



woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

HULL WATER POLLUTION CONTROL FACILITY

December
2022

MONTHLY OPERATING REPORT



NPDES NO. MA0101231

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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 December 2022.

- No lost-time incidents for the month of December.
- Continuing Covid-19 awareness- adhering to W&C, Town of Hull, and CDC guidelines and sharing any protocol updates.
- There were 140 effluent samples taken in December.
- There were no alarm calls afterhours that required a response by W&C staff.
- The Asset Management Accounts summaries for contract year #8 is attached- latest revision date is 11/1/22.
- There was just one E-One grinder pump resident call in December.
- W&C's O&M continued its efforts to support the various ongoing engineering projects and upgrades at the plant- see the projects section.
- The weekly Bio Bot Covid-19 wastewater sampling & monitoring program continued with W&C staff assisting Brian Kiley of the HSD when needed.
- On December 15, the Gravity Sludge Thickener #1 was put online and use of the rotary sludge thickener (RST) ceased for the winter months. Primary Clarifier #2 was put online at that time as well, which feeds settled solids into the Gravity Thickener.
- The DMR's required 4th Quarter Whole Effluent Toxicity (WET) testing was collected and submitted to RI Analytical Labs.

***Mike Sullivan – Plant Manager
Town of Hull WPCF
1/27/2023***

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



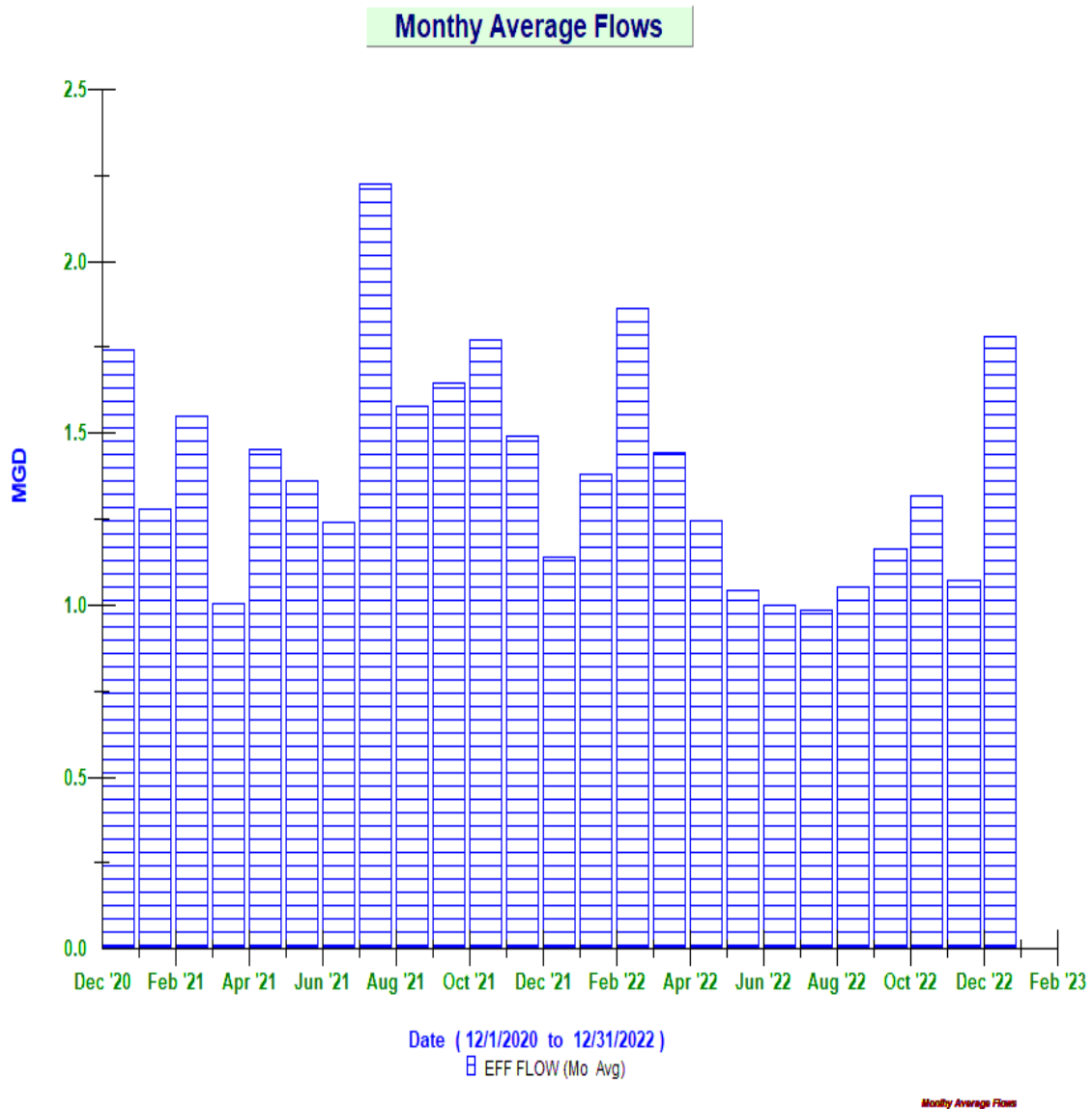
Average Daily Flows and Loadings for *December*

Month / Year	Eff Flow	Inf Flow	Inf BOD	Inf TSS	Eff BOD	EFF TSS
	MGD	MDG	LBS	LBS	LBS	LBS
Dec '20	1.74	1.99	2,599.58	4,453.69	82.05	237.66
Dec '21	1.14	1.21	1,529.72	1,603.68	41.08	76.63
Dec '22	1.78	1.85	1,580.10	1,801.48	70.25	109.31

* 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.

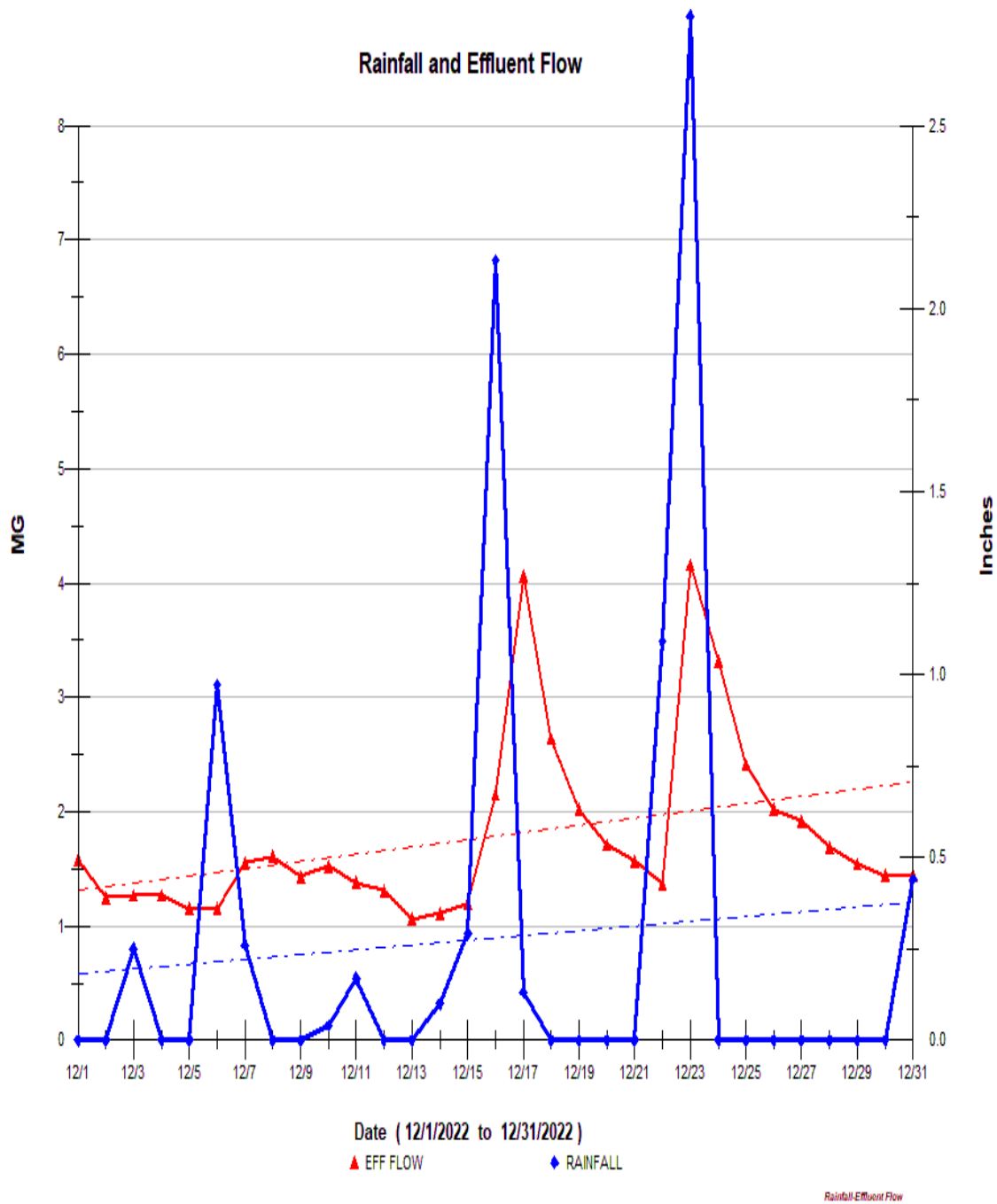
A. AVERAGE EFFLUENT MONTHLY FLOWS – 2+ YEAR COMPARISON

The monthly average flow for December was 1.78 MGD, well more than 1.07 MGD in December. Total precipitation for December was 8.67 inches, much more than November's 2.69 inches, but no impact on the plant's process conditions. 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].

