



# HULL WATER POLLUTION CONTROL FACILITY

September  
2021

## MONTHLY OPERATING REPORT



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

COMMITMENT & INTEGRITY DRIVE RESULTS

NPDES NO. MA0101231

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## **Cover pictures:**

[top] Pump Station #9 bypass pump set up, while pump & piping repairs being completed

[bottom] primary D-Box sluice gate valve housing – rotted/broken

# 1 EXECUTIVE SUMMARY

**This Monthly Operating Report provides a summary of the pertinent information and activities that occurred at Hull WPCF during the month of September 2021.**

- No lost-time incidents for the month of September.
- Continued/On-going covid-19 safety operations: Regular daily operations and staff scheduling, adhering to company and CDC guidelines and updates. Staffing levels normal as it pertains to covid19. Ongoing mask use per Town mandate.
- There were **146** effluent samples taken in the month of September [details on page (12).] All effluent samples collected were compliant. The average daily flow for the month was 1.58 MGD. A total of 5.81 inches of rainfall was recorded, with the highest daily total amount recorded on 9/1 [4.0"]. Process conditions remained compliant, and flows were elevated for the first 3-4 days of the month. The peak daily flow on 9/2 was 5.7 MG. Additional tanks [clarifiers] were put on-line, and additional staff coverage and remote assistance provided to maintain plant systems during the high flow periods.
- There were no Sanitary System Overflows [SSO] reported.
- The plant and collection system odors remained low as flows were above average during the early part of the month. Remote monitoring with the Vapor-Link to monitor H2S levels.
- At the Primary D-box – inlet gate to PC#1 failed when needed during the 9/1-9/2 rain event. Unable to isolate tank since the casting for the frame was rotted and broken. An inflatable plug was installed by D&C Construction.
- The Asset Management Accounts summaries for contract year #7 is attached. Latest revision date: 12/19/21.
- There were two grinder pump replacement call outs during the month of September.
- Electrical MCC and switch gear maintenance completed by EESCO in September [9/22-23]
- W&C O&M continued efforts on the Engineering projects – Ops HVAC, pump station #9, plant influent and secondary system, pump station #4 change-order work, D-Box gates.
- Weekly Bio Bot Covid-19 wastewater monitoring program - sampling continued.

**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



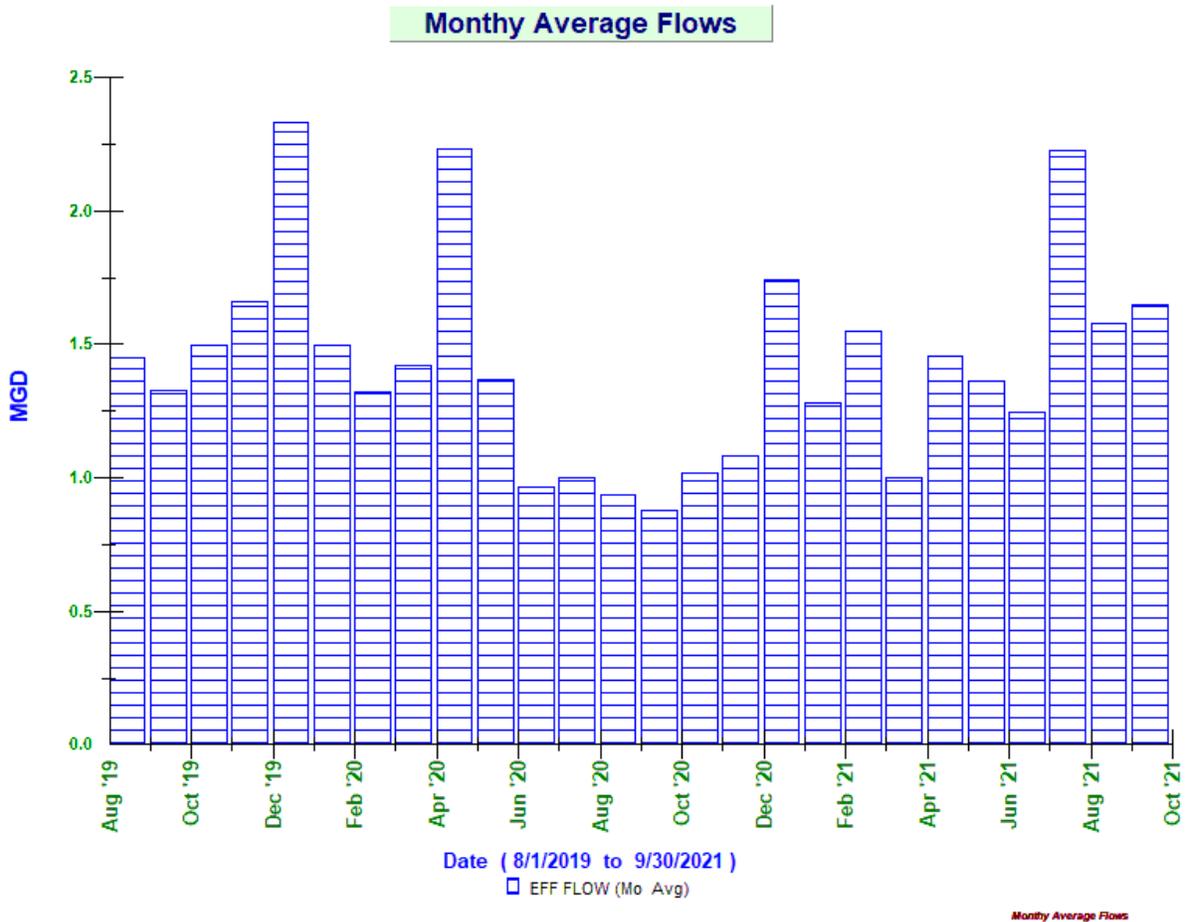
### Average Daily Flows and Loadings for the Month:

	Eff Flow MGD	Inf Flow MGD	Inf BOD LBS	Inf TSS LBS	Eff BOD LBS	EFF TSS LBS
Sept 2019	1.312	1.517 *	2020	5900	37	160
Sept 2020	0.876	0.881*	1775	3066	52	128
Sept 2021	1.645	<b>1.627*</b>	2549	3743	168	84

\* On-Going - The existing influent flow meters are strap on doppler flow meters, and the pipe condition prevents getting a strong signal. The staff utilizes the area velocity meter in the aeration tank inlet channel as well as the headworks influent Parshall Flume meter. 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.

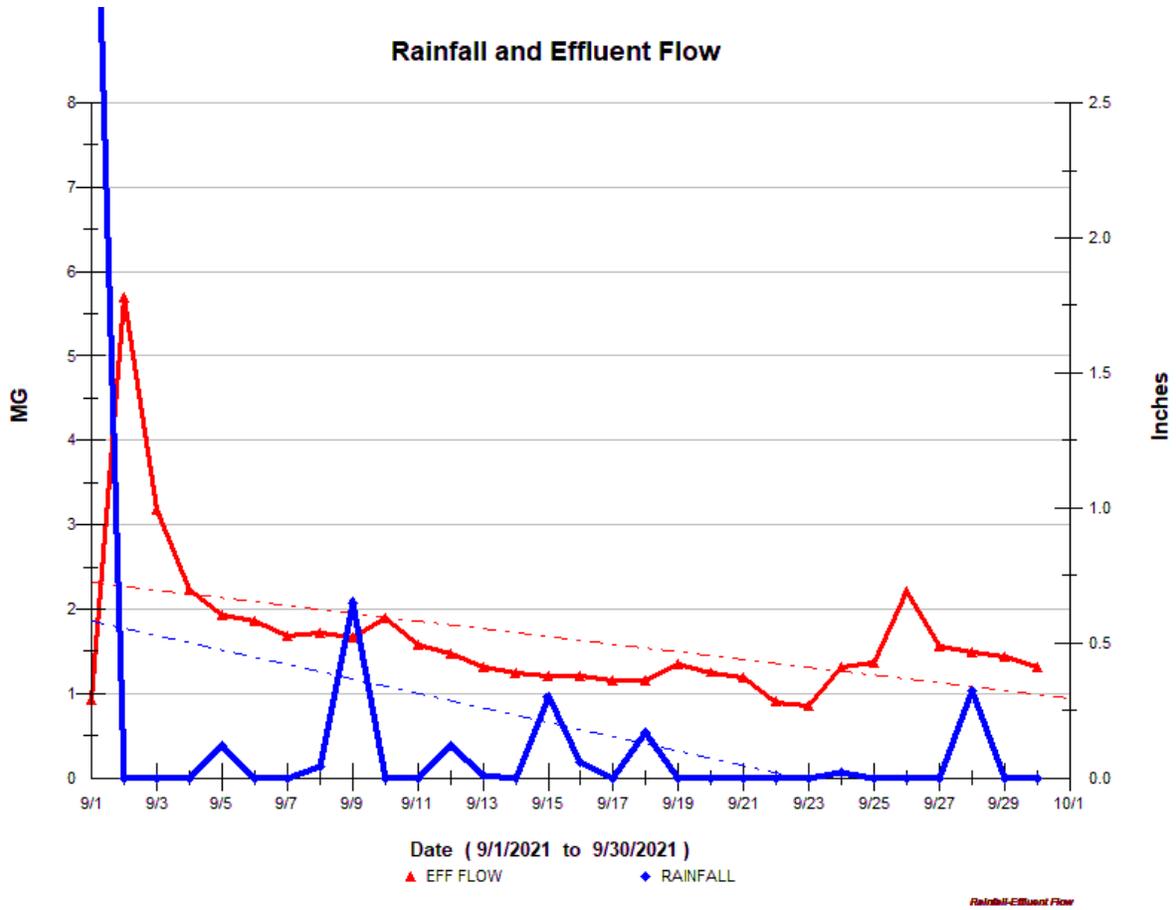
## 2.1 AVERAGE EFFLUENT MONTHLY FLOWS – 2+ YEAR COMPARISON

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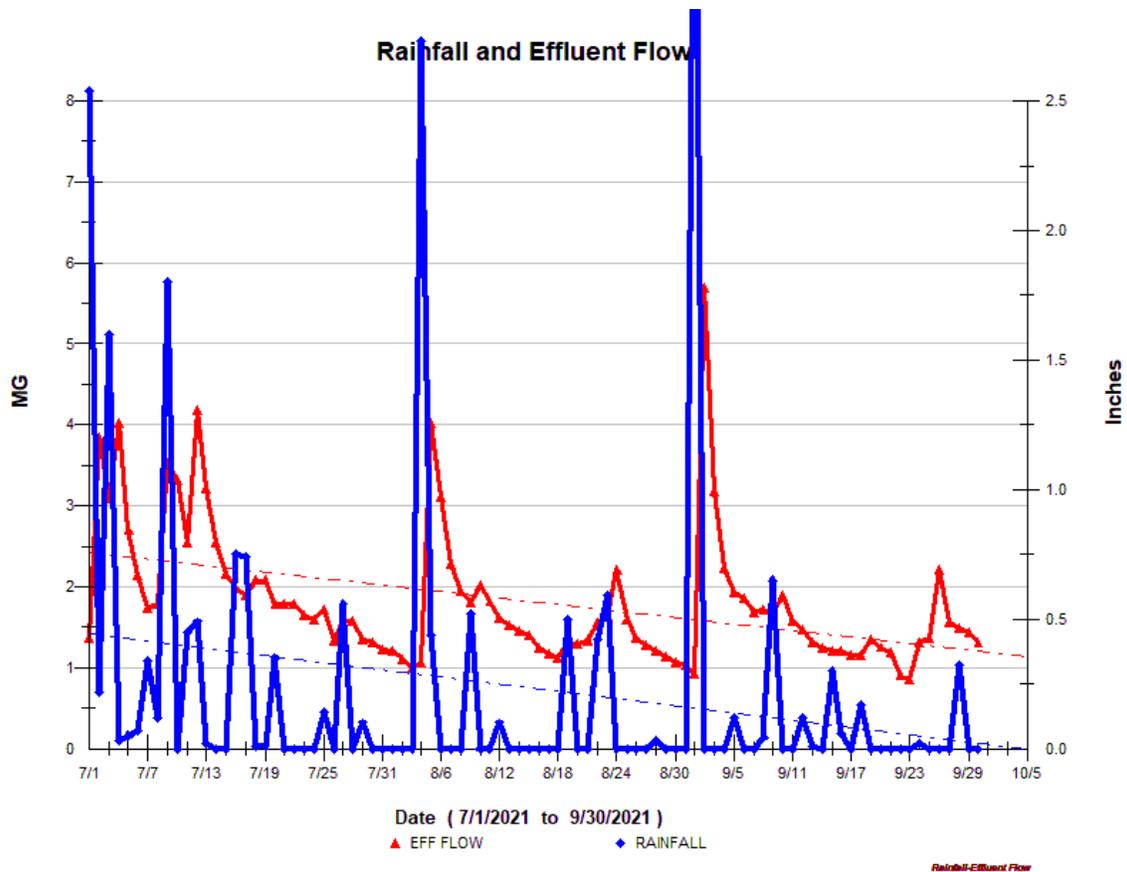


The monthly average flow for September was 1.65 MGD, slightly higher than the previous month. The total precipitation for the month was 5.81 inches, with 4.0 inches of rain on 9/1. The graph shows the 2-plus year summary of the monthly average flows. 2021 September average about 0.5MGD higher than August 2021.

