labor] through September	completed		103A				4 days - millwrights - Lydon \$8000
2	Aer tank repairs [labor] for diffuser membrane replacement	completed		103A		\$1,952.92		2 days - millwrights - Lydon \$6300; Aeration tank #3, aeration tank #1
3	Regen Aeration System - Pump Station #5	Pending		103A				Orig est \$1,500 -Tie into the SCADA system - Glen Fellows; .
3	SHT1 - demo of equip, air piping & diffuser install/materials	Pending		103A				demo concrete in tank - \$15,000 - sub-contractor and installation of new equip -additional new equip \$6,000; air piping to the tank \$10,000; Total estimate: \$31,000. Maybe year 8M project ?
4	Generators - Load Bank Testing Plant & Pump Stations	Pending		103A				Look at under 08M - recently done under 06M.
1	EESCO electrical MCC work - plant	completed		103A		\$10,235.00		In progress as of September 2021, and to be completed October 2021
1	EESCO MCC work at the Pump Stations	Pending		103A				TBD quoted for Oct/Nov 2021
1	Low pressure sewer valve box insp & mtce	Pending		103A				placeholder for contractoror O&M inspections and potential repairs; Looking at Rosano-Davis or another contractor & W&C to investigate; budget of \$7,500 on hold
3 of 4	5/3/2022 LS A pumps - Repairs to P2 by Industrial Pump	On Going		101A	2020_05_01_07M_Checkbook_YTD draft			Placeholder - 4/12 - Evaluating cost for pump repair while relacement costs for parts or new pumps are looked at..Spare assembly still at shop - repairs pending07M Planned Costs

Hull 2021-2022 - 07M Projects, Tasks, and Needs - (AV)								
Maintenance Account - Year 7 - 05_01_21 to 04_30_22								
FOR FEBRUARY 2021 MOR					\$0.00			<a href="#">5/3/2022 15:48</a>
Priority [1=high]	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
1	PC #2 rake repairs - Lydon	completed		103A		\$33,370.77		Time and materials per proposal;[\$18,000]Revised estimate due to additional issues not seen with first inspection. Estimated additional \$\$ - \$15,000
1	PC2 remaining repairs - turnbuickles	completed		103A				installation - INCL above.
1	Aeration Tank #1 mechanical assistance	completed		103A		\$6,911.47		hardware replacement and diffuser replacement - Late Nov, Early Dec.3 days of contractor assistance.
1	Deragger PS3 for Pump #2	On Going		102B				Needs to be completed by MSI, additional electrican assistance.
TOTAL					\$0.00			