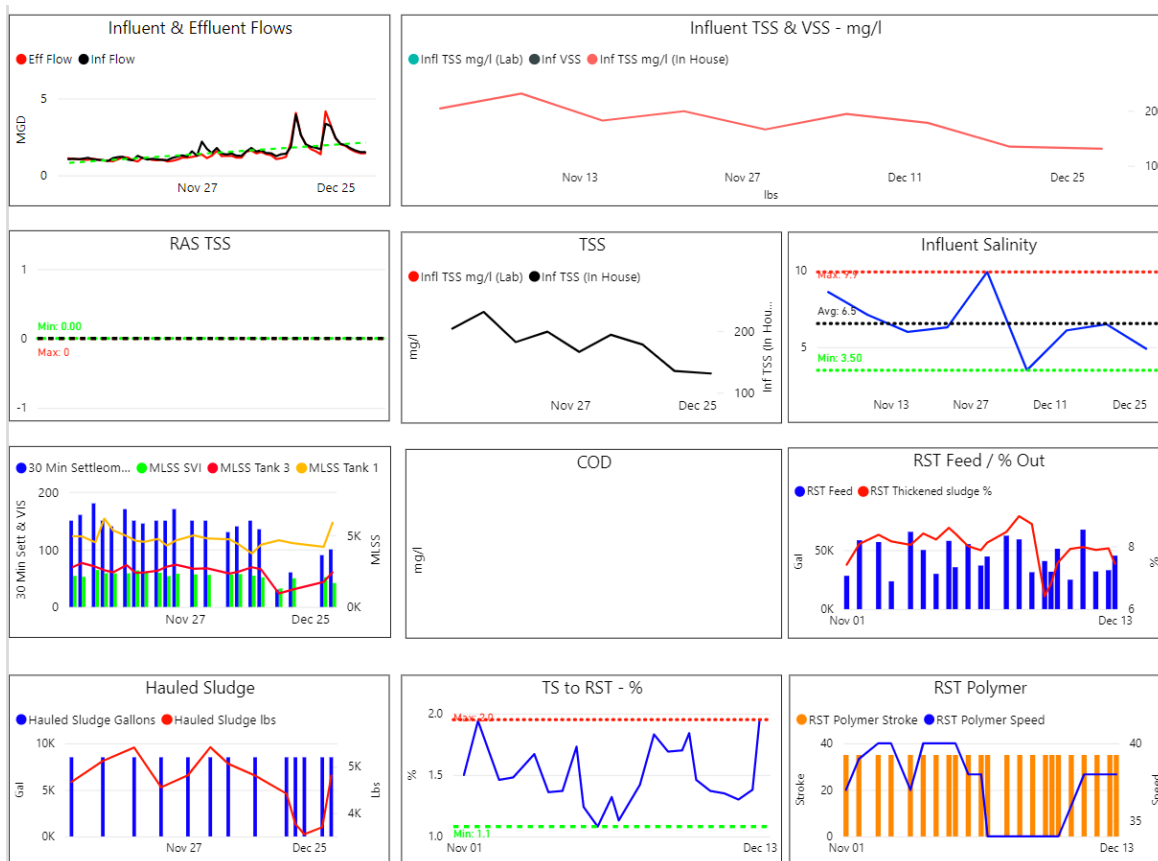


3 COMPLIANCE




➤ Plant Effluent

- The plant process conditions through December were steady.