## 2.2 MONTHLY SUMMARY OF RAINFALL AND THE INFLUENCE ON EFFLUENT FLOWS



This graph shows the days where precipitation occurred [rainfall] [Blue Peaks]. This graph indicates that wettest day was on 9/1 in September. The wet weather did impact on the plant flows early in the month.



This graph shows the data from the last 3 months and indicates the times when rainfall impacted the plant flows.

## 3 COMPLIANCE



### ➤ Plant Effluent

There were no permit exceedances in the month of September.

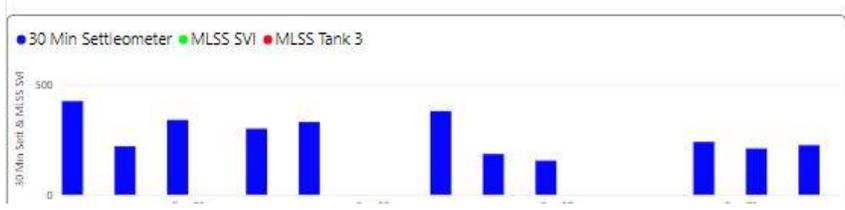
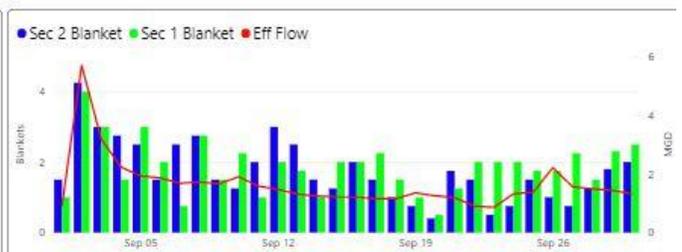
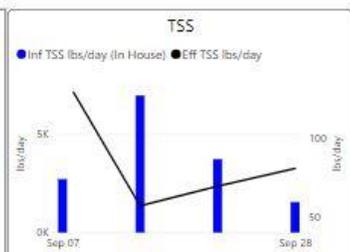
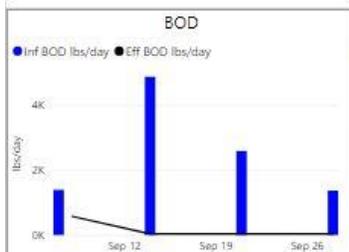
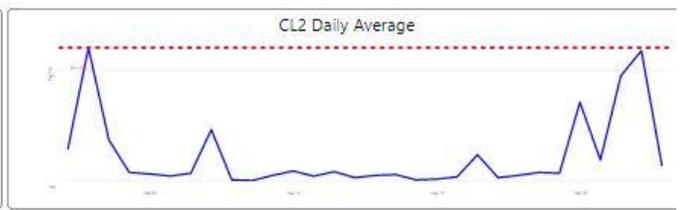
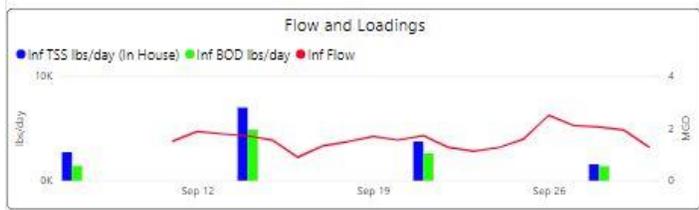
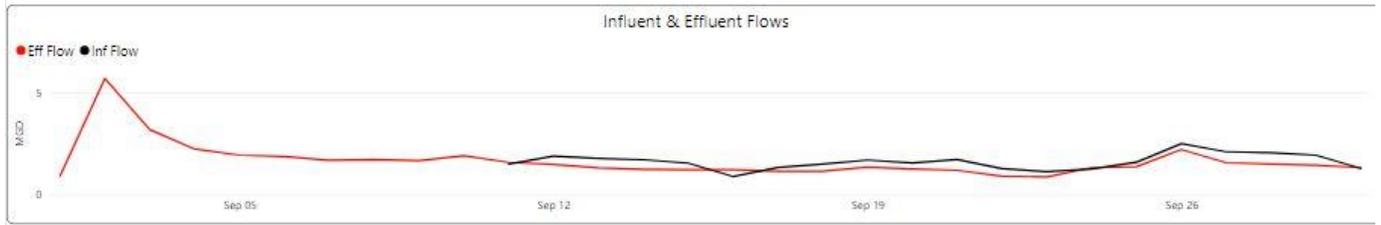
- Plant process conditions remained stable during the month, even with the high flow days 9/1-9/4. High flow management plan in effect. Additional staffing and remote monitoring in place. The influent gate was throttled down to regulate flows in, as the heavy rains came around 2am and pushed flows up over 7.5MGD. The daily peak on 9/2 reached 8.5MGD. Additional clarifier tanks put online. Aeration system air cycled off for several hours. Several pump stations in high level alarm, and all had returned to normal operating levels by end of the day on 9/2.
- Process tank configuration continued with one diffused aeration tank and one mechanical aeration tank in service while aeration tank #3 repairs offline for repairs. The process mode continued as a complete mix arrangement where RAS flow was returned to both aeration tanks.
- Utilized offline tanks as needed during the electrical shutdown for MCC maintenance.
- A Copy of the monthly NPDES reports for September 2021 and quarterly WET Report for August were submitted to the EPA & DEP and then forwarded to the Hull Sewer Dept.



# Hull Wastewater Treatment Facility

9/1/2021

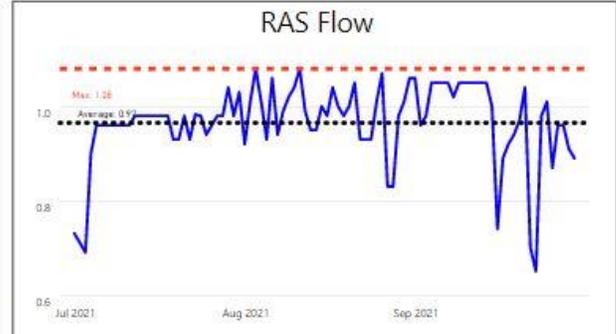
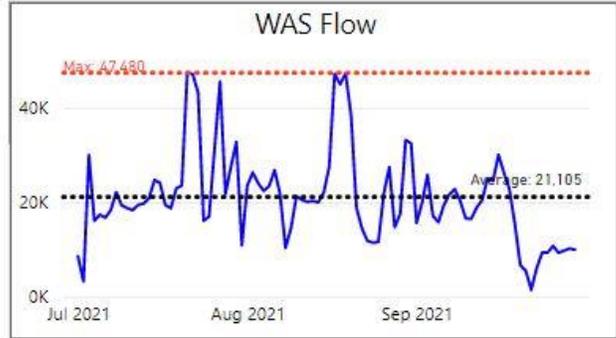
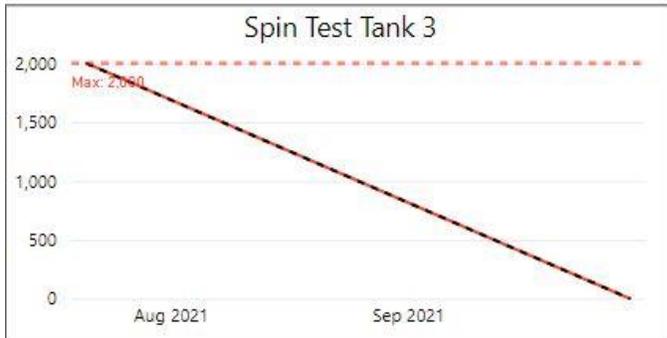
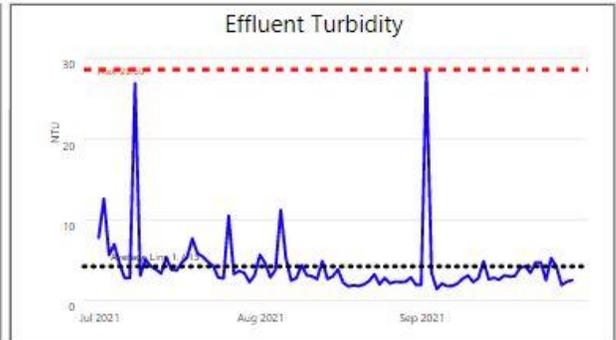
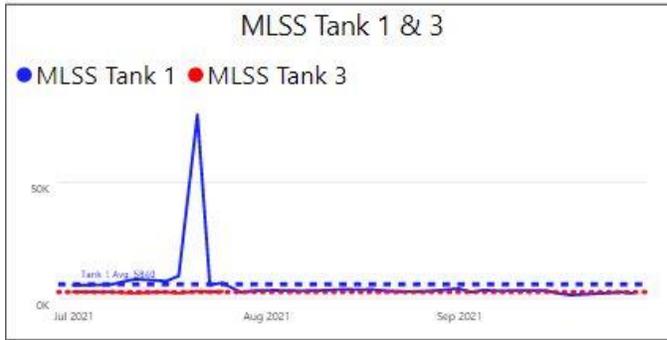
9/30/2021



BOD & TSS Removal			
Date	Eff TSS Removal	Eff BOD Removal	
5/31/2021	96.25	97.49	
6/30/2021	97.06	97.24	
7/31/2021	93.82	95.73	
8/31/2021	98.09	98.43	
9/30/2021	97.85	94.78	
10/31/2021	97.05	97.68	