# Maintenance History Report

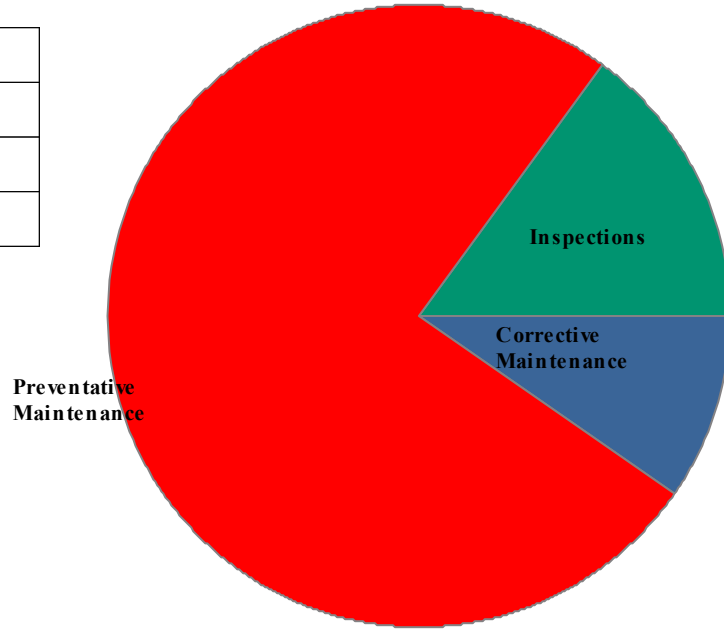
Start Date: 2/1/2022

End Date: 2/28/2022

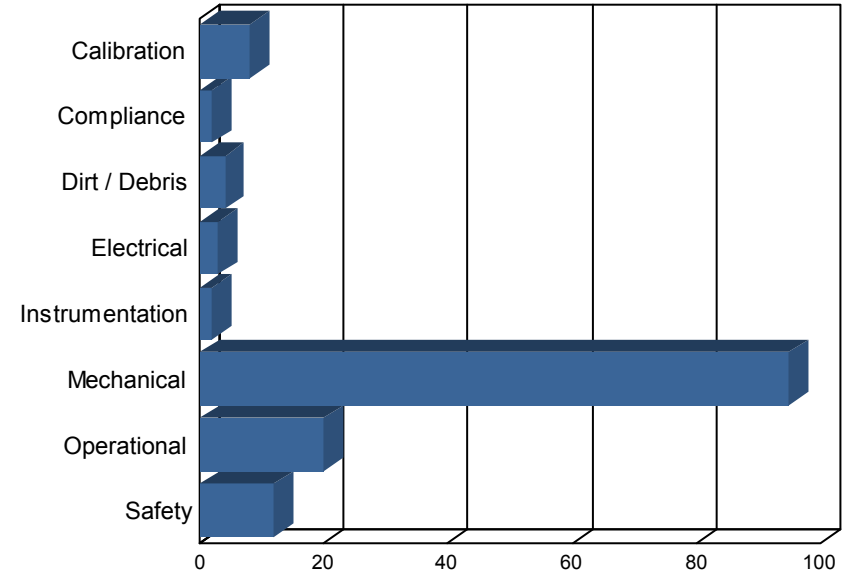
## Hull Wastewater

Work Order History By Type

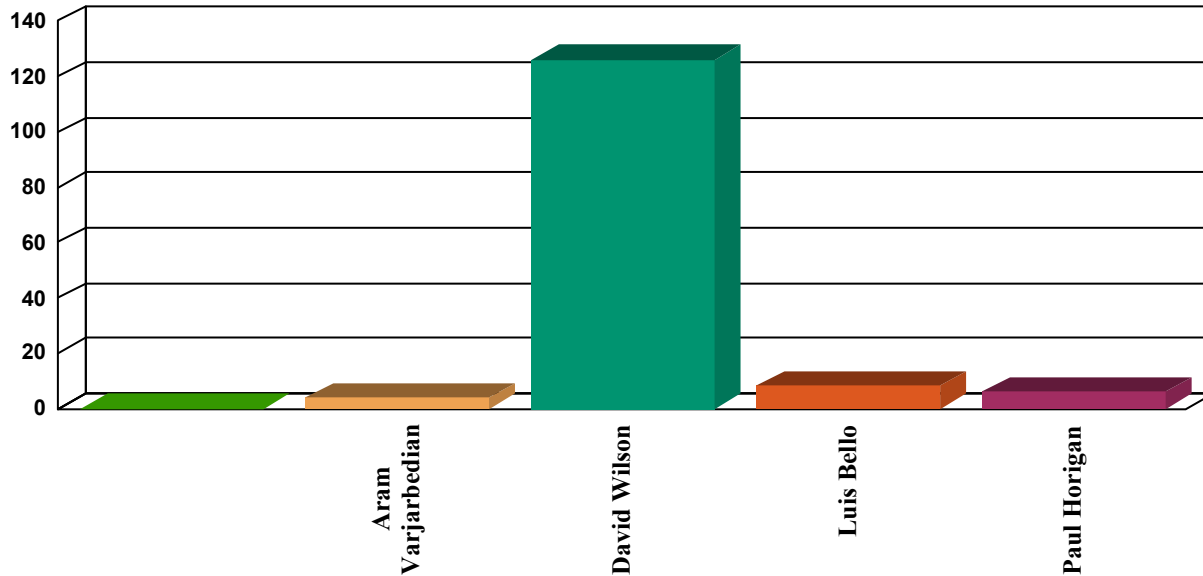
Corrective Maintenance	14
Inspections	22
Preventative Maintenance	110
<b>Total Work Orders</b>	<b>146</b>



Work Order History by Reason



Work Order History By Employee



Employee	WO Count	Labor Hours
Aram Varjarbedian	4	15
David Wilson	126	37
Luis Bello	8	1
Paul Horigan	6	3
Unassigned	2	3
<b>Totals</b>	<b>146</b>	<b>59</b>

## Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
2/1/22	15442	Generator #2 - Backup Detroit 500	Fuel oil leak while running.	While completing weekly no load generator run, I observed fuel oil leaking at a rate of 37 drips per minute from the bottom of the front cylinder head on the left side while facing the control panel. Fuel system needs to be inspected for overpressure and gasket failure.	David Wilson	2/1/22	In Process
2/3/22	15443	PS 1 Pump 1	Clean and inspect pump	DW/PH/ES LOTO of equipment. Separated clean outs. Found rope caught between impeller and volute. Removed rope and adjusted impeller. Cleaned and inspected check valve. Removed rag ball from disc. Reassembled and returned to service. Test and verified flow of 280gpm.	David Wilson	2/4/22	Completed
2/4/22	15444	RAS Pump 3	Clean and inspect pump.	DW/LB LOTO of equipment. Separated pump from volute. Removed rags from impeller. Removed cover from check valve. Removed rag ball on disc. Reassembled. Found two holes in volute needing additional work. Chased threads in cross threaded hole and installed time cert in stripped bolt hole. Resurfaced volute flange face. Reassembled and returned to service. Tested flow and observed .7mgd @ 32hZ	David Wilson	2/4/22	Completed
2/4/22	15445	30 - WW Treatment Plant - General	Diagnose and repair old snow blower.	Inspected fluids. Topped off as needed. Got snow blower running. Tested functions. Found fuel valve leaking, shear pin severed and minor oil leaking from oil pump housing. Installed new fuel valve and shear pin. Zip tied a backup shear pin to back of control panel.	David Wilson	2/4/22	Completed
2/7/22	15446	Mechanical Screen & Washpress System	flex rake drive failure at 12 am	Callout to ES, and AV at 12 am. Flex VFD fail. Attempt to reset, drawing high current. Monitor 1am to 7am [ES]; 7am open bypass channel, close infl gate and determined flex drive motor bad bearing. (motor lasted 2.25 yrs). Repl motor with new spare. AV, DW, MS. LB	Aram Varjarbedian	2/7/22	Completed
2/8/22	15451	PS 4 Sump Pump	High alarm	Received alarm, called Joe B, for assistance. Materials need 2" zoller and hose. Lower zoller, pumped out 20" of water discharged into wetwell. Turned off pump 1 do to seal leak. Once emptied used H2s meter into space, space was good. Joe basler, had H2s meter on him, Went down into drywell, isolated suction and discharge of pump 1 and unplugged sump which failed. Once task was done, no leaks into drywell. Left for the night in the morning we addressed issues		2/8/22	Completed
2/8/22	15447	PS 3 Sump Pump	Repair failed check valves.	Installed new check valves for both pumps.	David Wilson	2/9/22	Completed
2/9/22	15449	PS 4 Sump Pump	Repair failed coupling	Replaced check valve and couplings.	David Wilson	2/9/22	Completed
2/9/22	15448	PS 4 Piping and Valves	Clean and inspect check valve	Isolated pump 1 electrically and hydraulically. Removed cover and cleaned out debris.	David Wilson	2/9/22	Completed



## Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
2/11/22	15452	PS 5 Generator	Failed block heater	Isolated block heater. Removed mounting hardware and hoses. Installed new block heater and mount.	David Wilson	2/11/22	Completed
2/15/22	15453	HVAC System	Diagnose roof exhaust fan breaker tripped.	LOTO of equipment. Megged motor and found short. Isolated motor and reset circuit. Good. Replaced motor, conduit and pulley. Tested rotation. Good Returned to service.	David Wilson	2/15/22	Completed
2/16/22	15455	Aeration Tank 1 Oxygen Probe	Replace cracked cap	Cleaned probe. Removed broken cap and cleaned sensor. Configured sensor to new cap. Verified new sensor cap configuration in SC200.	David Wilson	2/16/22	Completed
2/24/22	15456	Influent Pump 2	Diagnose hard to turn shaft.	LOTO of equipment. Inspected impeller and found bolt worn. Found scoring in volute and on wear ring. Removed motor, frame and pump. Removed impeller for inspection and reassembled with new 316SS bolt. Returned to service.	David Wilson	2/24/22	Completed
2/28/22	15601	PS 4 Sump Pump	pipe leak at pump, high level alarm float activated	JB, AV. Alarm call to JB at approx 515am. Inspected, found broken fitting. AV assist and pump down room with back up pump. Repair piping with hard pieces at pump connection. test ok.	Aram Varjarbedian	2/28/22	Completed