Monthly Process Summary graphs from power BI: November- December 2022



Hull Wastewater Treatment Facility

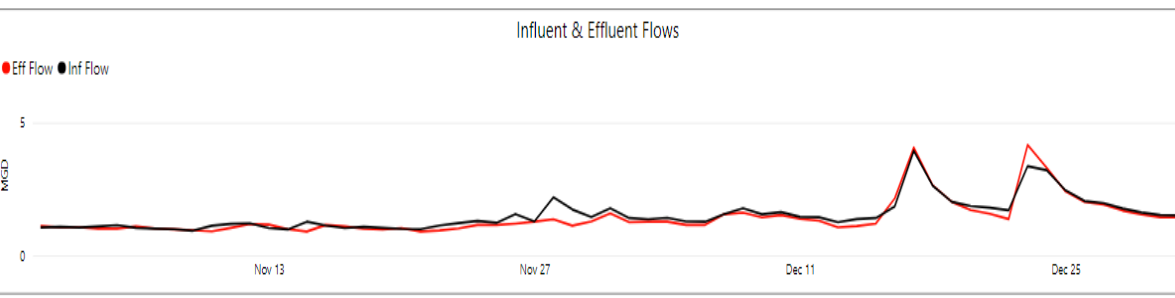
11/1/2022

12/31/2022



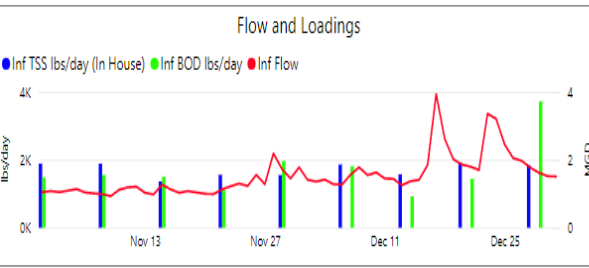
Influent & Effluent Flows

● Eff Flow ● Inf Flow



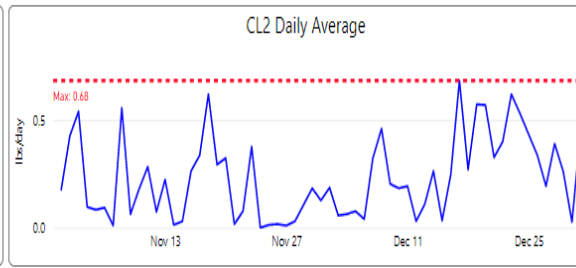
Flow and Loadings

● Inf TSS lbs/day (In House) ● Inf BOD lbs/day ● Inf Flow



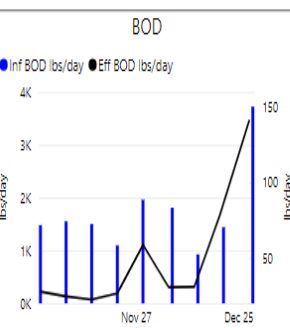
CL2 Daily Average

Max 0.68



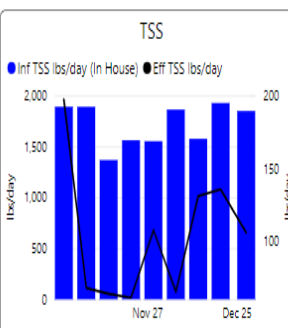
BOD

● Inf BOD lbs/day ● Eff BOD lbs/day



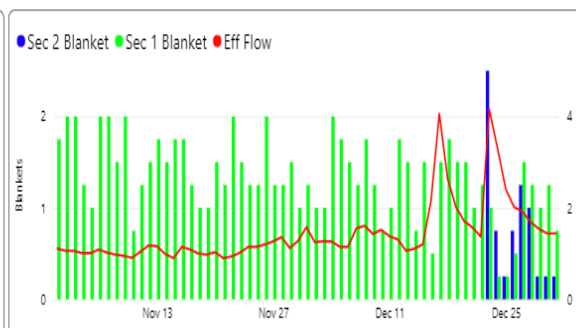
TSS

● Inf TSS lbs/day (In House) ● Eff TSS lbs/day



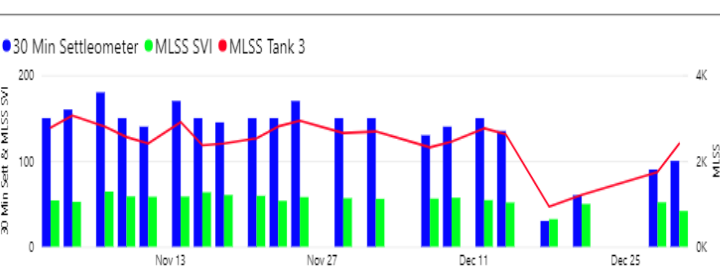
Blankets

● Sec 2 Blanket ● Sec 1 Blanket ● Eff Flow



30 Min Sett & MLSS SVI

● 30 Min Settlemeter ● MLSS SVI ● MLSS Tank 3



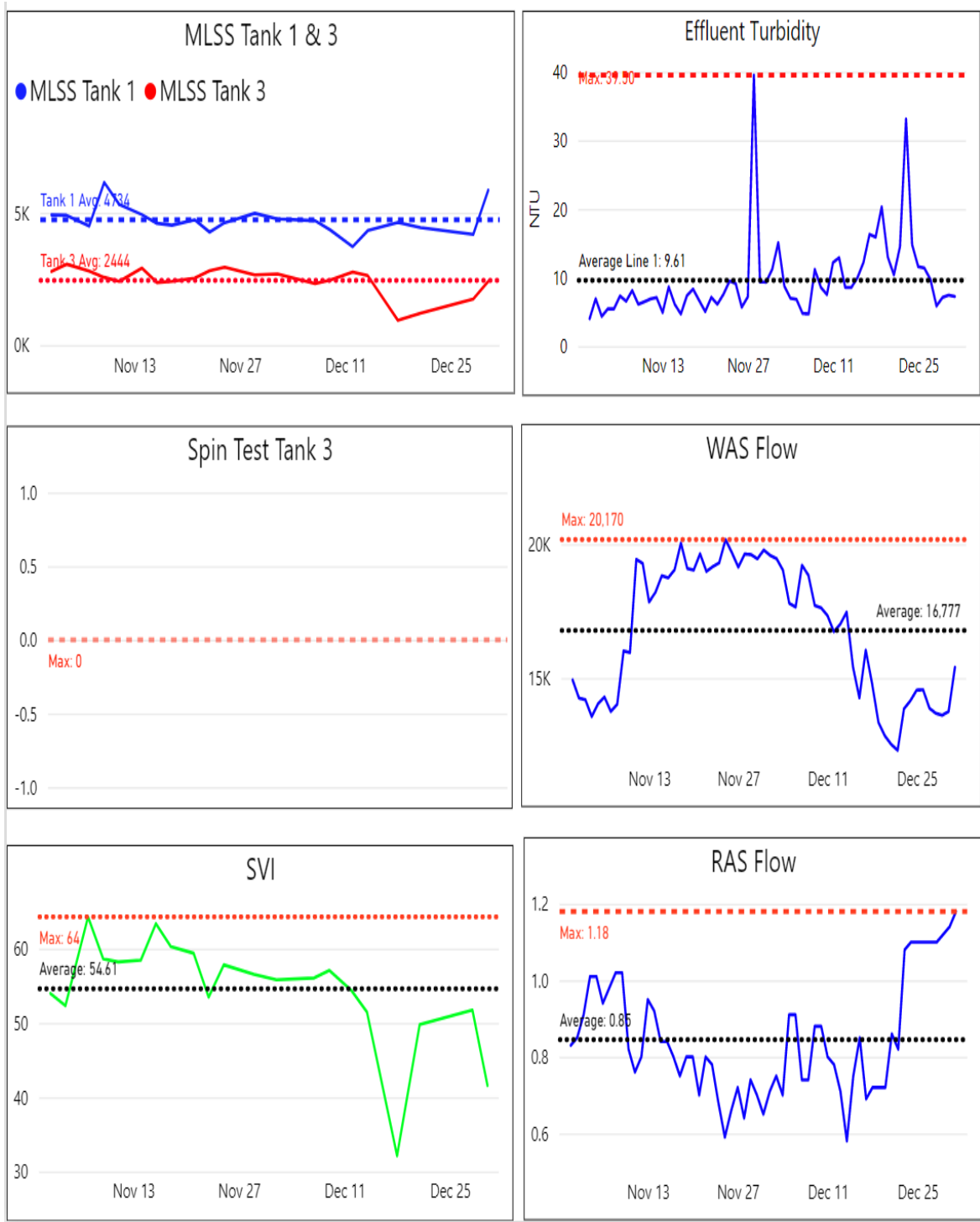
BOD & TSS Removal

Date	Eff TSS Removal	Eff BOD Removal
1/31/2021	98.24	99.36
2/28/2021	94.82	96.10
3/31/2021	98.12	99.01
4/30/2021	94.74	96.74
5/31/2021	96.21	97.49
6/30/2021	97.06	97.24
7/31/2021	93.62	95.73

Violations

Date	NOTES
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December 2022



Additional Power BI Graphs showing trends of various processes – 11/1-12/31 2022

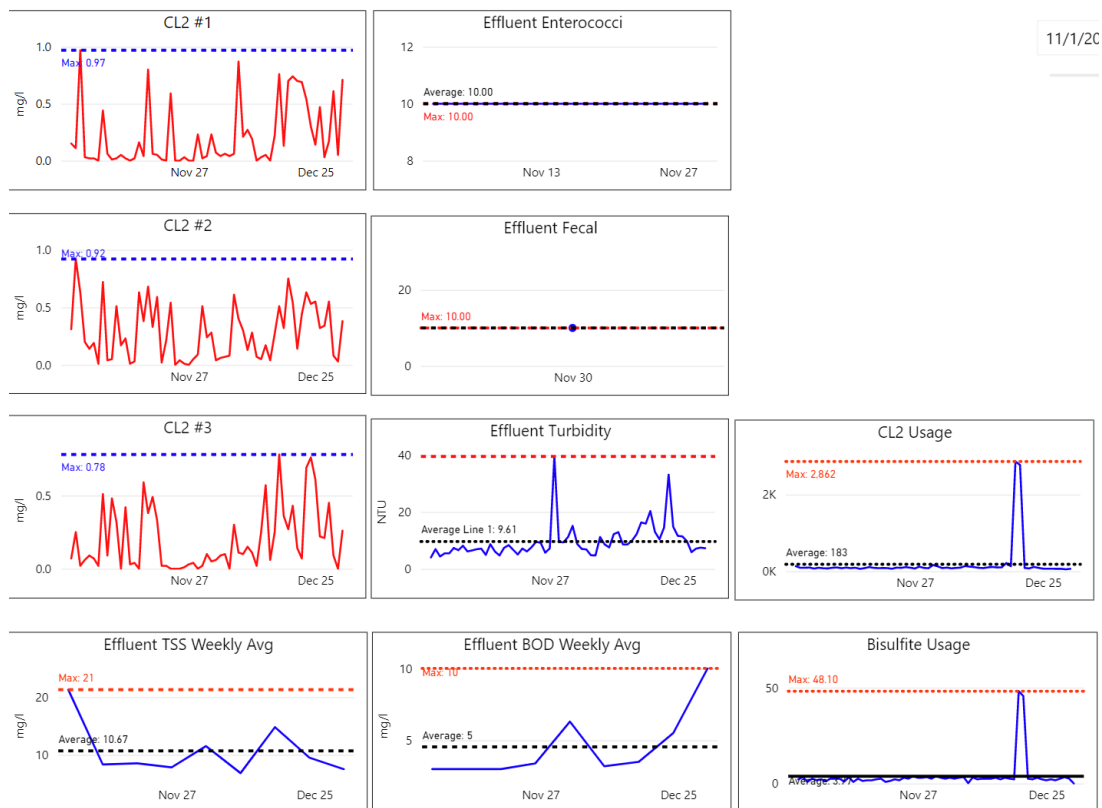
4 KEY PERFORMANCE INDICATORS



Parameter Info			Permit Requirements					Results				
Parameter	Hach WIMS Variable #	Units	Daily Max	Daily Min	Weekly Avg Max	Monthly Avg Max	Freq	Period Avg	Period Min	Period Max	# of Samples	# of Violations
Eff TSS	104 / 999081	MG/L	50		45	30	1 X Week	9.7	6.8	14.8	4	0
Eff TSS	184	LBS			1152	768	1 X Week	109.3	65.2	135.5	4	0
% TSS Rem	208	%		85			1 X Month	93.9			1	0
Eff BOD	108	MG/L	50		45	30	1 X Week	5.6	3.2	10.0	4	0
Eff BOD	185	LBS			1152	768	1 X Week	70.3	30.7	140.9	4	0
% BOD Rem	207	%		85			1 X Month	95.7			1	0
Eff Chlorine	142	MG/L	1			0.7	3 X Day	0.28	0.03	0.68	93	0
Eff Fecal	111	#/100 ML	260			88	1 X Week				0	0
Eff pH	136	SU	8.5	6.5			1X Daily	6.6	6.5	6.9	31	0
Enterococci	255	#/100 ML	276			35	1 X Week				0	0

There were 140 effluent samples taken in December with no violations.

EFFLUENT COMPLIANCE POWER BI GRAPHS



Quality of the effluent was satisfactory, turbidity NTU levels were normal.

Sewage Gallons Treated vs Sludge Disposed

Month	Effluent Treated, MG	Sludge Disposed, Gals
December 2020	53.97	70,500
December 2021	35.41	94,500
December 2022	55.29	68,000