Violations	
Date	NOTES

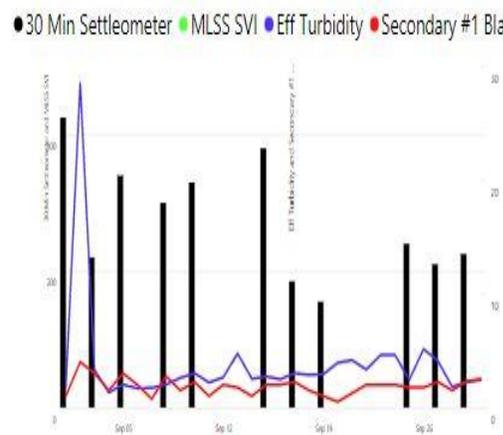
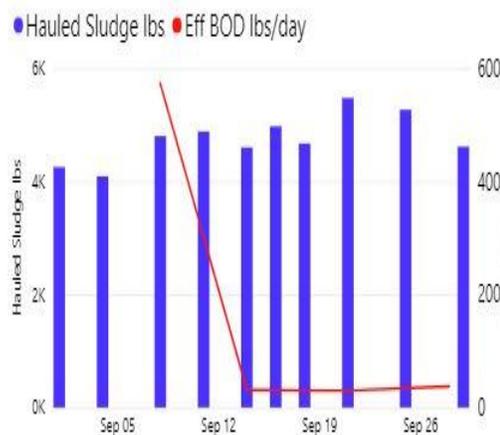
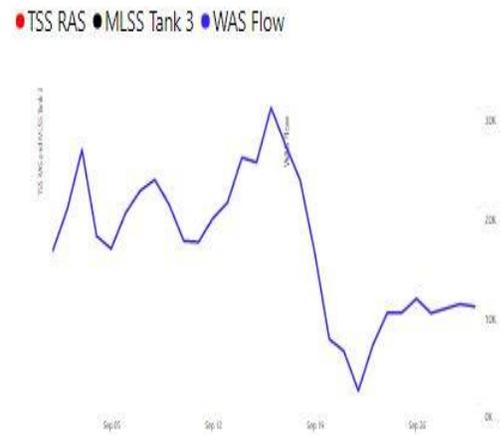
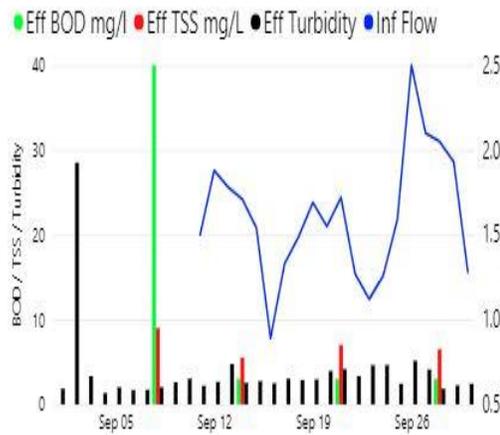
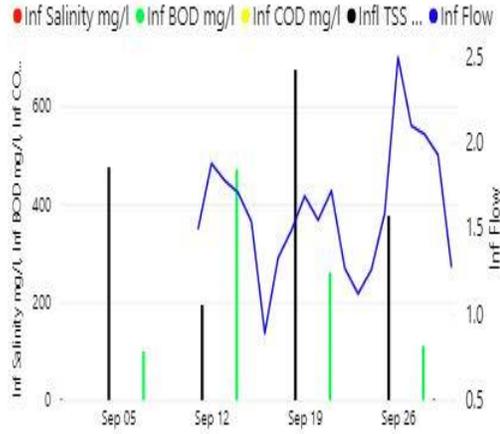
Monthly Process Summary graphs from power BI – September 2021.



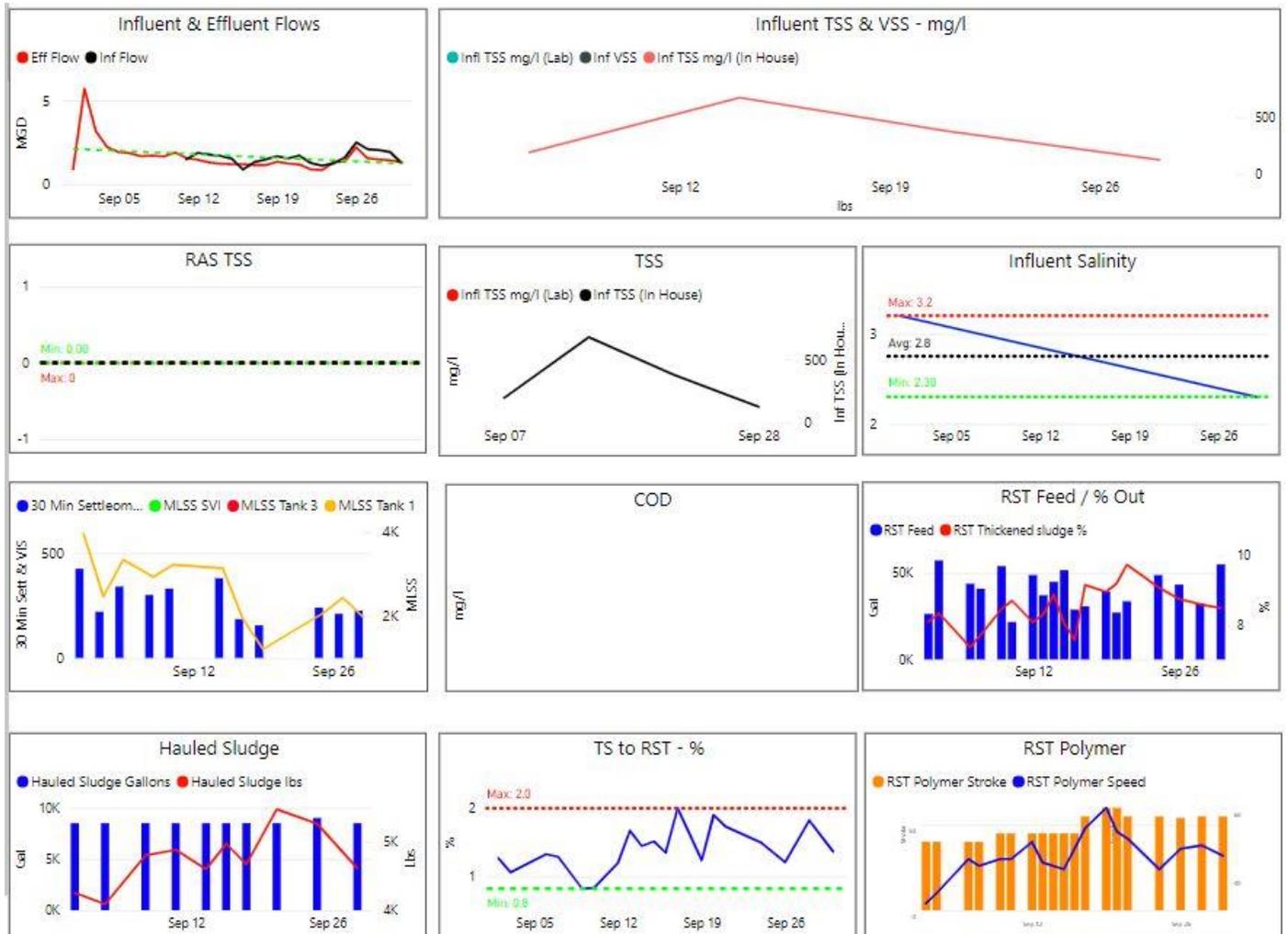
Graphs shows trending of secondary processes using Power BI for the 3-month period ending on 9/30/21. The tank solids levels under aeration showed little or no change, and wasted gallons were variable until the end of the month.

# Hull Wastewater Treatment Facility Drylet Parameters

9/1/2021 9/30/2021



Various Power BI Graphs [related to Drylet] shows trending of various processes – September 2021.



**Additional Power BI Graphs that show trending of various parameters – September 2021**

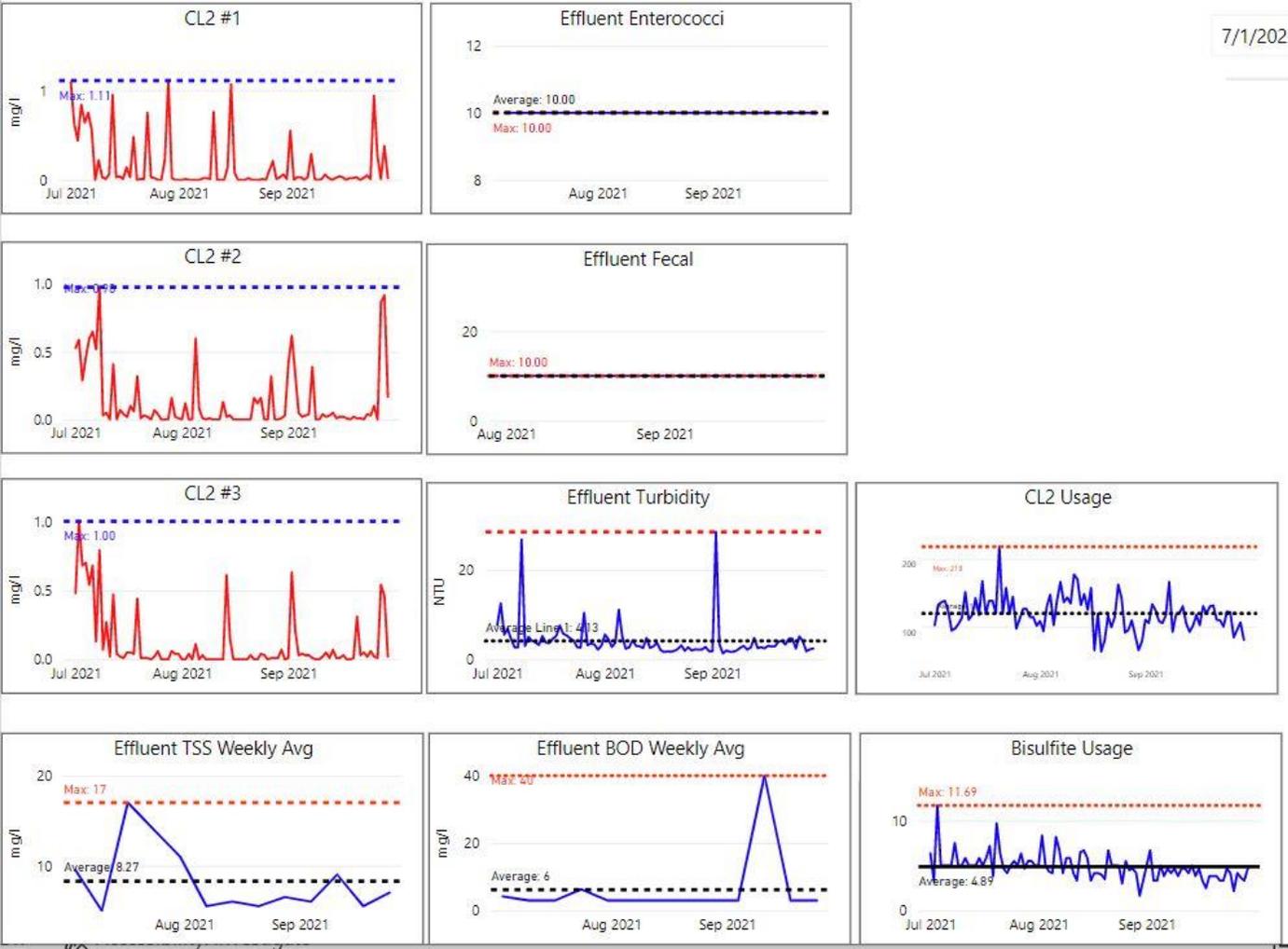
## 4 KEY PERFORMANCE INDICATORS



### 4.1 WATER QUALITY – SEPTEMBER 2021

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 Samples	# Of Violations
Eff TSS	MG/L	50		45	30	1 X Week	7.0	5.5	9.0	4	0
Eff TSS	LBS			1152	768	1 X Week	84.1	56.9	129.1		0
% TSS Rem	%		85			1 X Month	98.0				0
Eff BOD	MG/L	50		45	30	1 X Week	12.3	3.0	4.0	4	0
Eff BOD	LBS			1152	768	1 X Week	168	29.8	573.8		0
% BOD Rem	%		85			1 X Month	94.8				0
Eff Chlorine	MG/L	1.0			0.7	3 X Day	0.11	0.00	0.60	90	0
Eff Fecal	#/100 ML	260			88	1 X Week	10	10	10	5	0
Eff pH	SU	8.5	6.5			1X Daily	7.0	6.7	7.2	30	0
Enterococci	CFU/100 ML	276			35	1 X Week	10	10	10	5	0

There were **146** effluent samples taken in the month of September.