## Inspections

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
2/10/22	15022	PS 1	PS #1 Inspection - Monthly		David Wilson	2/3/22	Completed
2/10/22	15023	PS 3	PS #3 Inspection - Monthly		David Wilson	2/3/22	Completed
2/10/22	15026	PS 4	PS #4 Inspection - Monthly		David Wilson	2/3/22	Completed
2/10/22	15027	PS 5	PS #5 Inspection - Monthly		David Wilson	2/3/22	Completed
2/10/22	15030	PS 6	PS #6 Inspection - Monthly		David Wilson	2/3/22	Completed
2/10/22	15031	PS 9	PS #9 Inspection - Monthly		David Wilson	2/3/22	Completed
2/10/22	15034	PS A	PS #A Inspection - Monthly		David Wilson	2/3/22	Completed
2/11/22	15450	PS 4 Pump 2	Measure motor current.	Measured motor current from control panel for pump 2. Averaged - 45.6A FLA - 48.6A Measured motor current from control panel for pump 1. Averaged - 35.3A FLA - 48.6A Believe excessive draw due to debris stuck between impeller and volute. Recommend adjustment of impeller height after removing debris.	David Wilson	2/11/22	Completed
2/11/22	15066	Fire Extinguishers	WWTF Fire Extinguisher Inspections - Monthly		Luis Bello	2/7/22	Completed
2/11/22	14966	Eyewash Stations	WWTF Eyewash Inspection - Weekly		Luis Bello	2/6/22	Completed
2/11/22	15081	Waste Oil Storage	Waste Oil Area Inspection		Luis Bello	2/8/22	Completed
2/11/22	15082	Universal waste area	Universal Waste Storage Area Inspection		Luis Bello	2/8/22	Completed
2/11/22	14970	Emergency Lighting & exit signs	Emergency Lighting Inspection - Monthly		Luis Bello	2/9/22	Completed

## Inspections

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
2/11/22	14889	Truck 1 - 2010 Dodge Ram 1500	Monthly vehicle inspection on do-Forms		David Wilson	1/3/22	Completed
2/11/22	14900	Truck 2 - 2009 Chevy 2500 HD	Monthly vehicle inspection on do-Forms		David Wilson	1/3/22	Completed
2/11/22	14908	Truck 3 - 2015 Chevy 3500 HD	Monthly vehicle inspection on do-Forms		David Wilson	1/3/22	Completed
2/17/22	14967	Eyewash Stations	WWTF Eyewash Inspection - Weekly		David Wilson	2/13/22	Completed
2/18/22	15088	Truck 3 - 2015 Chevy 3500 HD	Monthly vehicle inspection on do-Forms	Topped off all fluids. Set tire pressures. Cleaned interior and exterior.	David Wilson	2/7/22	Completed
2/18/22	15454	Truck 3 - 2015 Chevy 3500 HD	Perform vehicle inspection	Inspected vehicle - See doFORMS report for full details.		2/18/22	Completed
2/18/22	15080	Truck 2 - 2009 Chevy 2500 HD	Monthly vehicle inspection on do-Forms	Topped off all fluids. Set tire pressures. Cleaned interior and exterior.	David Wilson	2/7/22	Completed
2/23/22	14968	Eyewash Stations	WWTF Eyewash Inspection - Weekly	Completed	Luis Bello	2/20/22	Completed
2/28/22	15089	Truck 4 - 2015 Nissan Frontier	Monthly vehicle inspection on do-Forms	Vehicle insp completed, no issues. Upcoming oil chg due. Mileage 138,000	Aram Varjarbedian	2/7/22	Completed

## Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
2/1/22	14819	Influent Sluice Isolation Gate	Weekly operate through full range		Aram Varjarbedian	1/26/22	Completed
2/1/22	14740	Building Flood Conrtol	Semi Annual PM of Flood Gates		David Wilson	12/16/21	Completed
2/1/22	14893	PS Kholer Trailer Mounted Generator	Generator Weekly - Test Run no load		David Wilson	1/31/22	Completed
2/1/22	14924	Generators "All Pump Station"	Generator Weekly - Test Run no load		David Wilson	1/31/22	Completed
2/1/22	14877	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	1/26/22	Completed
2/1/22	14883	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	1/26/22	Completed
2/1/22	14867	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	1/26/22	Completed
2/1/22	14873	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	1/26/22	Completed
2/1/22	14857	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		David Wilson	1/26/22	Completed
2/1/22	14863	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	1/26/22	Completed
2/1/22	14814	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load		David Wilson	1/24/22	Completed
2/1/22	14811	Generator #1- Emergency Kohler 750	Generator - Monthly Load Test		David Wilson	1/2/22	Completed
2/1/22	14928	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		David Wilson	1/23/22	Completed
2/1/22	14815	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load		David Wilson	1/31/22	Completed
2/1/22	14809	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load		David Wilson	1/24/22	Completed
2/1/22	14810	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load		David Wilson	1/31/22	Completed

## Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
2/2/22	14831	Aeration Blower 1	Aeration Blower #1 Air Filter Inspection - monthly		David Wilson	1/25/22	Completed
2/2/22	14832	Aeration Blower 2	Aeration Blower #2 Air Filter Inspection - Monthly		David Wilson	1/27/22	Completed
2/2/22	14895	Ventis MX4 #2 - 4 Gas	4 Gas Meter #2 Calibration - Monthly	Completed as requested	Paul Horigan	1/27/22	Completed
2/2/22	14896	Ventis MX4 #3 - 4 Gas	4 Gas Meter #3 Calibration - Monthly	Completed as requested	Paul Horigan	1/27/22	Completed
2/2/22	14897	Ventis MX4 #4 - 4 Gas	4 Gas Meter #4 Calibration - Monthly	Completed as requested	Paul Horigan	1/27/22	Completed
2/2/22	14899	Ventis MX4 #6 - 4 Gas	4 Gas Meter #6 Calibration - Monthly	Completed as requested	Paul Horigan	1/27/22	Completed
2/2/22	14898	Ventis MX4 #5 - 4 Gas	4 Gas Meter #5 Calibration - Monthly	Needs battery	Paul Horigan	1/27/22	Waiting for Parts
2/2/22	14903	GasAlert Max XTII #2	monthly calibration	Completed as requested	Paul Horigan	1/27/22	Completed
2/3/22	14981	Influent Sluice Isolation Gate	Weekly operate through full range		Luis Bello	2/2/22	Completed
2/3/22	14965	Portable Generator - Honda	Portable Generator Inspection - Monthly		David Wilson	2/2/22	Completed
2/3/22	15055	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	2/2/22	Completed
2/3/22	15051	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	2/2/22	Completed
2/3/22	15061	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	2/2/22	Completed
2/3/22	15045	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	2/2/22	Completed
2/3/22	15041	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	2/2/22	Completed
2/3/22	15035	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		David Wilson	2/2/22	Completed
2/3/22	14914	High level floats	Weekly High Float Alarm test		Luis Bello	1/30/22	Completed
2/10/22	14978	Grit Screw Classifier	Grit classifier Oil Change - Annual		David Wilson	2/1/22	Completed
2/10/22	14979	Grit Screw Drive	Grit Screw Drive Oil Change - Annual		David Wilson	2/1/22	Completed
2/10/22	15021	PS 1	PUMP STATIONS - QUATERLY PM'S		David Wilson	2/1/22	Completed
2/10/22	15024	PS 3	PUMP STATIONS - QUATERLY PM'S		David Wilson	2/1/22	Completed
2/10/22	15025	PS 4	PUMP STATIONS - QUATERLY PM'S		David Wilson	2/1/22	Completed
2/10/22	15028	PS 5	PUMP STATIONS - QUATERLY PM'S		David Wilson	2/1/22	Completed
2/10/22	15029	PS 6	PUMP STATIONS - QUATERLY PM'S		David Wilson	2/1/22	Completed
2/10/22	15032	PS 9	PUMP STATIONS - QUATERLY PM'S		David Wilson	2/1/22	Completed
2/10/22	15033	PS A	PUMP STATIONS - QUATERLY PM'S		David Wilson	2/1/22	Completed
2/10/22	15039	PS 1 Generator	PS #1 Generator Inspection and Load Test - Monthly		David Wilson	2/2/22	Completed
2/10/22	15040	PS 3 Generator	PS #3 Generator Inspection and Load Test - Monthly		David Wilson	2/2/22	Completed

## Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
2/10/22	15049	PS 4 Generator	PS #4 Generator Inspection and Load Test - Monthly		David Wilson	2/2/22	Completed
2/10/22	15050	PS 5 Generator	PS #5 Generator Inspection and Load Test - Monthly		David Wilson	2/2/22	Completed
2/10/22	15060	PS 6 Generator	PS #5 Generator Inspection and Load Test - Monthly		David Wilson	2/2/22	Completed
2/10/22	15059	PS 9 Generator	PS #9 Generator Inspection and Load Test - Monthly		David Wilson	2/2/22	Completed
2/10/22	15099	Generators "All Pump Station"	Generator - Monthly Load Test		David Wilson	2/6/22	Completed
2/10/22	14974	Generator #1- Emergency Kohler 750	Generator - Monthly Load Test		David Wilson	2/6/22	Completed
2/10/22	14985	Mechanical Screen & Washpress System	Monthly Maintenance		David Wilson	2/7/22	Completed
2/10/22	15074	PS Kholer Trailer Mounted Generator	Generator - Monthly Load Test		David Wilson	2/6/22	Completed
2/10/22	15090	High level floats	Weekly High Float Alarm test		David Wilson	2/6/22	Completed
2/10/22	15008	RAS Pump 3	Monthly Check Pump Couplings		David Wilson	2/2/22	Completed
2/10/22	15005	RAS Pump 2	Monthly Check Pump Couplings		David Wilson	2/2/22	Completed
2/10/22	15007	RAS Pump 3	RAS Pump #3 PM - Quarterly		David Wilson	2/2/22	Completed
2/10/22	15006	RAS Pump 2	RAS Pump #2 PM - Quarterly		David Wilson	2/2/22	Completed
2/10/22	14929	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		David Wilson	1/30/22	Completed
2/10/22	15067	GasAlert Max XTII #1	4 gas meter calibration - monthly		David Wilson	2/1/22	Completed
2/11/22	15103	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		David Wilson	2/6/22	Completed
2/11/22	14982	Influent Sluice Isolation Gate	Weekly operate through full range		David Wilson	2/9/22	Completed
2/11/22	15036	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		David Wilson	2/9/22	Completed
2/11/22	15042	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	2/9/22	Completed
2/11/22	15046	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	2/9/22	Completed
2/11/22	15052	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	2/9/22	Completed
2/11/22	15056	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	2/9/22	Completed
2/11/22	15062	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	2/9/22	Completed
2/16/22	15071	PS Kholer Trailer Mounted Generator	Generator Weekly - Test Run no load		David Wilson	2/14/22	Completed
2/16/22	15100	Generators "All Pump Station"	Generator Weekly - Test Run no load		David Wilson	2/14/22	Completed
2/16/22	14971	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load		David Wilson	2/14/22	Completed
2/16/22	14975	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load		David Wilson	2/14/22	Completed

## Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
2/16/22	14833	Aeration Tank 1 Oxygen Probe	AT #1 DO Probe Clean and Calibrate - Monthly	Cleaned and calibrated LDO probe. Offset was -.29 with new cap.	David Wilson	1/4/22	Completed
2/16/22	14834	Aeration Tank 3 Oxygen Probe	AT #3 DO Probe Clean and Calibrate - Monthly	Cleaned and calibrated LDO probe. Offset was -2.14.	David Wilson	1/4/22	Completed
2/16/22	14997	Aeration Tank 1 Oxygen Probe	AT #1 DO Probe Clean and Calibrate - Monthly		David Wilson	2/1/22	Completed
2/16/22	14998	Aeration Tank 3 Oxygen Probe	AT #3 DO Probe Clean and Calibrate - Monthly		David Wilson	2/1/22	Completed
2/16/22	15098	ORP meter	Clean and Calibrate	Cleaned and calibrated ORP probe. Offset was -26mV. Cal passed.	David Wilson	2/10/22	Completed
2/16/22	15097	pH meter	Clean and Calibrate	Cleaned and calibrated pH meter. Offset was -.95. Cal passed.	David Wilson	2/1/22	Completed
2/16/22	14995	Secondary Clarifier 1	Clean Launder Screens - Quarterly	No screen in place.	David Wilson	2/7/22	Completed
2/16/22	14996	Secondary Clarifier 2	Clean Launder Screens - Quarterly	Relatively clean. Some pine needles on it	David Wilson	2/7/22	Completed
2/17/22	14983	Influent Sluice Isolation Gate	Weekly operate through full range		David Wilson	2/16/22	Completed
2/17/22	15037	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		David Wilson	2/16/22	Completed
2/17/22	15043	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	2/16/22	Completed
2/17/22	15047	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	2/16/22	Completed
2/17/22	15053	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	2/16/22	Completed
2/17/22	15057	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	2/16/22	Completed
2/17/22	15063	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	2/16/22	Completed
2/17/22	15091	High level floats	Weekly High Float Alarm test		David Wilson	2/13/22	Completed
2/17/22	15104	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		David Wilson	2/13/22	Completed
2/17/22	15010	RST Feed Pump 1	Monthly Check Pump Couplings		David Wilson	2/2/22	Completed
2/17/22	15011	RST Feed Pump 2	Monthly Check Pump Couplings		David Wilson	2/2/22	Completed
2/17/22	15017	Sludge Transfer Pump 1	Monthly Check Pump Couplings		David Wilson	2/2/22	Completed
2/17/22	15018	Sludge Transfer Pump 2	Monthly Check Pump Couplings	Spider coupling part came in. Pump currently out of service.	David Wilson	2/2/22	Completed
2/17/22	15014	Primary Sludge Pump 1	Monthly Check Pump Couplings		David Wilson	2/2/22	Completed
2/17/22	15015	Primary Sludge Pump 2	Monthly Check Pump Couplings		David Wilson	2/2/22	Completed
2/18/22	14999	Effluent Pumps	Effluent Pump - Monthly		David Wilson	2/15/22	Completed
2/18/22	14835	Effluent Pumps	Effluent Pump - Monthly		David Wilson	1/15/22	Completed
2/18/22	15003	RAS Pump 1	RAS Pump #1 PM - Quarterly		David Wilson	2/2/22	Completed
2/18/22	15004	RAS Pump 1	Monthly Check Pump Couplings		David Wilson	2/2/22	Completed
2/18/22	14986	Influent Pump 1	Monthly Check Pump Couplings	Turns freely. Acceptable wear.	David Wilson	2/2/22	Completed

## Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
2/18/22	14987	Influent Pump 2	Monthly Check Pump Couplings	Hard to turn. Follow up inspection. Coupling in good shape. Hub height should be adjusted.	David Wilson	2/2/22	Completed
2/18/22	14988	Influent Pump 3	Monthly Check Pump Couplings		David Wilson	2/2/22	Completed
2/18/22	14989	Influent Pump 4	Monthly Check Pump Couplings		David Wilson	2/2/22	Completed
2/18/22	14990	Influent Pump 5	Monthly Check Pump Couplings		David Wilson	2/2/22	Completed
2/22/22	14976	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load		David Wilson	2/21/22	Completed
2/22/22	15072	PS Kohler Trailer Mounted Generator	Generator Weekly - Test Run no load		David Wilson	2/21/22	Completed
2/22/22	15101	Generators "All Pump Station"	Generator Weekly - Test Run no load		David Wilson	2/21/22	Completed
2/22/22	14972	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load		David Wilson	2/21/22	Completed
2/23/22	14984	Influent Sluice Isolation Gate	Weekly operate through full range		David Wilson	2/23/22	Completed
2/23/22	15092	High level floats	Weekly High Float Alarm test	DW,LB. tested ok.	David Wilson	2/20/22	Completed
2/23/22	15105	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY	Inspect all, drain condensate, chk oil levels ok	David Wilson	2/20/22	Completed