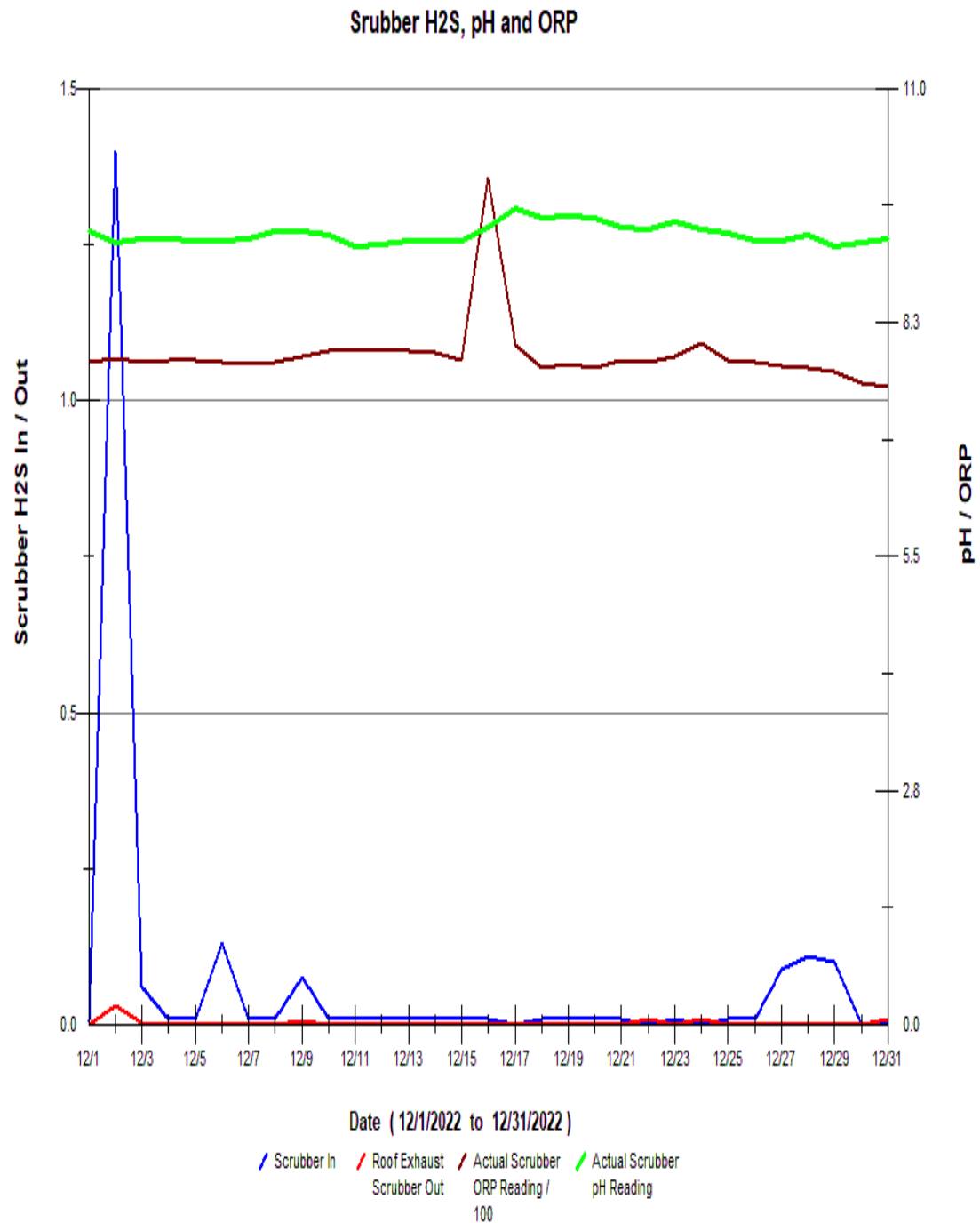
Additional Power BI graphs for sludge solids for 3-month period ending 12/31/22.



The Bioxide system was on, and the feed rates were lowered, as normal seasonal temperatures were cooler. Monthly graphs are attached below, the daily average Bioxide use for November was about 43 gallons per day.

- The “In-Pipe” bacteria containers in the collection system manholes were changed out on December 13 and 28

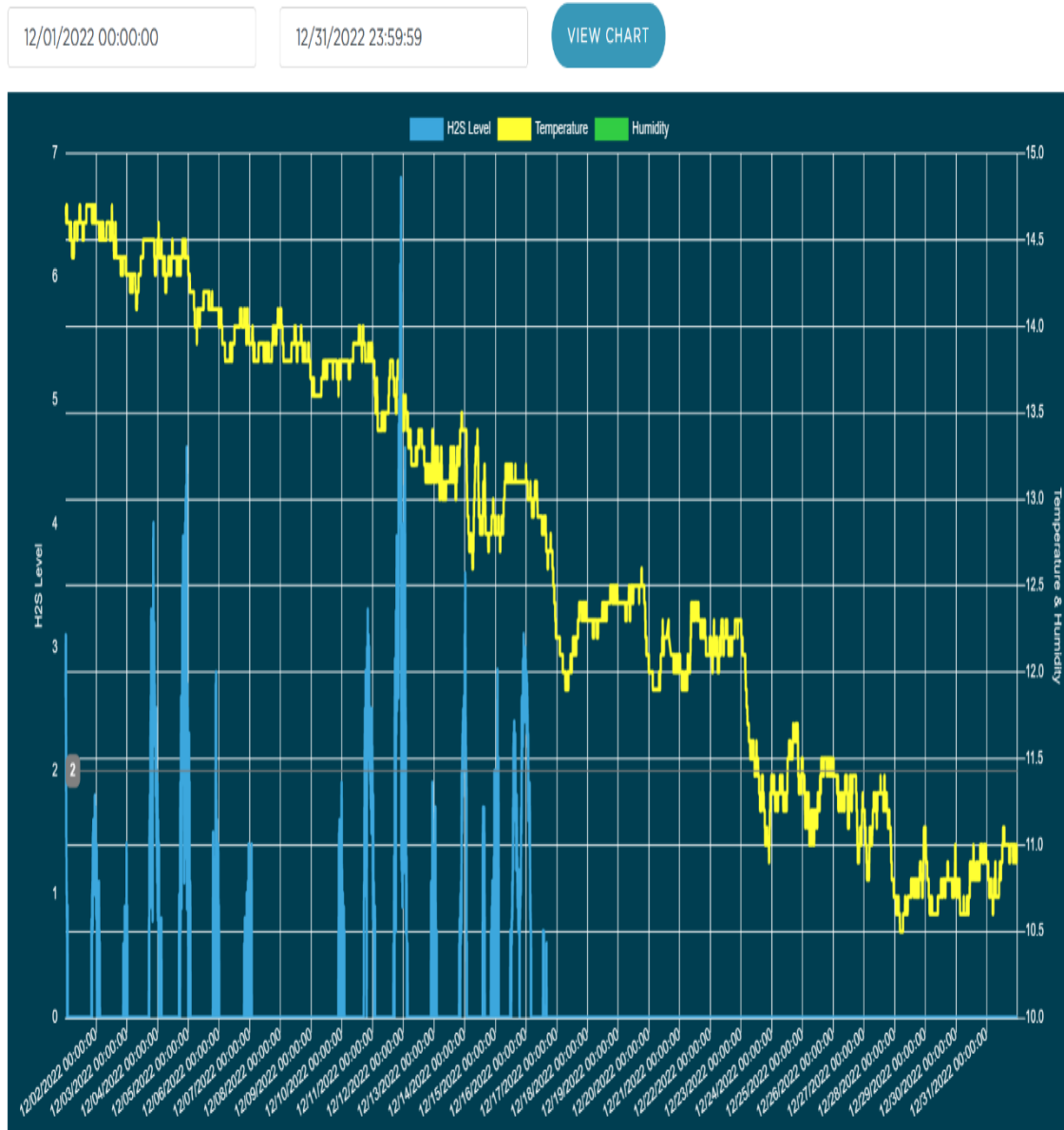
- Slight changes - Hydrogen sulfide (H₂S) monitoring units were recording and trending on the odor scrubber. [inlet and outlet]. Increased scrubber fan speed slightly. See graph below:



Scrubber H₂S, pH and ORP

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

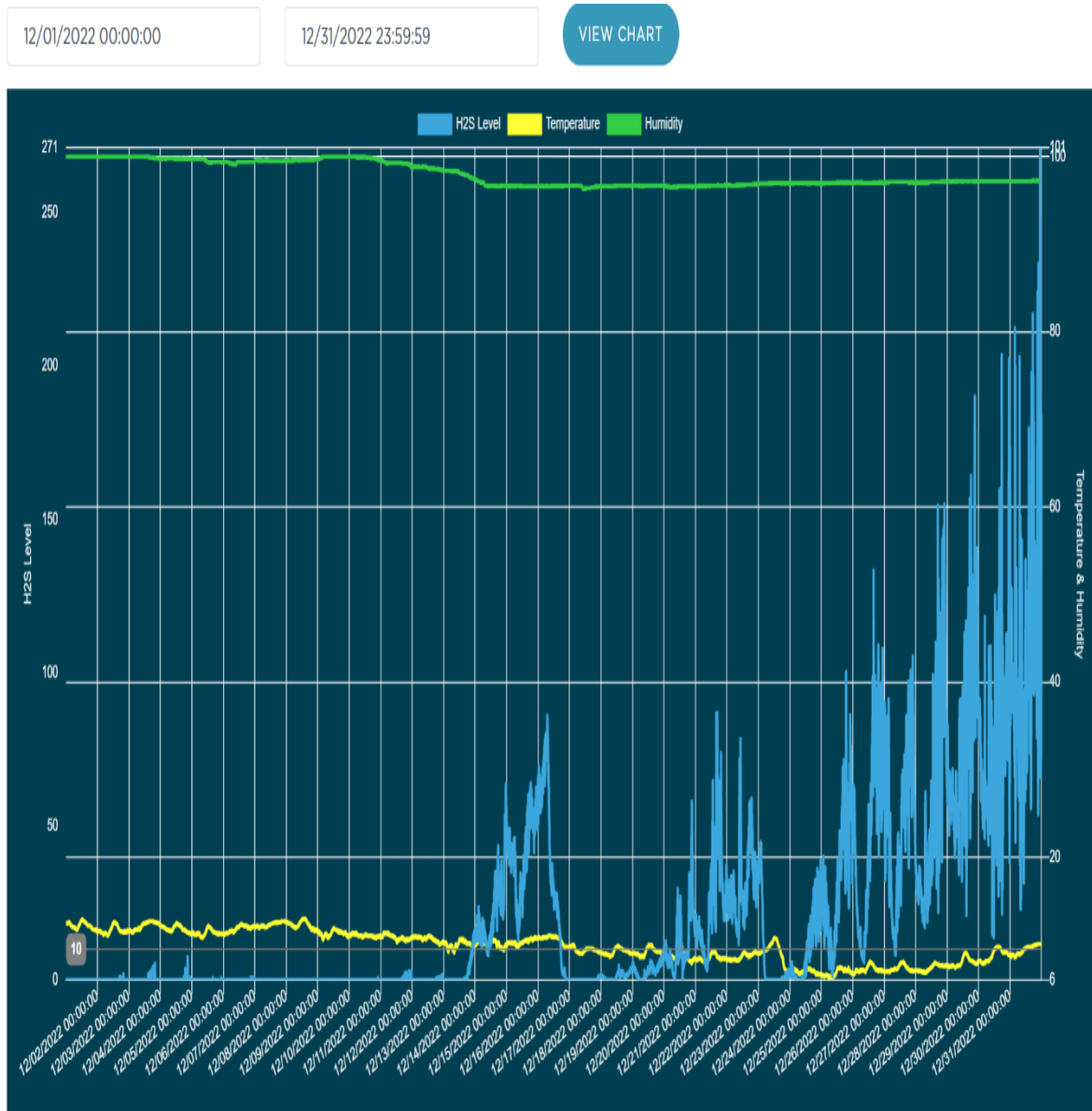
XYZ – Nantasket Ave [closest to plant]



The odor data logging unit at XYZ monitoring the overall H2S levels close to the plant. From the graph, the daily pattern of H2S levels see a rise in the mid-afternoon until late evening/early AM.