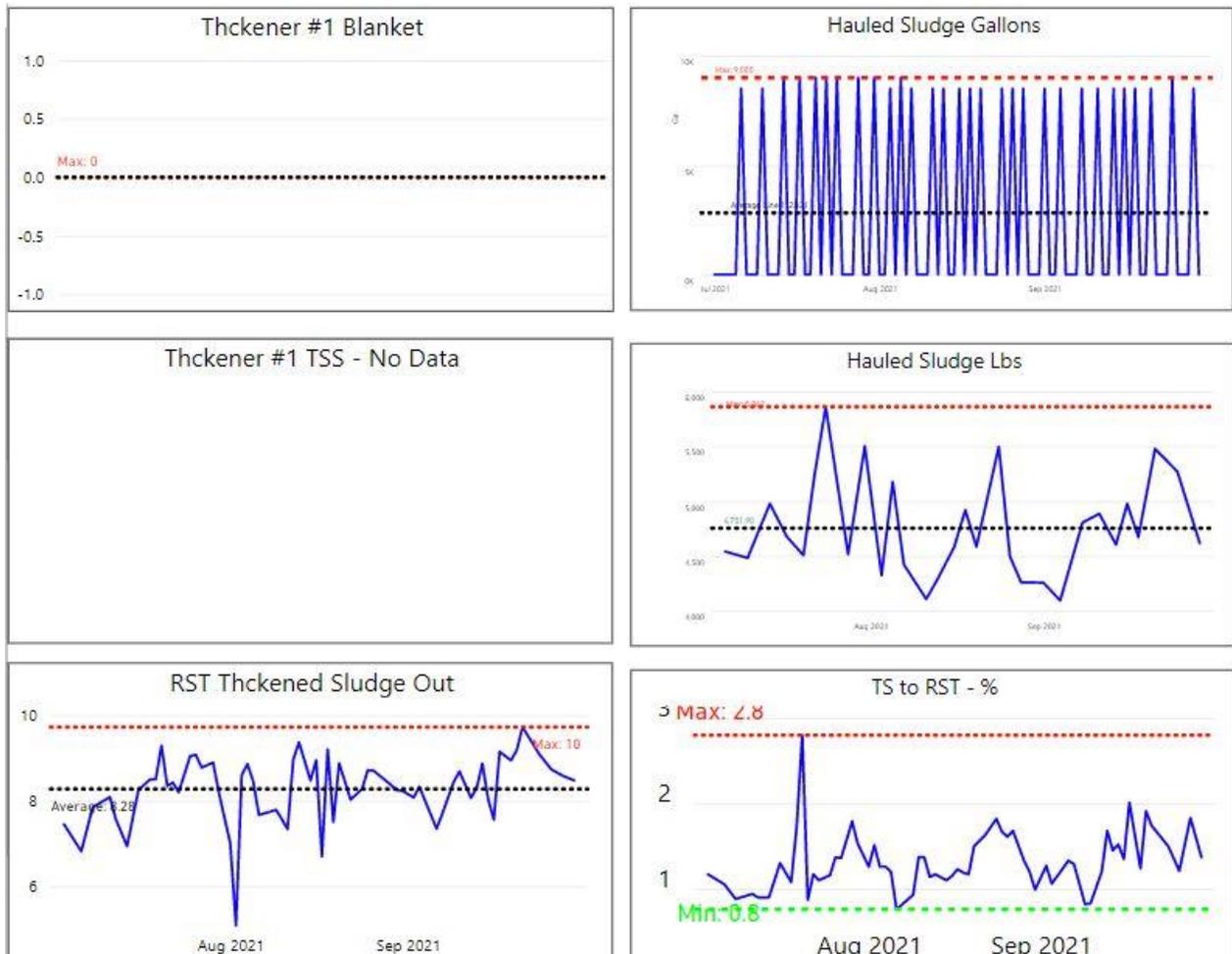


Power BI graphs showing effluent compliance for the last 3-month period ending on 9/30/21 - chlorine residuals, effluent compliance, & chemical use. Bleach [sodium hypochlorite] & sodium bisulfite stable. Turbidity [clarity] of the effluent was stable.

## Gallons Treated vs Sludge Disposed

Month	Effluent Treated, MG	Sludge Disposed, Gals
September 2019	39.82	72,000
September 2020	26.28	52,000
September 2021	49.35	85,500

**Additional Power BI graphs for sludge solids for 3-month period ending 9/30/21. Trends indicate heavier solids/sludge production for Aug-Sept. Process changes due to aeration system failure, and partly due to seasonal decrease.**



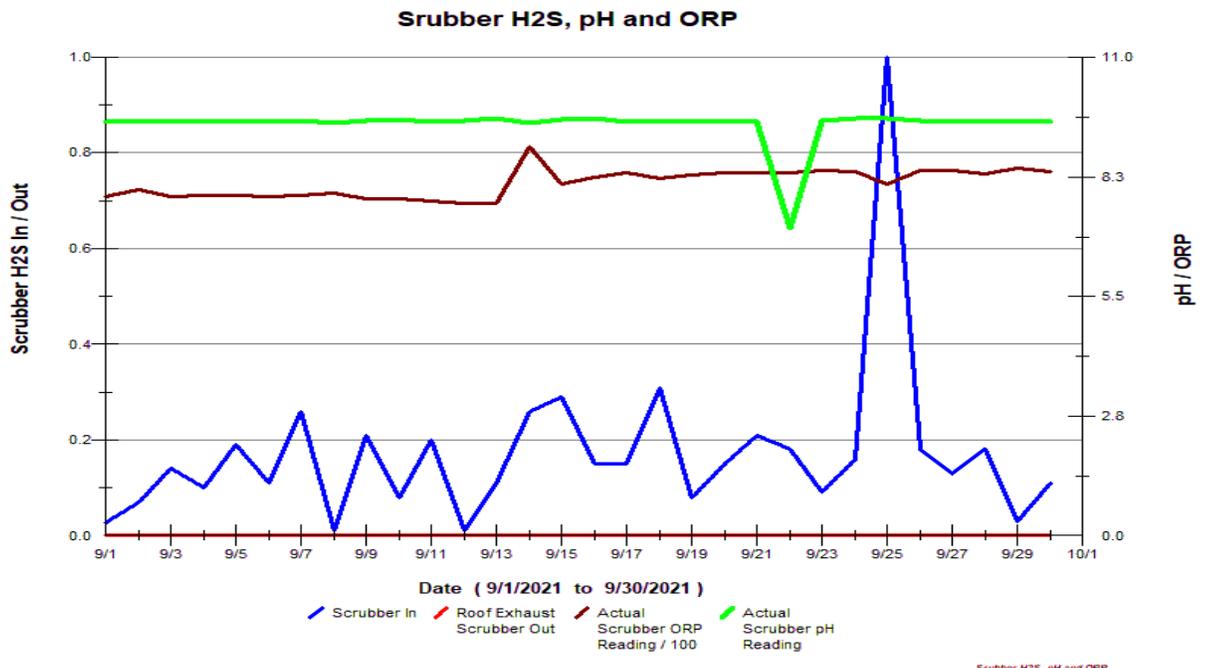
# 5 ODOR CONTROL

There were no odor complaint calls received during the month of September for the wastewater plant.

- Grinder pump odor call – 9/14 – 96 N. Truro.

The Bioxide system was on, and the feed rates were adjusted as needed according to data seen at Nantasket/Water MH and XYZ/Nantasket MH. The monthly graphs are attached below.

- “In-Pipe” bacteria – monthly changeouts completed on 9/17/21. Bi-monthly changes done on 9/29
- No changes: on pump station mixing systems/aerators.
- No changes - Hydrogen sulfide monitoring units [H2S] were recording and trending on the odor scrubber. [inlet and outlet]. see graph below
- Weekly Neighborhood H2S monitoring around the plant done as needed.
- The gravity thickener remained off-line, and the primary tanks were used only as needed for high flow management. [The tanks were then pumped down and cleaned out.
- Sewage on beach issue investigated – Alphabet Street area – determined not to be a Hull System issue.



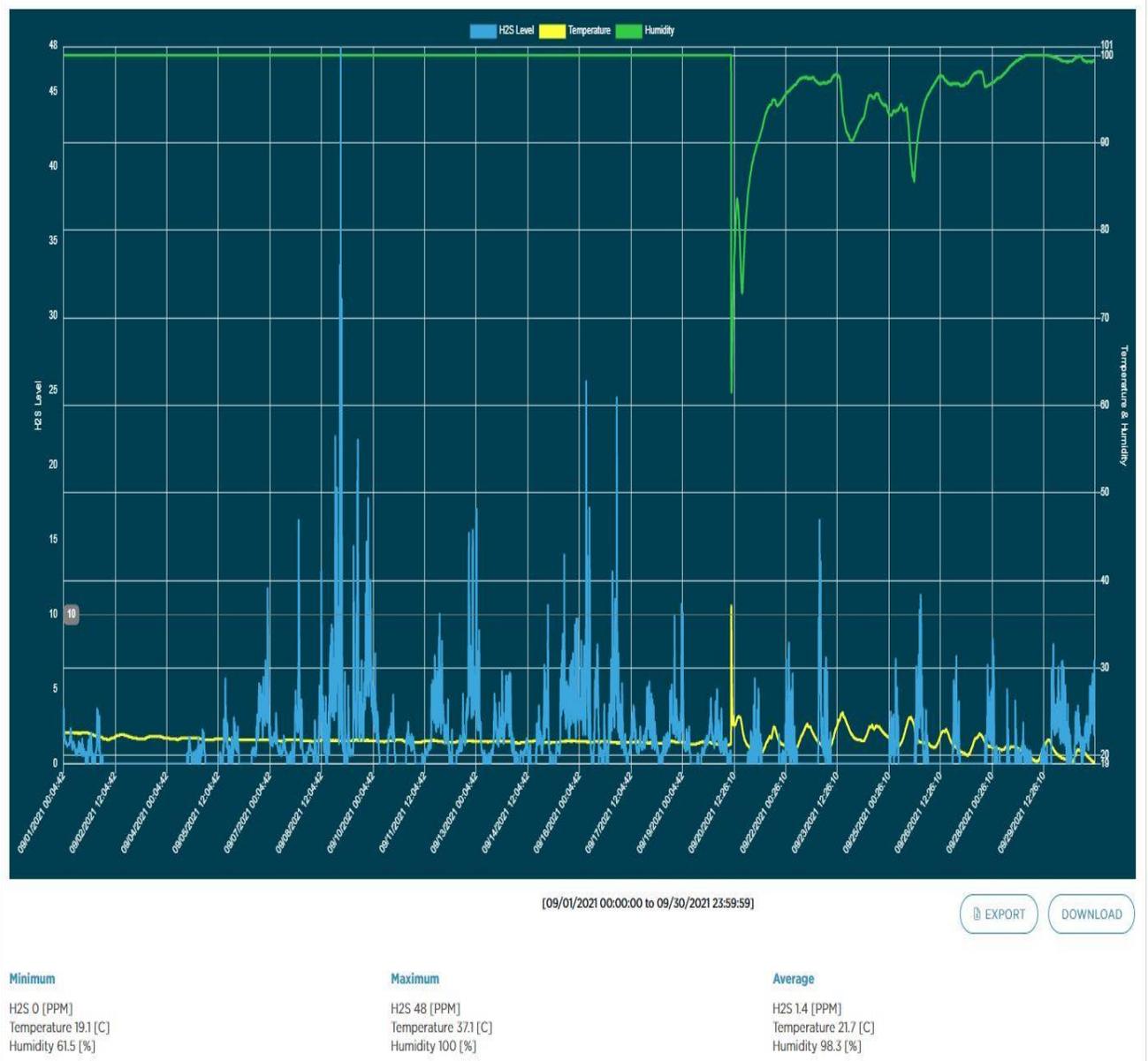
[pictured below: Scrubber trend, and trending graphs for H2S levels recorded from the vapor link system cellular at manhole at XYZ Street/Nantasket Ave and Nantasket Ave/Water Street.