Date	Asset ID	Asset Description	Asset Class	Name	Workflow Class
2/10/2022 8:58	03-020	88 MAIN ST	Hull Parcels	Sutton, Eric	Hull - Markout
2/23/2022 14:08	04-060	18 NEWTON ST	Hull Parcels	Sutton, Eric	Hull - Sewer Backup
2/10/2022 8:57	05-078	73 HIGHLAND AVE	Hull Parcels	Sutton, Eric	Hull - Markout
2/18/2022 12:24	15-036	36 K STREET	Hull Parcels	Sutton, Eric	Hull - Markout
2/23/2022 11:08	15-054	32 L STREET	Hull Parcels	Sutton, Eric	Hull - Markout
2/18/2022 12:21	16-160	48 G STREET	Hull Parcels	Sutton, Eric	Hull - Markout
2/24/2022 13:29	18-081	28 A STREET	Hull Parcels	Sutton, Eric	Hull - Markout
2/2/2022 10:50	23-004	543 NANTASKET AVE	Hull Parcels	Sutton, Eric	Hull - Markout
2/18/2022 12:16	29-055	1 SECOND ST	Hull Parcels	Sutton, Eric	Hull - Markout
2/3/2022 9:19	29-056	59 WHITEHEAD AVE	Hull Parcels	Sutton, Eric	Hull - Markout
2/18/2022 12:04	29-073	4 SECOND ST	Hull Parcels	Sutton, Eric	Hull - Markout
2/22/2022 12:20	30-053	102 EDGEWATER RD	Hull Parcels	Sutton, Eric	Hull - Markout
2/14/2022 14:35	34-022	5 EASTERN AVE	Hull Parcels	Sutton, Eric	Hull - Markout
2/3/2022 9:15	34-097	247 NANTASKET AVE	Hull Parcels	Sutton, Eric	Hull - Markout
2/22/2022 13:57	35-078	9 HILLSIDE RD	Hull Parcels	Sutton, Eric	Hull - Sewer Backup
2/20/2022 15:42	36-030	5 HAMPTON CIRCLE	Hull Parcels	Sutton, Eric	Hull - Markout
2/18/2022 12:19	36-104	11 MAYFLOWER AVE	Hull Parcels	Sutton, Eric	Hull - Markout
2/18/2022 12:28	36-104	11 MAYFLOWER AVE	Hull Parcels	Sutton, Eric	Hull - Markout
2/15/2022 11:24	45-002	1 DIGHTON ST	Hull Parcels	Sutton, Eric	Hull - Markout
2/15/2022 10:47	49-068	38 ATLANTIC HSE RD	Hull Parcels	Sutton, Eric	Hull - Markout
2/15/2022 11:21	49-068	38 ATLANTIC HSE RD	Hull Parcels	Sutton, Eric	Hull - Markout
2/14/2022 13:19	50 Nantasket Ave	50 Nantasket Ave Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Hull - Grinder Pump Maintenance
2/3/2022 14:32	51-023	219 ATLANTIC AVE	Hull Parcels	Sutton, Eric	Hull - Markout
2/9/2022 15:23	96 N Truro St	96 N Truro St Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Hull - Grinder Pump Maintenance
2/22/2022 14:02	96 N Truro St	96 N Truro St Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Hull - Grinder Pump Maintenance
2/17/2022 13:07	Bacteria UNIT #21	UNIT #21	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:13	Bacteria UNIT #22	UNIT #22	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:00	Bateria UNIT # 8	UNIT # 8	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 12:57	Bateria UNIT #1	UNIT #1	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:01	Bateria UNIT #10	UNIT #10	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:04	Bateria UNIT #11	UNIT #11	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:12	Bateria UNIT #12	UNIT #12	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:09	Bateria UNIT #13	UNIT #13	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:08	Bateria UNIT #14	UNIT #14	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:06	Bateria UNIT #15	UNIT #15	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:05	Bateria UNIT #16	UNIT #16	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:01	Bateria UNIT #17	UNIT #17	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:03	Bateria UNIT #18	UNIT #18	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units

Date	Asset ID	Asset Description	Asset Class	Name	Workflow Class
2/10/2022 8:58	03-020	88 MAIN ST	Hull Parcels	Sutton, Eric	Hull - Markout
2/17/2022 13:02	Bateria UNIT #19	UNIT #19	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 12:57	Bateria UNIT #2	UNIT #2	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:05	Bateria UNIT #20	UNIT #20	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:10	Bateria UNIT #23	UNIT #23	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 12:56	Bateria UNIT #24	UNIT #24	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:02	Bateria UNIT #3	UNIT #3	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 12:55	Bateria UNIT #4	UNIT #4	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 12:59	Bateria UNIT #5	UNIT #5	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 12:58	Bateria UNIT #6	UNIT #6	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:00	Bateria UNIT #7	UNIT #7	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/17/2022 13:13	Bateria UNIT #9	UNIT #9	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
2/10/2022 9:03	MH-20087	SEMS_Asset	Sanitary Manhole	Sutton, Eric	Generic WO