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 excess nitrate in the sewage system to treat the additional H2S added from other parts the system – such as PS #4, contributions from lines feeding the interceptor - PS #5, PS #6, PS #9, Spinnaker Island, etc., all the way to the wastewater plant. H2S levels through November were minimal and lessening with cold weather, and adjustments for less Bioxide feed were made over the course of the month.



Nantasket Ave

6 MAINTENANCE SUMMARY

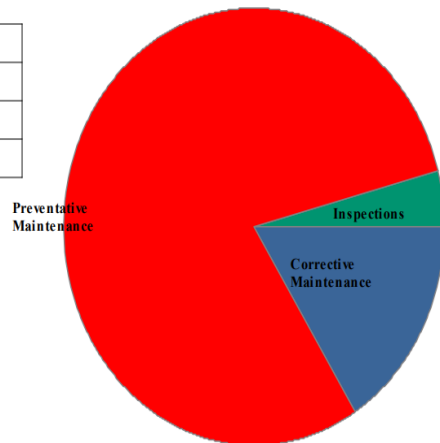


Maintenance History Report Hull Wastewater

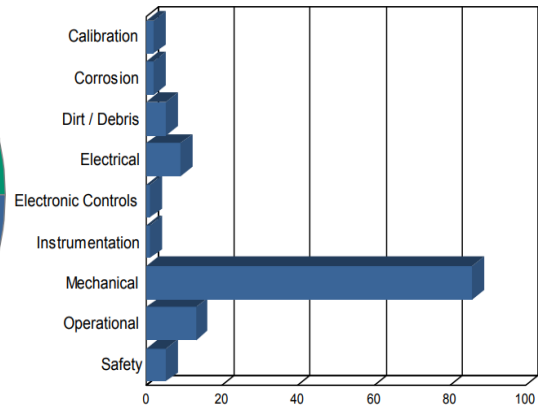
Start Date: 12/1/2022
End Date: 12/31/2022

Corrective Maintenance	20
Inspections	5
Preventative Maintenance	99
Total Work Orders	124

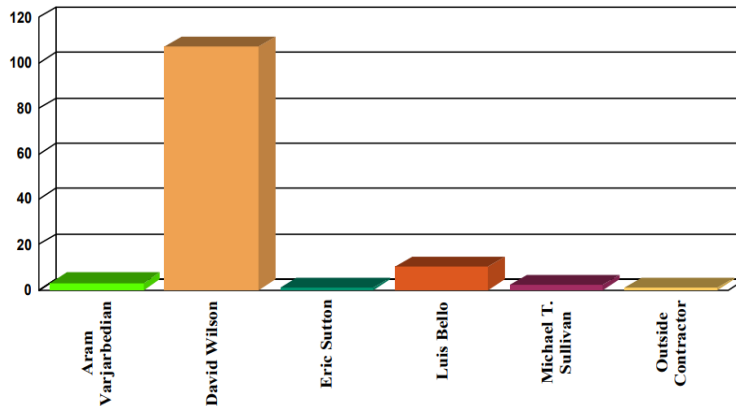
Work Order History By Type



Work Order History by Reason



Work Order History By Employee



Employee	WO Count	Labor Hours
Aram Varjarbedian	3	3
David Wilson	107	29
Eric Sutton	1	1
Luis Bello	10	1
Michael T. Sullivan	2	0
Outside Contractor	1	10
Totals	124	43

A. TASKS COMPLETED THIS MONTH

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

- On December 1 civil engineering contractor E.M. Lofgren was onsite. A yard hydrant (plant effluent water) by Primary Clarifier #2 was moved away from the primary influent bypass line. A broken hydrant by the influent bypass Godwin pump was replaced. Lofgren also dug a trench for buried electrical conduit going between the chlorine contact chamber (CCC) and the secondary gallery, which will house electrical wires powering the CCC.
- On December 12 Hi-Voltage Electric was onsite to disassemble the wiring to influent pump #1 motor, which needed rebuilding, and completed new lighting assembly and installation down in the sludge transfer room.
- Dec 21 Recycling Solutions of Fall River, MA picked up a pallet of old and unusable electronics for recycle or proper disposal-they will subsequently be offering a dollar value.
- December 1 & 2 Millwrights continued working in the Secondary Clarifier #2- addressing the center well height & alignment, scrapers on the rake arm assembly, and removing the unworkable PVC piping once used as return sludge draft tubes.
- Lydon subsequently returned on December 22 as the clarifier's rotation failed shortly after it was put into service on Dec 21. After a few days of use a rake arm became misaligned and would not allow for proper rotation, causing the unit to trip out. Lydon fortunately prioritized the repairs as a major high flow storm even was in route.
- December 29 trouble shooting an electrical issue at PS #5. The two 1.amp fuses for the pumps were found to be failing during a power failure, when the transfer to emergency generator occurs. Both fuses were stepped up to 1.5 AMPS, per Mike P. of Hi-Voltage Electric, and he will further investigate the cause.
- On December 30 at pump station #6 the de-ragger unit's control panel for pump #2 was found not working properly- Mechanical Solutions of Connecticut were called and a technician will be onsite to address the system.
- On December 27 the conduit for the high-level alarm floats at PS# 1 was found full of infiltration groundwater, as an alarm had been sent. The conduit connections were replaced, and a new high-level alarm float was wired in.
- This area had a high flow storm event on Dec 23-24, and there was a town wide power loss on that Friday afternoon. When power was restored influent pump # 2 shorted out, resulting a fire alarm! Hi-Voltage Electric was able to get onsite shortly thereafter- they installed influent pump's motor #1 onto influent pump #2, as the #1 influent pump's assembly was out of service for repair.

B. ASSET MANAGEMENT ACCOUNTS

- **Please see the attached summary totals and planned expenditures for the Asset Management accounts for contract year (8). Most recent through 12/5/22**

5 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.

- No lost time incidents were reported for December.
- Monthly PM's - emergency eyewash and shower inspections, fire extinguishers, and emergency lighting inspections completed.
- Monthly calibrations were performed on all MX4 & Max XT11 gas meters.
- On-going Covid-19 Pandemic awareness with daily review and as needed and keeping in contact with all onsite contractors regarding Hull and W&C covid-19 protocols.
- W&C's Pure Safety topic for December was batteries and charging systems.
- The monthly W&C SPARKS safety meeting was held on December 29 with a review of W&C's monthly "Lessons Learned!"
- W&C's monthly safety inspection checklist for the plant was completed.

6 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:

- All staff completed W&C's monthly Pure Safety training and the plant's monthly safety meeting was held on December 29. Topics discussed were scaffolding, rigging & hoists, and reviewing the "near-miss" incidents occurring at all W&C projects in the November "Lessons Learned!"
- Regular, usually daily, operational updates and process control discussions, pump station operations, Dig Safes, and the HVAC construction project work scope ongoing at the plant. Daily safety briefings and Covid-19 protocol updates if necessary.

Staffing related items:

- Plant continued to have Sunday coverage supplemented with part-time staffer Roger Boltrushek in addition to Aram and Mike.
- O&M Specialists Paul Horigan and Jody St George continue to assist as needed with plant O&M projects.