### XYZ – Nantasket Ave [closest to plant]



The odor data logging unit at XYZ that was being used to monitor overall H2S levels close to the plant has had little or no H2S present. There were spikes seen and feed rates were increased as needed from mid-month forward. When system flows were high, the chemical feed rates were lowered, as there is less sulfide production seen

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 Nantasket & Water Street MH. Biocide is added with excess nitrate concentration desired in the sewage to treat the additional H2S added from other parts of the system – PS4, contributions from lines feeding the interceptor, PS5, PS6, etc. all the way to the plant.

# 6 MAINTENANCE SUMMARY

## 6.1 TASKS COMPLETED THIS MONTH

The SEMS monthly work order summary for September is attached for review.

Additional key items of note are listed below.

- On 9/8 - D&C on site for D-box inspection late morning into the afternoon. CSE into the D-Box and found PC1 sluice gate frame/casting cracked off & rotted and the gate was out of the tracks. and gate was not repairable. D&C inserted an inflatable plug into the inlet for PC1 so that flow to the D-Box could be resumed. The influent gate was closed early in the day and headworks bypassed. The Godwin pump ran for approximately 6 hours, pumping flow to the screenings box, before shutting the pump down and returning plant to normal flow and pumping. Whipps Gate representative on site to inspect D-Box gates and future replacements. Next Level Pumping on site to pump out the D-Box chamber. The MA DEP was informed of the gate failure.
- 9/22-23 – Electrical shutdown maintenance performed on all motor control centers and main switchgear. HMLP shut off power to the plant on 9/22 and the facility used the 12-inch Godwin bypass pump to pump sewage to offline tanks. Other portable pumps were also used to manage flows to empty tanks while maintenance was performed. The facility was returned to service approximately 6 hours after the shutdown. The shutdown also allowed for correction of minor deficiencies found in the recent infrared scanning study.
- Work with HSD and Town to collect old electronics equipment for proper disposal as part of town-wide disposal effort.
- Continued work to lower old/outdated equipment and motors to ground floor level. Some for discard, and some to be checked out by electrical repair shop.
- Several issues at Pump Station #9 – replace failed motor on pump #2. Replace rotating assembly for pump #1, due to a leaking seal, and valve/check valve. Inspect check valve on pump #2 since it was not seating properly and allowing backflow into the wet well. The check valve will need replacement. D&C Construction assisted with some of the work, and WC set up a station bypass with a portable trash pump. Pictured: safety barricade & cover for station wetwell, P2 check valve that needs replacement, P1 valve and check valve that need to be replaced.



- On 9/30 - A&N technicians in for actuator assessment for aeration tank #1 and they attempted to swap one from another tank, but the stem threads were all different. They cut off a piece from the stem on the gate for inlet to aeration tank #1 and will have the correct bronze bushing made up. The actuator itself was ok.





## 6.2 ASSET MANAGEMENT ACCOUNTS

- Please see the attached summary totals and planned expenditures for the Asset Management accounts for contract year (7). Most recent through **12/19/21**.
- Planned expenditure list updated. Monthly review & update.

## 7 SAFETY



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

- No lost time incidents reported for September
- Monthly PM's - Emergency eyewash and shower inspections, fire extinguisher and emergency lighting inspections completed. Monthly facility safety inspection completed.
- On-going Coronavirus Covid-19 awareness and updates discussed – daily & as needed. Discuss covid protocol changes. Increased concern by staff, due to an increase in area Covid cases, affecting families, schools, and friends Ongoing: Work with onsite contractors to ensure that Covid-19 procedures in place and being followed.
- On-going – daily safety briefing meetings with staff, covid updates & reminders, site specific safety policies for sub-contractors, safety tailgate meetings. Pure Safety topic– September -Hazard Communication.
- Monthly staff safety meeting conducted on 9/30/21. Major topics discussed: updates in site specific safety binder for BBP and Pandemic Plans, Job Aids - electrical, hammers & chisels, OSHA and heat related hazards
- Staff CPR/First Aid training, qualified electrical training renewals where needed. New hire training/on-boarding continued.
- Working on site specific annual task list for 2021

## 8 STAFF DEVELOPMENT

**Training is an important part of any operation to ensure employee health and safety is assured, quality standards are maintained, 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 monthly safety meeting. W&C “near-miss” incidents at all projects for August discussed. Staff required to complete Cyber Security training from W&C.
- Regular [usually daily] operational updates and process control discussions, pump station operations, especially with construction projects going on at the plant and pump stations. Safety Covid-19, dig-safes, etc.
- PS #5 – new pump training provided by Xylem on 9/14.

**Staffing related items:**

- The regular staff labor is supplemented by the two O&M Specialists as needed to cover all the necessary shifts. Paul Horigan and Jody St. George provided the additional assistance.
- Continued to have some Saturday & Sunday staff coverage with part-time staff. Sunday coverage rotation continued with Aram, Roger, Mike, and Joe.
- Mass Maritime [MM] intern Joel Terrio completed internship at the end of August. He remains on staff in a part-time role [working weekends Saturdays & Sundays] through Summer 2022.

## 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

Woodard & Curran assisted/conducted camera work and sewer system support in the Hull collection system at the following areas during the month of September.

- In-Pipe units – on-going maintenance of dosing units as needed. Staff conducts board troubleshooting, dosing pump repairs and replacements, and works with “In-Pipe” technician on these issues.
- Pump station generators loaded, and non-loaded generator runs completed.
- All Pump station wet wells were inspected in September. Monthly Pump Station Inspections are completed and combined with monthly station PM's.
- Upload new/updated tie-cards to the UC as requested.

- Grinder pump summary:
  - 30 Alsada Rd
  - 6 Alsada Rd
  - 26 Rockview

**Dig Safe mark outs:**

- On-going Dig-Safe mark outs. 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 and are listed in the UC summary.

**Collection system support: Ongoing backup and blockage call outs requiring an increase in manpower and time to support. Below summarizes W&C's efforts at the various call out locations.**

- Complete emergency dig-safe requests & regular dig safe mark outs, when able to complete them.
- 9/2 - D Street P2 breaker issue, Glenn F checked out and new breaker for panel needed
- 9/2 – after hours callout to Jake's Seafood – blockage on their property found
- 9/1 – E-1 pump at 30 Alsada Rd- debris clogging line & preventing plumbers snake from being removed. Needed pump truck to clean out pump chamber. Also, new Electrical box needed.
- 9/9 - PS3 working on P2 VFD board replacement to see if VFD could be reversed, and this was successful.
- 9/15 - Odor complaint follow up at 96 N Truro
- 9/20 - Back up call at # 8 & #10 Moreland Ave. Street check done and flowing.
- 9/30 - Brewster/Samoset call out for sewage leak/smell. ES checked out and appeared to be a private lateral issue behind the house.

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

# 10 PROJECT MANAGEMENT & ADMINISTRATION

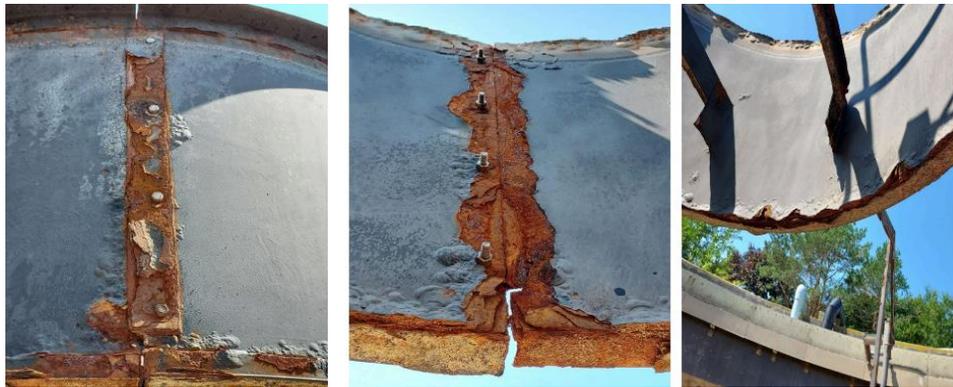


## 10.1 ON-GOING PROJECTS AND SUPPORT ITEMS

### September updates:

- Continued review of effluent pumps and replacement needs at the facility – the 60HP pump was sent out for evaluation and evaluation results pending, a replacement 35HP pump due to age and lack of seal protection was recommended and on order by the Town. An approval for a replacement 20HP effluent pump was made and approved by the HSD.
- Ongoing – support of engineering projects with review and feedback provided – PS9 and generator questions, & 90% design on the influent pumps/secondary project, capital planning
- Aeration tank #3 – evaluating possible diffuser membrane replacement, since age of the existing membranes is approaching 19 years of service life, and the normal life expectancy is 8 to 10 years.
- Radio Communications Project - Procurement document of radio communications system equipment for pump stations published/posted and fielding requests and questions. Provide updates to the HSD as requested. Bids closed on 9/27.
- Pump Station #4 pumps – New pump alternatives evaluated, and quotes received by several vendors. New replacement pump approval given for both pumps due to poor condition.

- Report on PC2 rake condition received from IPC Lydon. Repair cost estimate pending.



- Portable trash pumps – existing: working on control panels – some issues with transition. Also, inquiring on a new replacement 6-inch trash pump.
- On-going work with FRMahony for E-1 grinder pump repairs and new pump replacements. Price increases on all equipment.
- Update/prepare inventory list of sewer pipe couplings – rubber & strongback type
- Mersino Pump presented a revised proposal to modify the 12-inch bypass piping by the Primary D-Box, so that bypassed influent pumped flow can go to the D-Box before the screenings box, in addition to directly to the screenings box. The work is to be scheduled in late fall.



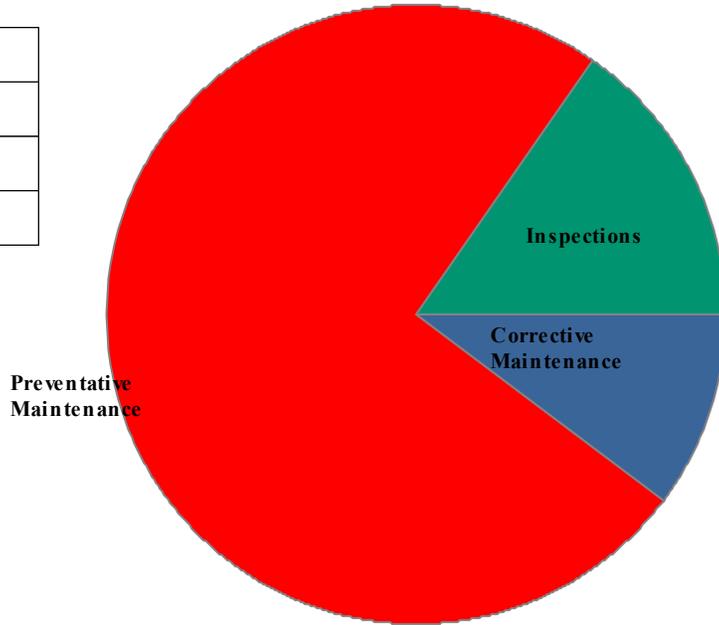
# Maintenance History Report

## Hull Wastewater

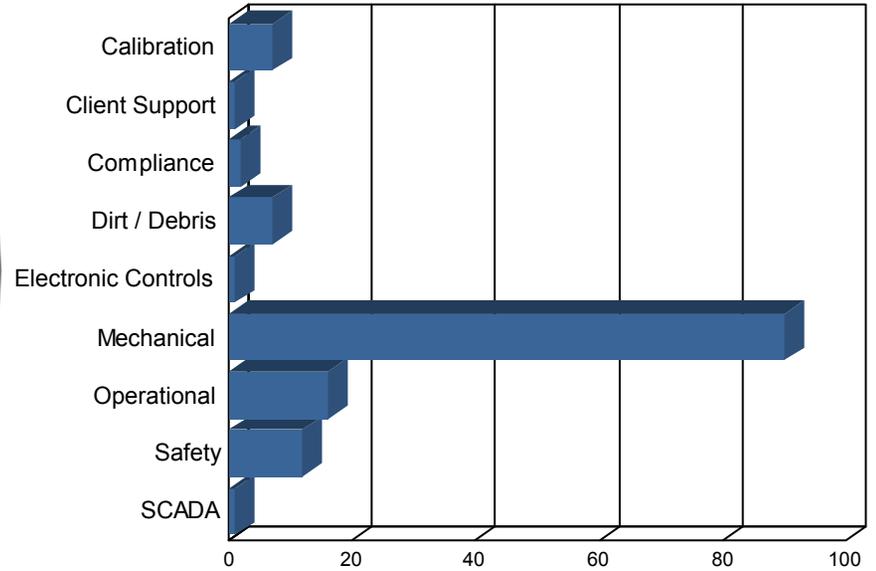
Start Date: 9/1/2021  
End Date: 9/30/2021

### Work Order History By Type

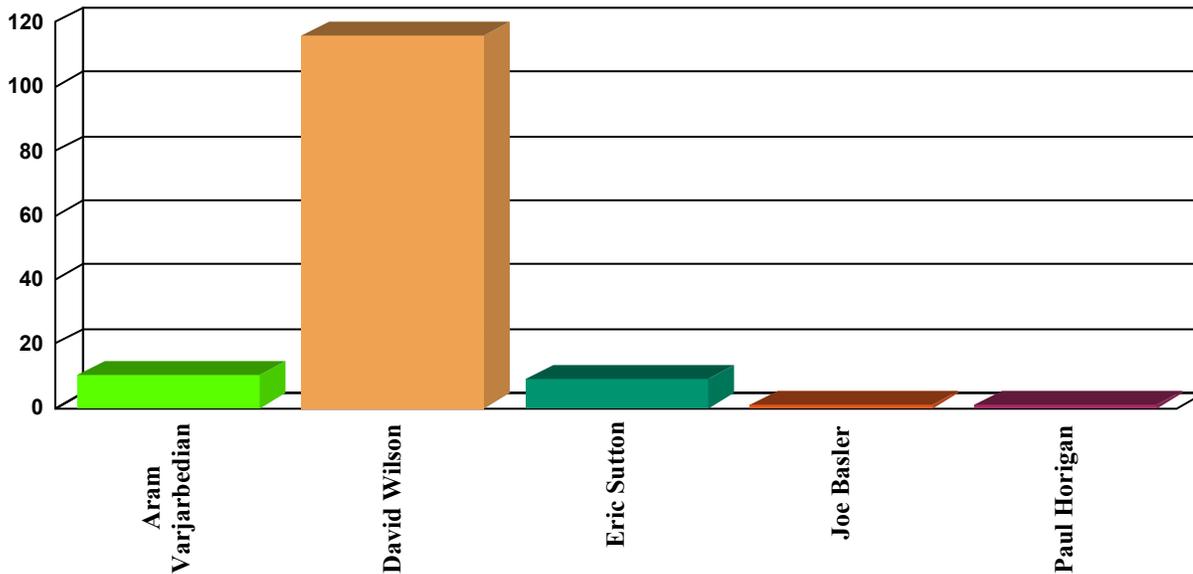
Corrective Maintenance	14
Inspections	21
Preventative Maintenance	102
<b>Total Work Orders</b>	<b>137</b>



### Work Order History by Reason



### Work Order History By Employee



Employee	WO Count	Labor Hours
Aram Varjarbedian	10	12
David Wilson	116	11
Eric Sutton	9	6
Joe Basler	1	2
Paul Horigan	1	1
<b>Totals</b>	<b>137</b>	<b>32</b>

## Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
9/2/21	14622	RAS Pump 2	Clean and inspect impeller.	LOTO of equipment. Separated pump from volute and cleared the impeller. Reassembled and returned to service.	David Wilson	9/2/21	Completed
9/2/21	14623	RAS Pump 3	Clean and inspect impeller.	LOTO of equipment. Separated pump from volute and cleared the impeller. Reassembled and returned to service.	David Wilson	9/2/21	Completed
9/3/21	14624	PS 6 SCADA Panel	loss of comm, no powet	Av got loss of comm alarm at 658pm, assumed UPS tripped again. contact Joe B to visit station, and he restarted the UPS. and got PLC power back.. actual failure was at 640pm, resume station ops at 8pm. wetwell pumped down ok. AV will obtain a new UPS on 9/4.	Aram Varjarbedian	9/3/21	Completed
9/6/21	14626	PS 6	scada cab UPS shutting off	replace UPS in scada cabinet with new unit	Aram Varjarbedian	9/6/21	Completed
9/8/21	14625	Effluent Composit Sampler	Not producing samples	Replacement of sampler tubing and suction line	Joe Basler	9/8/21	Completed
9/9/21	14627	PS D - DPW Stormwater Pump Station	portable pump set up	AV, DW, MS, LB set up 6 inch trash pump for upcoming wet weather, due being down 1 station pump.	Aram Varjarbedian	9/9/21	Completed
9/14/21	14629	PS 9 Pump 2	Replace motor on pump 2. (Upper bearing failure)	LOTO of equipment. Removed wiring from motor. Removed motor from pump. Removed coupling and hub. Bolt extracted from replacement motor. Installed hub and coupling. Set height of hub. Mounted motor. Wired motor and performed bump test. Swapped two leads and Verified rotation. Returned to service.	David Wilson	9/15/21	Completed
9/15/21	14628	PS 9 Piping and Valves	Check valve not seating properly	Installed counter weight on check valve arm. Spring that was installed was not the correct length. Believe that there is debris under flapper. Requires hardware replacement on cover and bolt extraction due to excessive corrosion.	David Wilson	9/15/21	Completed
9/18/21	14630	Odor Control Wet Scrubber Vessel	feed water filter replacement	replace pvc strainer unit with new one	Aram Varjarbedian	9/16/21	Completed
9/18/21	14631	Plant Water System	hypo feed line leaking in safety room	replace 50 ft of 3/8 pvc tubing, check out pump, and also install new head on pump. DW had previously cleaned inj check valve. test with water. then hypo. back in service.	Aram Varjarbedian	9/18/21	Completed
9/19/21	14632	RAS Pump 2	low output flow	low output flow, less than 0.2 MGD ar 36 hz, test at 45 hz, no change. Pull and clean pump. Impeller completely jammed with rags.	Aram Varjarbedian	9/19/21	Completed
9/24/21	14633	RAS Pump 3	Clean and inspect impeller	LOTO of equipment. Separated pump from volute. Cleaned debris from impeller. Reassembled and returned to service.	David Wilson	9/24/21	Completed
9/24/21	14634	Primary Sludge Pump 2	Clean and inspect impeller.	LOTO of equipment. Removed cleanout and siphoned out fluid. Rotated shaft by hand in opposite direction. Freed up pump shaft. Removed piece of aluminum from volute. Reassembled and returned to service.	David Wilson	9/24/21	Completed

## Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
9/28/21	14635	RAS Pump 2	Clean and inspect impeller	LOTO of equipment. Separated pump from volute and cleared the debris from the impeller. Reassembled and returned to service.	David Wilson	9/28/21	Completed

## Inspections

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
9/2/21	14103	Truck 1 - 2010 Dodge Ram 1500	Monthly vehicle inspection on do-Forms	Found front drivers side caliper piston seal leaking. Replaced caliper and bled brakes. Tested good. A/C compressor needs to be recharged and the knock sensor is intermitantly throwing a code. Tires will need replacing and the suspension needs to be inspected.	David Wilson	8/2/21	Completed
9/2/21	14113	Truck 2 - 2009 Chevy 2500 HD	Monthly vehicle inspection on do-Forms	Truck taken to Wilder Brothers for diag and repair. Multiple codes for ABS system, airbags, and SRS system. Oil changed and tires rotated.	David Wilson	8/2/21	Completed
9/2/21	14122	Truck 3 - 2015 Chevy 3500 HD	Monthly vehicle inspection on do-Forms	Inspected vehicle. Scheduled oil change and tire rotation. No issues.	David Wilson	8/2/21	Completed
9/2/21	14002	Eyewash Stations	WWTF Eyewash Inspection - Weekly		David Wilson	8/8/21	Completed
9/2/21	14006	Emergency Lighting & exit signs	Emergency Lighting Inspection - Monthly		David Wilson	8/11/21	Completed
9/9/21	14170	Eyewash Stations	WWTF Eyewash Inspection - Weekly		David Wilson	9/5/21	Completed
9/10/21	14285	Truck 4 - 2015 Nissan Frontier	Monthly vehicle inspection on do-Forms	130k miles, AV replace pass side headlight bulb and repair battery hold down bracket. Also,hull auto repl throttle sway sensor	Aram Varjarbedian	9/6/21	Completed
9/12/21	14114	Waste Oil Storage	Waste Oil Area Inspection	Checked	Aram Varjarbedian	8/10/21	Completed
9/12/21	14115	Universal waste area	Universal Waste Storage Area Inspection	Area needs to be moved and set up again	Aram Varjarbedian	8/10/21	Completed
9/13/21	14224	PS 9	PS #9 Inspection - Monthly		David Wilson	9/2/21	Completed
9/13/21	14223	PS 6	PS #6 Inspection - Monthly		David Wilson	9/2/21	Completed
9/13/21	14225	PS A	PS #A Inspection - Monthly		David Wilson	9/2/21	Completed
9/13/21	14221	PS 4	PS #4 Inspection - Monthly		David Wilson	9/2/21	Completed
9/13/21	14222	PS 5	PS #5 Inspection - Monthly		David Wilson	9/2/21	Completed
9/13/21	14220	PS 3	PS #3 Inspection - Monthly		David Wilson	9/2/21	Completed
9/13/21	14263	Fire Extinguishers	WWTF Fire Extinguisher Inspections - Monthly		David Wilson	9/6/21	Completed
9/13/21	14305	Blower Room Exhaust Fan 1	Monthly operational inspection		David Wilson	9/1/21	Completed
9/13/21	14306	Blower Room Exhaust Fan 2	Monthly operational inspection		David Wilson	9/1/21	Completed
9/13/21	14005	Eyewash Stations	WWTF Eyewash Inspection - Weekly		David Wilson	8/29/21	Completed
9/15/21	14004	Eyewash Stations	WWTF Eyewash Inspection - Weekly		David Wilson	8/22/21	Completed

## Inspections

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
9/28/21	14277	Truck 2 - 2009 Chevy 2500 HD	Monthly vehicle inspection on do-Forms		David Wilson	9/6/21	Completed

## Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
9/2/21	13872	RST Feed Pump 1	Monthly Check Pump Couplings		David Wilson	7/7/21	Completed
9/2/21	14038	RAS Pump 1	Monthly Check Pump Couplings		David Wilson	8/4/21	Completed
9/2/21	14037	RAS Pump 1	RAS Pump #1 PM - Quarterly	LOTO of pump. Out of service for seal replacement.	David Wilson	8/4/21	Completed
9/2/21	14039	RAS Pump 2	Monthly Check Pump Couplings		David Wilson	8/4/21	Completed
9/2/21	14040	RAS Pump 2	RAS Pump #2 PM - Quarterly		David Wilson	8/4/21	Completed
9/2/21	14042	RAS Pump 3	Monthly Check Pump Couplings		David Wilson	8/4/21	Completed
9/2/21	14041	RAS Pump 3	RAS Pump #3 PM - Quarterly		David Wilson	8/4/21	Completed
9/2/21	14127	High level floats	Weekly High Float Alarm test		David Wilson	8/22/21	Completed
9/2/21	14142	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		David Wilson	8/22/21	Completed
9/2/21	14010	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load		David Wilson	8/30/21	Completed
9/2/21	14014	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load		David Wilson	8/30/21	Completed
9/2/21	14138	Generators "All Pump Station"	Generator Weekly - Test Run no load		David Wilson	8/30/21	Completed
9/2/21	14106	PS Kohler Trailer Mounted Generator	Generator Weekly - Test Run no load		David Wilson	8/30/21	Completed
9/2/21	14226	PS 1 Generator	PS #1 Generator Inspection and Load Test - Monthly		David Wilson	9/1/21	Completed
9/2/21	14227	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		David Wilson	9/1/21	Completed
9/2/21	14237	PS 3 Generator	PS #3 Generator Inspection and Load Test - Monthly		David Wilson	9/1/21	Completed
9/2/21	14232	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	9/1/21	Completed
9/2/21	14239	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	9/1/21	Completed
9/2/21	14249	PS 5 Generator	PS #5 Generator Inspection and Load Test - Monthly		David Wilson	9/1/21	Completed
9/2/21	14244	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	9/1/21	Completed
9/2/21	14261	PS 6 Generator	PS #5 Generator Inspection and Load Test - Monthly		David Wilson	9/1/21	Completed
9/2/21	14250	PS 9 Generator	PS #9 Generator Inspection and Load Test - Monthly		David Wilson	9/1/21	Completed
9/2/21	14256	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	9/1/21	Completed
9/2/21	14207	RAS Pump 1	Monthly Check Pump Couplings		David Wilson	9/1/21	Completed

## Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
9/2/21	14208	RAS Pump 2	Monthly Check Pump Couplings		David Wilson	9/1/21	Completed
9/2/21	14251	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	9/1/21	Completed
9/2/21	14209	RAS Pump 3	Monthly Check Pump Couplings		David Wilson	9/1/21	Completed
9/9/21	14271	PS Kholer Trailer Mounted Generator	Generator - Monthly Load Test		David Wilson	9/5/21	Completed
9/9/21	14295	Generators "All Pump Station"	Generator - Monthly Load Test		David Wilson	9/5/21	Completed
9/9/21	14228	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		David Wilson	9/8/21	Completed
9/9/21	14233	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	9/8/21	Completed
9/9/21	14240	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	9/8/21	Completed
9/9/21	14245	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	9/8/21	Completed
9/9/21	14252	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	9/8/21	Completed
9/9/21	14257	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	9/8/21	Completed
9/9/21	14184	Influent Sluice Isolation Gate	Weekly operate through full range		David Wilson	9/8/21	Completed
9/9/21	14183	Influent Sluice Isolation Gate	Weekly operate through full range		David Wilson	9/1/21	Completed
9/9/21	14111	Ventis MX4 #5 - 4 Gas	4 Gas Meter #5 Calibration - Monthly	Out of service. H2S sensor on order.	David Wilson	8/26/21	Completed
9/9/21	14116	GasAlert Max XTII #2	monthly calibration		David Wilson	8/26/21	Completed
9/9/21	14264	GasAlert Max XTII #1	4 gas meter calibration - monthly		David Wilson	9/1/21	Completed
9/9/21	14108	Ventis MX4 #2 - 4 Gas	4 Gas Meter #2 Calibration - Monthly		David Wilson	8/26/21	Completed
9/9/21	14112	Ventis MX4 #6 - 4 Gas	4 Gas Meter #6 Calibration - Monthly		David Wilson	8/26/21	Completed
9/9/21	14110	Ventis MX4 #4 - 4 Gas	4 Gas Meter #4 Calibration - Monthly		David Wilson	8/26/21	Completed
9/9/21	14109	Ventis MX4 #3 - 4 Gas	4 Gas Meter #3 Calibration - Monthly		David Wilson	8/26/21	Completed
9/10/21	14287	High level floats	Weekly High Float Alarm test	Completed as requested	Eric Sutton	9/12/21	Completed
9/10/21	14286	High level floats	Weekly High Float Alarm test	Done	David Wilson	9/5/21	Completed
9/11/21	14119	Chlorine probe ATI	Weekly calibration	Weekly in tank close to lab. No changes needed.	Aram Varjarbedian	8/30/21	Completed
9/12/21	14128	High level floats	Weekly High Float Alarm test	Did on WO 9/10	David Wilson	8/29/21	Completed
9/13/21	14143	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		David Wilson	8/29/21	Completed
9/13/21	14299	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		David Wilson	9/5/21	Completed
9/13/21	14206	Wet Scrubber Fan	Scrubber Exhaust Fan PM - Monthly		David Wilson	9/8/21	Completed
9/13/21	14217	Sludge Transfer Pump 1	Monthly Check Pump Couplings		David Wilson	9/1/21	Completed
9/13/21	14218	Sludge Transfer Pump 2	Monthly Check Pump Couplings	Out of service	David Wilson	9/1/21	Completed

## Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
9/13/21	14210	RST Feed Pump 1	Monthly Check Pump Couplings		David Wilson	9/1/21	Completed
9/13/21	14211	RST Feed Pump 2	Monthly Check Pump Couplings		David Wilson	9/1/21	Completed
9/13/21	14215	Primary Sludge Pump 1	Monthly Check Pump Couplings		David Wilson	9/1/21	Completed
9/13/21	14216	Primary Sludge Pump 2	Monthly Check Pump Couplings		David Wilson	9/1/21	Completed
9/13/21	14046	RST Feed Pump 2	Vaughan Centrifugal pump - Semi Annual		David Wilson	8/19/21	Completed
9/13/21	14043	RST Feed Pump 1	Vaughan Centrifugal pump - Semi Annual		David Wilson	8/19/21	Completed
9/13/21	14050	Primary Sludge Pump 2	Vaughan Centrifugal pump - Semi Annual		David Wilson	8/19/21	Completed
9/13/21	14047	Primary Sludge Pump 1	Vaughan Centrifugal pump - Semi Annual		David Wilson	8/19/21	Completed
9/13/21	14052	Sludge Transfer Pump 2	Monthly Check Pump Couplings		David Wilson	8/4/21	Completed
9/13/21	14045	RST Feed Pump 2	Monthly Check Pump Couplings		David Wilson	8/4/21	Completed
9/13/21	14051	Sludge Transfer Pump 1	Monthly Check Pump Couplings		David Wilson	8/4/21	Completed
9/13/21	14044	RST Feed Pump 1	Monthly Check Pump Couplings		David Wilson	8/4/21	Completed
9/13/21	14036	Wet Scrubber Fan	Scrubber Exhaust Fan PM - Monthly		David Wilson	8/11/21	Completed
9/15/21	14294	ORP meter	Clean and Calibrate		David Wilson	9/10/21	Completed
9/15/21	14229	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		Eric Sutton	9/15/21	Completed
9/15/21	14234	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	9/15/21	Completed
9/15/21	14268	PS Kholer Trailer Mounted Generator	Generator Weekly - Test Run no load		Eric Sutton	9/13/21	Completed
9/15/21	14185	Influent Sluice Isolation Gate	Weekly operate through full range		David Wilson	9/15/21	Completed
9/15/21	14241	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	9/15/21	Completed
9/15/21	14246	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	9/15/21	Completed
9/15/21	14258	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	9/15/21	Completed
9/15/21	14253	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	9/15/21	Completed
9/15/21	14296	Generators "All Pump Station"	Generator Weekly - Test Run no load		David Wilson	9/13/21	Completed
9/15/21	14175	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load		David Wilson	9/13/21	Completed
9/15/21	14179	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load		David Wilson	9/13/21	Completed
9/15/21	14293	pH meter	Clean and Calibrate		David Wilson	9/1/21	Completed
9/15/21	14133	ORP meter	Clean and Calibrate		David Wilson	8/10/21	Completed
9/15/21	14169	Portable Generator - Honda	Portable Generator Inspection - Monthly		David Wilson	9/1/21	Completed

## Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
9/23/21	14201	Aeration Blower 2	Aeration Blower #2 Air Filter Inspection - Monthly	Completed as requested	David Wilson	9/23/21	Completed
9/28/21	14181	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load		David Wilson	9/27/21	Completed
9/28/21	14177	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load		David Wilson	9/27/21	Completed
9/28/21	14254	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	9/22/21	Completed
9/28/21	14247	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	9/22/21	Completed
9/28/21	14259	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	9/22/21	Completed
9/28/21	14235	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	9/22/21	Completed
9/28/21	14242	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	9/22/21	Completed
9/28/21	14186	Influent Sluice Isolation Gate	Weekly operate through full range		David Wilson	9/22/21	Completed
9/28/21	14230	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		David Wilson	9/22/21	Completed
9/28/21	14176	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load		David Wilson	9/20/21	Completed
9/28/21	14180	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load		David Wilson	9/20/21	Completed
9/28/21	14269	PS Kholer Trailer Mounted Generator	Generator Weekly - Test Run no load		David Wilson	9/20/21	Completed
9/28/21	14297	Generators "All Pump Station"	Generator Weekly - Test Run no load		David Wilson	9/20/21	Completed
9/29/21	14255	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly	Completed as requested	Eric Sutton	9/29/21	Completed
9/29/21	14260	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly	Completed as requested	Eric Sutton	9/29/21	Completed
9/29/21	14248	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly	Completed as requested	Eric Sutton	9/29/21	Completed
9/29/21	14243	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly	Completed as requested	Eric Sutton	9/29/21	Completed
9/29/21	14236	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly	CCompleted as requested	Eric Sutton	9/29/21	Completed
9/29/21	14231	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly	Completed as requested	Eric Sutton	9/29/21	Completed
9/29/21	14298	Generators "All Pump Station"	Generator Weekly - Test Run no load	Completed as requested	Paul Horigan	9/27/21	Completed