7 COLLECTION SYSTEM

A. WET WELL CLEANING

The actual schedule for wet well cleaning: May 2022 to June 2023:

(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, 2022								
June, 2022	X			X				
July, 2022								
Aug., 2022								
Sept. 2022								
Oct., 2022								
Nov, 2022								
Dec., 2023								
Jan., 2023								
Feb., 2023								
March 2023								
April 2023								

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

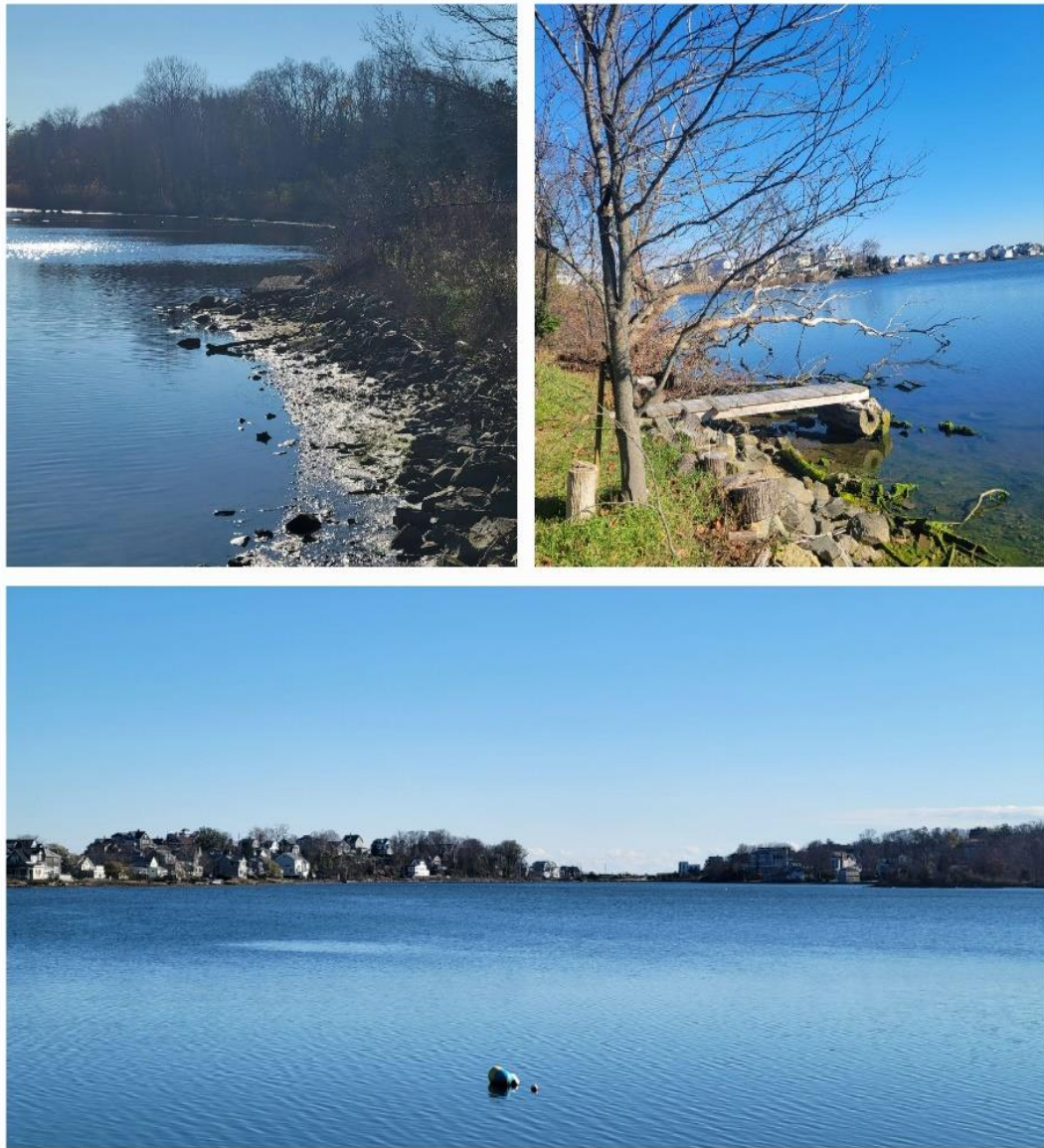
B. COLLECTION SYSTEM MAINTENANCE

Collection system work is being documented and tracked in Utility Cloud [UC] and a summarized report for September 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 September. 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.

- There were three calls for E-One Grinder pump service – see UC summary.

- Pump station emergency generator testing consists of weekly no load runs and monthly loaded runs.
- All Pump station wet wells were inspected in December- monthly station inspections are completed and combined with the monthly station PM's.
- Upload new or updated tie-cards to the UC as required.
- Dig-Safe mark outs are completed throughout the Town of Hull as needed to assist and facilitate scheduled and emergency gas repairs, broken water mains, roadway paving projects, and other residential and town projects. All are listed in the UC summary.



8 PROJECT MANAGEMENT & ADMINISTRATION



A. ON-GOING PROJECTS AND SUPPORT ITEMS

October updates:

- Ongoing construction work continued in many areas of the operations building for the Phase 1 HVAC project. W&C staff work closely with the contractors- moving equipment & items as needed in the working areas to allow for the renovation work to continue. W&C staff check in with the general contractor supervisor daily and attend the monthly meeting with Tighe & Bond and all the project sub-contractors.
- Mike S. and Aram V. continue to meet weekly with John S. and Brian K. to discuss Sewer Department operations, any treatment plant issues, the collection system, and any upcoming projects.

Date	Asset ID	Asset Description	Asset Class	Name	Workflow Class
12/1/2022 13:27	05-056	32 HIGHLAND AVE	Hull Parcels	Basler, Joe	Hull - Sewer Backup
12/14/2022 11:17	05-056	32 HIGHLAND AVE	Hull Parcels	Basler, Joe	Hull - Sewer Backup
12/30/2022 14:50	16-113	24 E STREET	Hull Parcels	Sutton, Eric	Hull - Markout
12/30/2022 14:53	16-113	24 E STREET	Hull Parcels	Sutton, Eric	Hull - Sewer Backup
12/19/2022 14:47	30 Dellawanda Rd	30 Dellawanda Rd Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Hull - Grinder Pump Maintenance
12/30/2022 11:59	33-113	19 SAGAMORE TERRACE	Hull Parcels	Sutton, Eric	Hull - Markout
12/22/2022 15:25	55-005	8 SUMMIT AVE	Hull Parcels	Sutton, Eric	Hull - Sewer Customer Complaint
12/20/2022 14:58	Bacteria UNIT #21	UNIT #21	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 14:55	Bacteria UNIT #22	UNIT #22	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:05	Bateria UNIT # 8	UNIT # 8	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:04	Bateria UNIT #10	UNIT #10	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:01	Bateria UNIT #11	UNIT #11	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 14:56	Bateria UNIT #12	UNIT #12	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 14:56	Bateria UNIT #13	UNIT #13	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 14:57	Bateria UNIT #14	UNIT #14	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 14:59	Bateria UNIT #15	UNIT #15	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:00	Bateria UNIT #16	UNIT #16	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:04	Bateria UNIT #17	UNIT #17	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:03	Bateria UNIT #18	UNIT #18	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:02	Bateria UNIT #19	UNIT #19	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:08	Bateria UNIT #2	UNIT #2	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:08	Bateria UNIT #2	UNIT #2	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:00	Bateria UNIT #20	UNIT #20	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 14:55	Bateria UNIT #23	UNIT #23	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:07	Bateria UNIT #24	UNIT #24	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:02	Bateria UNIT #3	UNIT #3	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:07	Bateria UNIT #4	UNIT #4	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:06	Bateria UNIT #5	UNIT #5	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:06	Bateria UNIT #5	UNIT #5	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:06	Bateria UNIT #6	UNIT #6	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
12/20/2022 15:05	Bateria UNIT #7	UNIT #7	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units

12/20/2022 14:54	Bateria UNIT #9	UNIT #9	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units
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Maintenance History Report