Date	Asset ID	Asset Description	Asset Class	Name	Workflow Class
9/21/2021 14:47	01-001	0 MAIN ST	Hull Parcels	Sutton, Eric	Generic WO
9/15/2021 12:15	01-019	1 ARTHUR ST	Hull Parcels	Sutton, Eric	Hull - Markout
9/15/2021 12:16	01-031	1 MILDRED ST	Hull Parcels	Sutton, Eric	Hull - Markout
9/22/2021 10:47	02-016	1 TOWN WAY	Hull Parcels	Sutton, Eric	Hull - Markout
9/21/2021 14:42	03-101	36 LAFAYETTE RD	Hull Parcels	Sutton, Eric	Generic WO
9/27/2021 14:37	10-076	22 HOLBROOK AVE	Hull Parcels	Sutton, Eric	Hull - Markout
9/22/2021 12:29	10-084	18 BLUFF RD	Hull Parcels	Sutton, Eric	Hull - Markout
9/24/2021 13:26	11-013	909 NANTASKET AVE	Hull Parcels	Sutton, Eric	Hull - Markout
9/15/2021 12:14	13-045	4 T STREET	Hull Parcels	Sutton, Eric	Hull - Markout
9/24/2021 13:24	13-134	301 BEACH AVE	Hull Parcels	Sutton, Eric	Hull - Markout
9/15/2021 12:11	17-072	71 C STREET	Hull Parcels	Sutton, Eric	Hull - Markout
9/15/2021 12:12	22-138	19 COBURN ST	Hull Parcels	Sutton, Eric	Hull - Markout
9/27/2021 14:34	25-007	73 BEACH AVE	Hull Parcels	Sutton, Eric	Hull - Markout
9/3/2021 12:21	26-006	33 BATES ST	Hull Parcels	Sutton, Eric	Hull - Markout
9/8/2021 10:51	26-062	29 STAFFORD RD	Hull Parcels	Sutton, Eric	Hull - Markout
9/27/2021 14:32	26-170	515 NANTASKET AVE	Hull Parcels	Sutton, Eric	Hull - Markout
9/2/2021 11:15	30 Alsada Rd	30 Alsada Rd Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Hull - Grinder Pump Maintenance
9/13/2021 14:48	30 Alsada Rd	30 Alsada Rd Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Sticker Replacement - Grinder Panels
9/13/2021 12:51	35-109	1 ROOSEVELT AVE	Hull Parcels	Sutton, Eric	Hull - Markout
9/21/2021 14:56	36-050	10 MORELAND AVE	Hull Parcels	Sutton, Eric	Hull - Sewer Backup
9/2/2021 10:21	37-006-A	50 GEO WASH BLVD	Hull Parcels	Sutton, Eric	Hull - Sewer Backup
9/3/2021 12:26	37-008	213 NANTASKET AVE	Hull Parcels	Sutton, Eric	Hull - Markout
9/3/2021 12:28	38-029	12 PARK AVE	Hull Parcels	Sutton, Eric	Hull - Markout
9/13/2021 14:54	43-045	30 ALSADA RD	Hull Parcels	Sutton, Eric	Generic WO
9/22/2021 12:25	45-270	0 BARNSTABLE ST	Hull Parcels	Sutton, Eric	Hull - Markout
9/24/2021 13:17	49-074	10 MAPLE WAY	Hull Parcels	Sutton, Eric	Hull - Markout
9/29/2021 15:21	52-011	168 ATLANTIC AVE	Hull Parcels	Sutton, Eric	Hull - Markout
9/22/2021 12:30	56-010	1172 NANTASKET AVE	Hull Parcels	Sutton, Eric	Hull - Markout
9/17/2021 14:04	Bacteria UNIT #21	UNIT #21	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:08	Bacteria UNIT #22	UNIT #22	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 13:59	Bateria UNIT # 8	UNIT # 8	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 13:54	Bateria UNIT #1	UNIT #1	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 13:59	Bateria UNIT #10	UNIT #10	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units

Date	Asset ID	Asset Description	Asset Class	Name	Workflow Class
9/17/2021 14:02	Bateria UNIT #11	UNIT #11	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:07	Bateria UNIT #12	UNIT #12	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/24/2021 13:19	Bateria UNIT #12	UNIT #12	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:06	Bateria UNIT #13	UNIT #13	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:05	Bateria UNIT #14	UNIT #14	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:05	Bateria UNIT #15	UNIT #15	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:03	Bateria UNIT #16	UNIT #16	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:00	Bateria UNIT #17	UNIT #17	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:01	Bateria UNIT #18	UNIT #18	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:02	Bateria UNIT #19	UNIT #19	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 13:56	Bateria UNIT #2	UNIT #2	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:03	Bateria UNIT #20	UNIT #20	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:07	Bateria UNIT #23	UNIT #23	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 13:55	Bateria UNIT #24	UNIT #24	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:01	Bateria UNIT #3	UNIT #3	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 13:56	Bateria UNIT #4	UNIT #4	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 13:57	Bateria UNIT #5	UNIT #5	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 13:58	Bateria UNIT #5	UNIT #5	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 13:57	Bateria UNIT #6	UNIT #6	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 13:58	Bateria UNIT #7	UNIT #7	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/17/2021 14:08	Bateria UNIT #9	UNIT #9	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
9/21/2021 14:38	MH-20195	SEMS_Asset	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection
9/21/2021 14:34	MH-20221	SEMS_Asset	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection
9/28/2021 9:44	MH-20490	SEMS_Asset	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection
9/29/2021 15:27	MH-20490	SEMS_Asset	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection
9/17/2021 13:37	MH-20520	SEMS_Asset	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection

Asset Management Accounts - Year 7							
Account		Actual to date			Projected for Final Estimate		
		Budgeted Amount	Spent to Date	Delta	Projected costs and incl PO's	Final est	Delta
07M-101A	Preventive Maint	\$213,028.73	\$96,102.67	\$116,926.06	\$32,700.00	\$128,802.67	\$84,226.06
07M-102B	Capital and Major Repairs	\$140,000.00	\$100,227.96	\$39,772.04	\$109,000.00	\$209,227.96	(\$69,227.96)
07M-103A	Major Sub Contractors	\$180,465.81	\$151,797.76	\$28,668.05	\$78,311.47	\$230,109.23	(\$49,643.42)
blank					#REF!		
	<b>Asset Management</b>	<b>\$533,494.54</b>	<b>\$348,128.39</b>	<b>\$185,366.15</b>	<b>#REF!</b>	<b>\$568,139.86</b>	<b>(\$34,645.32)</b>

#REF!

Budget expended	Time Status	
	NOW=	12/19/2021
	Start	5/1/2020
45.1%	163.7%	118.6%
71.6%	163.7%	92.1%
84.1%	163.7%	79.6%
<b>65.3%</b>	<b>163.7%</b>	<b>98.5%</b>

07S	D Street	\$7,500.00	\$2,183.39	\$5,316.61	\$0.00	\$2,183.39	\$5,316.61
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29.1%	163.7%	134.6%
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07C	Odor Control Chemicals	\$100,000.00	\$88,256.00	\$11,744.00	\$0.00	\$88,256.00	\$11,744.00
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88.3%	163.7%	75.5%
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Estimated total remaining 07M, 07C, 07S (\$17,584.71)

**Hull 2021-2022 - 07M Projects, Tasks, and Needs - (AV)**  
**Maintenance Account - Year 7 - 05\_01\_21 to 04\_30\_22**

FOR SEPTEMBER 2021 MOR

#REF!

12/19/2021 15:01

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	\$7,000.00			Jody St. George, Paul Horigan & WC Support Staff - Total budget \$25,000; inci annual scrubber cleaning, remove old blowers [mech];other items as needed. Adj budget down to \$9,000 - 11/22. Adjust 12/19;
1	Pump and Motor Repairs [invoiced and pcard]	On Going		101A	\$6,000.00			to keep existing equipment running - utilize various outside contractor repair shops, new purchases. orig budget \$20,000; adjust to 6000 11/22.
1	Lubricants	On Going		101A	\$1,500.00			Various Suppliers for oil and grease. Budgeted \$3500.
1	Generator Repairs	On Going		101A	\$2,000.00			General Repair Work - Original Placeholder \$3,000; pending invoice for water solenoed main gen oct 2020; Adj 11/22 to \$2000.
1	Fire Alarm Inspections and Service	On Going		101A	\$2,000.00			Semi Annual - Hart Security [October & April , central station, & Service]Orig budget \$3000.
2	Universal waste disposal	Pending		101A	\$500.00			Placeholder - \$500; zero the budget, will incur if needed
1	Service the Forklift	Pending		101A	\$400.00			Placeholder \$400 - Annual cost - outside vendor
1	Overhead Hoist Inspection	Pending		101A	\$1,500.00			Annual task - Applied Dynamics - PO is usually issued for April. \$1500
1	Flow meter verification and calibration	Pending		101A	\$1,000.00			Placeholder - Annual - Ray Ferland 1 visit annually [orig budget \$1,000
1	Facility Building - Roof Inspection	Pending		101A	\$2,800.00			\$2800 Annual Placeholder - Established contract with Tecta America
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	\$2,000.00			Estimated annual expenditures - Orig budget \$4,000; adj 12/19;
1	Manhole Inspections	Pending		101A				As required, and/or scheduled
2	General mechanical and electrical items/supplies	On Going		101A	\$5,000.00			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.
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 SEPTEMBER 2021 MOR

#REF!

12/19/2021 15:01

Priority [1=high]	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
2	Misc. Materials	On Going		101A	\$1,000.00			Hardware Store - \$200.00 per month - reoccurring expense; orig budget \$2,400;
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	\$5,000.00			sub-contractor labor - pending; Have materials on hand
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	Completed		102B	\$10,000.00			Most likely by D & C
1	Effluent Pump #3 - repairs	On Going		102B	\$25,000.00			Currently the 60HP pump is at Flygt Repair shop - estimated repairs and new power cord - \$25,000; Pump still at shop - Dec 2021;
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	On Going		102B	\$60,000.00			Purchase from either Sourcewell or other -best estimate:
1	New Effluent Flygt Pump #4	On Going		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 4	AUMA spare electric actuator	Pending		102B	2020_05_01_07M_Checkbook_YTD draft			one spae unit, for inventory - Quoted by A&N. PO requested. & on order #103652 07M Planned Costs

Hull 2021-2022 - 07M Projects, Tasks, and Needs - (AV)

Maintenance Account - Year 7 - 05\_01\_21 to 04\_30\_22

FOR SEPTEMBER 2021 MOR

#REF!

12/19/2021 15:01

Priority [1=high]	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
1	Grit classifier system parts	On Going		102B	\$9,000.00			No spare parts - tail shaft housing, tail shaft, bushing, retainer plate, etc. Estimate from DGMarshall, and Envirodyne. Parts purchasing initiated Dec 2021.
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; rmv 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	\$6,000.00			Steve Rose and the SCADA Support Team; orig budget \$25,000; adj Dec 2021. Adjust budget remaining from 11K down to 6K
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	Annual Generator inspection	Pending		103A	\$6,000.00			placeholder 2021 Annual \$4,900 - MSElectrical Power - Generator PM/Service work - due in November, Early Dec target completion.
1	Automatic Transfer Switch inspection and servicing	Pending		103A	\$2,400.00			\$2400 - Annual Service planned for April Highland Power - NETS - Transfer Switch; Part of Gen Svc PO.
1	Wetwell Inspections and Cleaning - Plant/Pump Stations	On Going		103A	\$8,000.00			As required, plant or pump stations; orig budget \$10,000; adj 12/19 down to \$5000
1	Sewer Line Cleaning - Emergencies	On Going		103A	\$5,000.00			Placeholder - As required for various sub-contractors; could be Hoadley, Truax, WindRiver, BMC, or other, collection system & plant; <b>orig budget \$10,000</b> ; adj budget down to \$5,000 10/20
1	Collection System and plant - emerg & unplanned calls - Jetting & CCTV work - various contractors	On Going		103A	\$10,000.00			Budget - 15,000, adj down to 10K on 10/20;
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 contractor O&M inspections and potential repairs; Looking at Rosano-Davis or another contractor & W&C to investigate; budget of \$7,500 on hold
1	LS A pumps - Repairs to P2 by Industrial Pump	On Going		101A				Placeholder - 4/12 - Evaluating cost for pump repair while replacement costs for parts or new pumps are looked at..
1	PC #2 rake repairs - Lydon	completed		103A	\$33,000.00			Time and materials per proposal; [\$18,000] Revised estimate due to additional issues not seen with first inspection. Estimated additional \$\$ - \$15,000

**Hull 2021-2022 - 07M Projects, Tasks, and Needs - (AV)**  
**Maintenance Account - Year 7 - 05\_01\_21 to 04\_30\_22**

FOR SEPTEMBER 2021 MOR

[12/19/2021 15:01](#)

Priority [1=high]	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
1	PC2 remaining repairs - turnbuckles	Pending		103A	\$2,000.00			installation
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 electrician assistance.
TOTAL					\$220,011.47			