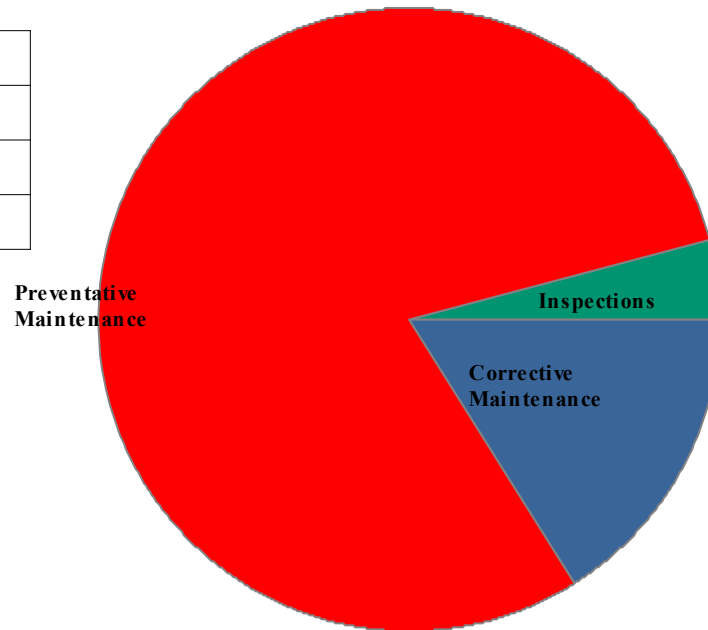
Start Date: 12/1/2022

End Date: 12/31/2022

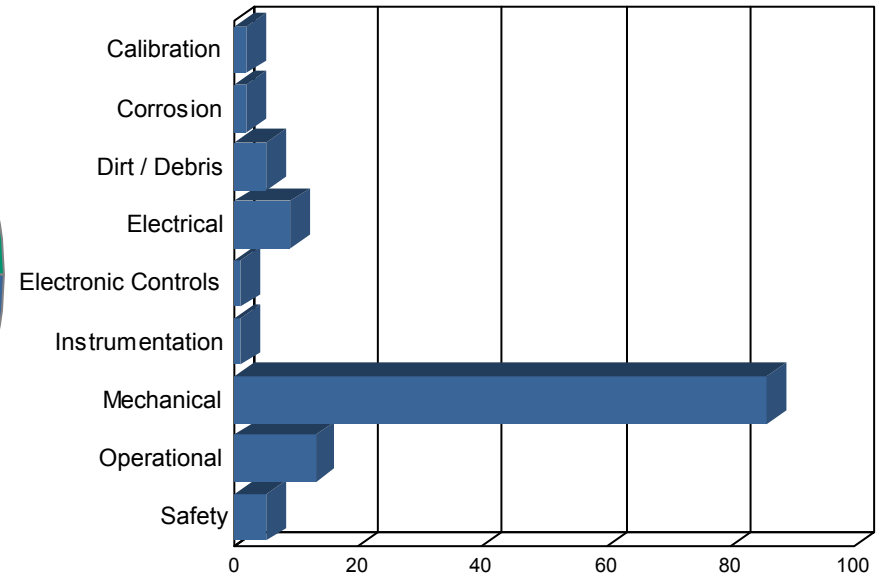
Hull Wastewater

Work Order History By Type

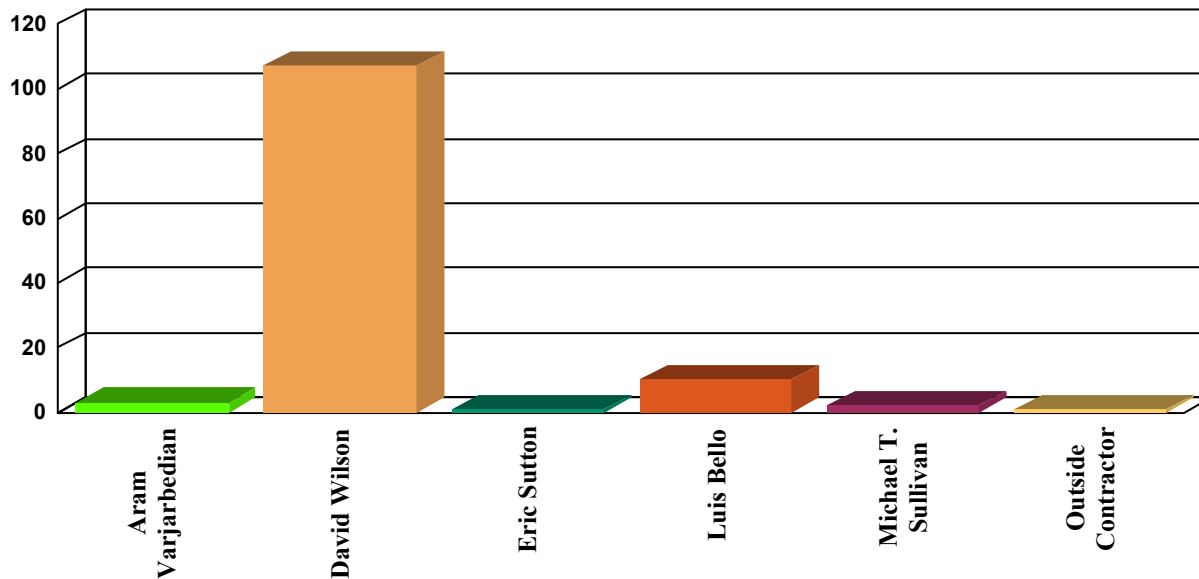
Corrective Maintenance	20
Inspections	5
Preventative Maintenance	99
Total Work Orders	124



Work Order History by Reason



Work Order History By Employee



Employee	WO Count	Labor Hours
Aram Varjarbedian	3	3
David Wilson	107	29
Eric Sutton	1	1
Luis Bello	10	1
Michael T. Sullivan	2	0
Outside Contractor	1	10
Totals	124	43

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/1/22	17080	GODWIN Portable Pump	purge out discharge line	JB and MS obtain air compressor from the DPW. AV and MS purge out 12 inch HDPE line to dbox and screenings box.	Aram Varjarbedian	12/1/22	Completed
12/1/22	17082	Plant water yard hydrants	replace two failed yard hydrants	Replace two yard hydrants. By Ops building infl MH and by PC 2. install new hydrants and isol valves. EM Lofgren Contracting did the work. Wzc shut down PW system.	Outside Contractor	12/1/22	Completed
12/1/22	17081	PS 5 Pump 1	pump not running	AV,JS check P1 fuses on transformer and found blown fuse. Replaced and test ok. Prev day was town power loss drill.	Aram Varjarbedian	11/30/22	Completed
12/6/22	17083	PS 9 Generator	Replace failed block heater.	Isolated block heater. Verified power at socket. Replaced heater due to failed coil.	David Wilson	12/6/22	Completed
12/6/22	17084	PS 4 Generator	Replace failed block heater.	Isolated block heater and verified supply voltage. Mounted new unit and verified operation.	David Wilson	12/6/22	Completed
12/7/22	17085	Primary Clarifier 2 Drive System	Replaced fluid in SEW gear reducer	LOTO of drive system. Drained gearbox fluid. Filled with Royal Purple Synfilm gt220 to threads of level plug.	David Wilson	12/7/22	Completed
12/8/22	17086	RAS Pump 1	Diagnose low output. 40% loss	JT locked out assembly. I verified LOTO and	David Wilson	12/8/22	Completed
12/15/22	17087	RAS Pump 1	Clean and inspect impeller	LOTO of equipment. Separate pump from volute. Removed large rag ball from impeller face.	David Wilson	12/15/22	Completed
12/23/22	17098	PS 6 Pump 2	Diagnose loss of pump 2.	Checked pump locally. Doesn't pump but shows as running. LOTO of pump assembly. Inspected coupling. Inspected impeller. Checked supply flow. Returned to service. Tested operation. Deragger runs in hand but not in auto. Tech rep contacted 12/28. Suspect open on "auto" signal wire from HOA to deragger unit. Follow up required.	David Wilson	12/28/22	Completed
12/23/22	17089	PS 9 Pump 2	Pump 2 failure	Inspected VFD. Found fault. Cleared fault and tested operation. Returned to service. Wetwell high level alarm cleared.	David Wilson	12/27/22	Completed
12/23/22	17090	PS 9 Pump 1	Pump 1 failure.	Town transfer of power caused fault. Cleared fault and returned to service.	David Wilson	12/27/22	Completed
12/23/22	17097	Influent Pump 2 Motor	Diagnose motor failure	Fire alarms sounding. Verified alarm in influent pump room. Influent pump 2 up in smoke. Electricity isolated. Fire department responded and verified heat source eliminated. LOTO of VFD. High Voltage Electrical onsite for wiring. Swapped out motor and wired in backup motor since high flow management plan is in place. Restored pumping capacity.	David Wilson	12/28/22	Completed
12/27/22	17095	PS 1 Building	Repair ladder extension	Disassembled ladder extension. Installed new spring assembly. Reassembled extension and tested operation.	David Wilson	12/27/22	Completed
12/27/22	17091	PS 9 Pump 2	Pump 2 failed	VFD fault due to town power transfer from generator power.	David Wilson	12/27/22	Completed

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/27/22	17096	PS 9 Pump 1	Pump 1 fails to pump.	Inspected pump assembly. Mmotor not running due to thermal protection circuit. Cleared fault and tested. Returned. Inspected wiring for thermal switch. Found loose pot screw by wiggle test. Tightend hardware and tried to replicate. Fault did not retrun. Put pump back into service.	David Wilson	12/27/22	Completed
12/27/22	17094	PS 9 Building	Install fall protection on mid level.	Cut pipe to fit. Secured floor and wall fittings with anchors. Assembled fall protection.	David Wilson	12/27/22	Completed
12/27/22	17088	PS 9 Pump 1	Loss of power caused VFD fault	Town wide power loss. Caused surge in VFD. 600vac fuse open. Isolated VFD and replaced fuse. Returned to service and verified operation.	David Wilson	12/27/22	Completed
12/27/22	17092	PS 1 Building	Dry well high level alarm.	DW/JS inspect cause of alarm. Found junction box filled with water. Drained out water. Used moisture displacement in connectors. Inspected wiring for high level float. Insulation breakdown on wires. Replaced float switch assembly. Verified operation.	David Wilson	12/27/22	Completed
12/27/22	17093	PS 1 Building	Replace failed drywell ventilation ducting.	Demolished old ducting. Installed two 90`s, 10` srtaight ducting and 1` strainght ducting. Screwed together and sealed with tape.	David Wilson	12/27/22	Completed
12/30/22	17099	Plant water yard hydrants	Secondary # 1 hydrant	Broken open use ground valve to operate	Eric Sutton	12/30/22	In Process

Inspections

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/8/22	16758	Blower Room Exhaust Fan 1	Monthly operational inspection	Due to ambient temperature, motor has not been called to run since last service. Inspected components and ran in hand. No unusual noises or vibrations.	David Wilson	12/1/22	Completed
12/8/22	16759	Blower Room Exhaust Fan 2	Monthly operational inspection	Due to ambient temperature, motor has not been called to run since last service. Inspected components and ran in hand. No unusual noises or vibrations.	David Wilson	12/1/22	Completed
12/8/22	14803	Eyewash Stations	WWTF Eyewash Inspection - Weekly		David Wilson	1/23/22	Completed
12/8/22	14804	Eyewash Stations	WWTF Eyewash Inspection - Weekly		David Wilson	1/30/22	Completed
12/8/22	14909	Truck 4 - 2015 Nissan Frontier	Monthly vehicle inspection on do-Forms		Aram Varjarbedian	1/3/22	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/5/22	16470	Generator #1- Emergency Kohler 750	Generator - Monthly Load Test		David Wilson	11/6/22	Completed
12/5/22	16484	Aeration Blower 1	Aeration Blower #1 Air Filter Inspection - monthly		Luis Bello	11/22/22	Completed
12/5/22	16475	Influent Sluice Isolation Gate	Weekly operate through full range		David Wilson	11/23/22	Completed
12/5/22	16485	Aeration Blower 2	Aeration Blower #2 Air Filter Inspection - Monthly		Luis Bello	11/24/22	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/5/22	16602	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		David Wilson	11/27/22	Completed
12/5/22	16598	Generators "All Pump Station"	Generator Weekly - Test Run no load		Luis Bello	11/28/22	Completed
12/5/22	16589	High level floats	Weekly High Float Alarm test		Michael T. Sullivan	11/27/22	Completed
12/5/22	16565	PS Kholer Trailer Mounted Generator	Generator Weekly - Test Run no load		Luis Bello	11/28/22	Completed
12/5/22	16476	Influent Sluice Isolation Gate	Weekly operate through full range		Michael T. Sullivan	11/30/22	Completed
12/5/22	16748	Generators "All Pump Station"	Generator - Monthly Load Test		David Wilson	12/4/22	Completed
12/5/22	16720	PS Kholer Trailer Mounted Generator	Generator - Monthly Load Test		David Wilson	12/4/22	Completed
12/5/22	16522	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		David Wilson	11/23/22	Completed
12/5/22	16529	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	11/23/22	Completed
12/5/22	16534	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	11/23/22	Completed
12/5/22	16541	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	11/23/22	Completed
12/5/22	16552	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	11/23/22	Completed
12/5/22	16523	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		David Wilson	11/30/22	Completed
12/5/22	16547	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	11/23/22	Completed
12/5/22	16530	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	11/30/22	Completed
12/5/22	16535	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	11/30/22	Completed
12/5/22	16542	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	11/30/22	Completed
12/5/22	16553	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	11/30/22	Completed
12/5/22	16548	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	11/30/22	Completed
12/5/22	16715	GasAlert Max XTII #1	4 gas meter calibration - monthly		Luis Bello	12/1/22	Completed
12/5/22	16762	Secondary Effluent Isolation Gate	Isolation Valve Exercise		David Wilson	12/2/22	Completed
12/6/22	16492	Wet Scrubber Fan	Scrubber Exhaust Fan PM - Monthly		David Wilson	11/9/22	Completed
12/7/22	16567	Grit Chamber Blower #4	Grit Rotary Blower #4 PM - Annual	LB completed LOTO of equipment. Removed belt guards and inspected belt condition and deflection. Reassembled. Lubed drive motor and checked pulley. Drained oil from blower. Set oil level. Replaced air filter. Returned to service standby.	David Wilson	11/23/22	Completed
12/7/22	16566	Sludge Storage Tank Blower #3	Sludge Rotary Blower #3 PM - Annual	JT LOTO of equipment. Verified LOTO. Inspected air filter element. Good. Inspected drive belt condition. Should be replaced. Replacement belt incorrect. Reinstalled old belt until correct replacement comes in. Greased drive motor. Changed oil in blower.	David Wilson	11/23/22	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/8/22	16573	Parts Washer	Parts Washer PM - Annual	Inspected parts washer. Found open in switch wiring. Replaced switch. Tested pump and found to be bound. Freed up shaft and tested motor. Good. Replaced parts washer fluid. 25 gallons of water with 1 gallon of blue beast degreaser. Reassembled and retruned to service.	David Wilson	11/10/22	Completed
12/8/22	16664	RAS Pump 1	Monthly Check Pump Couplings		David Wilson	12/7/22	Completed
12/8/22	16665	RAS Pump 2	Monthly Check Pump Couplings		David Wilson	12/7/22	Completed
12/8/22	16666	RAS Pump 3	Monthly Check Pump Couplings		David Wilson	12/7/22	Completed
12/8/22	16687	PS 1 Generator	PS #1 Generator Inspection and Load Test - Monthly		David Wilson	12/7/22	Completed
12/8/22	16683	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		David Wilson	12/7/22	Completed
12/8/22	16688	PS 3 Generator	PS #3 Generator Inspection and Load Test - Monthly		David Wilson	12/7/22	Completed
12/8/22	16689	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	12/7/22	Completed
12/8/22	16697	PS 4 Generator	PS #4 Generator Inspection and Load Test - Monthly		David Wilson	12/7/22	Completed
12/8/22	16693	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	12/7/22	Completed
12/8/22	16698	PS 5 Generator	PS #5 Generator Inspection and Load Test - Monthly	Transfer of load caused pump 1 drivr fault. 1A 600VAC fuse found blown. Replaced and verified proper operation.	David Wilson	12/7/22	Completed
12/8/22	16699	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	12/7/22	Completed
12/8/22	16708	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	12/7/22	Completed
12/8/22	16712	PS 6 Generator	PS #5 Generator Inspection and Load Test - Monthly		David Wilson	12/7/22	Completed
12/8/22	16703	PS 9 Generator	PS #9 Generator Inspection and Load Test - Monthly		David Wilson	12/7/22	Completed
12/8/22	16704	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	12/7/22	Completed
12/8/22	14668	Wet Scrubber Fan	Scrubber Exhaust Fan PM - Monthly		David Wilson	12/8/21	Completed
12/8/22	14736	Ventis MX4 #4 - 4 Gas	4 Gas Meter #4 Calibration - Monthly		David Wilson	12/30/21	Completed
12/8/22	15828	Primary Sludge Pump 2	Monthly Check Pump Couplings		David Wilson	7/6/22	Completed
12/8/22	16752	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		Luis Bello	12/4/22	Completed
12/8/22	16739	High level floats	Weekly High Float Alarm test		Luis Bello	12/4/22	Completed
12/8/22	16632	Portable Generator - Honda	Portable Generator Inspection - Monthly	Checked all fluids. Started generator and brought up to operating temp. Let run for 10 minutes after reaching temp. Shut off fuel and let runout of gas. Turned on choke and lowered rpm. Ran slow until float bowl was emptied. Put away.	David Wilson	12/7/22	Completed
12/8/22	16647	Influent Sluice Isolation Gate	Weekly operate through full range		Luis Bello	12/7/22	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/13/22	16641	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load	Checked all fluids. Added 1.5 gallons premix coolant. Brought up to operating temp. Recorded run data. Cleaned strainer basket.	David Wilson	12/12/22	Completed
12/13/22	16638	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load	Checked all fluids. Added 1 gallon of premix coolant. Brought up to operating temp. Recorded all run data.	David Wilson	12/12/22	Completed
12/15/22	16740	High level floats	Weekly High Float Alarm test	LB and PH completed weekly high level alarm testing.	Luis Bello	12/11/22	Completed
12/15/22	16753	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		David Wilson	12/11/22	Completed
12/15/22	16721	PS Kholer Trailer Mounted Generator	Generator Weekly - Test Run no load		David Wilson	12/12/22	Completed
12/15/22	16749	Generators "All Pump Station"	Generator Weekly - Test Run no load		David Wilson	12/12/22	Completed
12/15/22	16659	Aeration Tank 1 Oxygen Probe	AT #1 DO Probe Clean and Calibrate - Monthly	Cleaned and calibrated LDO probe. Offset -.6mgl	David Wilson	12/6/22	Completed
12/15/22	16660	Aeration Tank 3 Oxygen Probe	AT #3 DO Probe Clean and Calibrate - Monthly	Cleaned and inspected LDO probe for AT 3. Offset of -.4mgl.	David Wilson	12/6/22	Completed
12/16/22	16746	pH meter	Clean and Calibrate		David Wilson	12/1/22	Completed
12/16/22	16747	ORP meter	Clean and Calibrate		David Wilson	12/10/22	Completed
12/19/22	16487	Secondary Clarifier 2	Clean Launder Screens - Quarterly		David Wilson	11/7/22	Completed
12/19/22	16486	Secondary Clarifier 1	Clean Launder Screens - Quarterly		David Wilson	11/7/22	Completed
12/19/22	16651	Mechanical Screen & Washpress System	Monthly Maintenance	Completed monthly service of flexrake and wash press.	David Wilson	12/5/22	Completed
12/19/22	16672	Primary Sludge Pump 1	Monthly Check Pump Couplings		David Wilson	12/7/22	Completed
12/19/22	16673	Primary Sludge Pump 2	Monthly Check Pump Couplings		David Wilson	12/7/22	Completed
12/19/22	16667	RST Feed Pump 1	Monthly Check Pump Couplings		David Wilson	12/7/22	Completed
12/19/22	16668	RST Feed Pump 2	Monthly Check Pump Couplings		David Wilson	12/7/22	Completed
12/19/22	16674	Sludge Transfer Pump 1	Monthly Check Pump Couplings		David Wilson	12/7/22	Completed
12/19/22	16675	Sludge Transfer Pump 2	Monthly Check Pump Couplings		David Wilson	12/7/22	Completed
12/20/22	16684	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		David Wilson	12/14/22	Completed
12/20/22	16690	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	12/14/22	Completed
12/20/22	16694	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	12/14/22	Completed
12/20/22	16700	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	12/14/22	Completed
12/20/22	16709	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	12/14/22	Completed
12/20/22	16705	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	12/14/22	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/20/22	16670	Secondary Scum Pump 1	Pen Valley Double Disc pumps - Quarterly	LOTO of equipment for maintenance. Removed belt guard and inspected condition and deflection. Good. Lubed and inspected trundle bearings. Inspected trundles. Purged liquid from air dampers. Cleaned valve shafts and adjusted packing glands.	David Wilson	12/8/22	Completed
12/20/22	16671	Secondary Scum Pump 2	Pen Valley Double Disc pumps - Quarterly	LOTO of equipment for maintenance. Removed belt guard and inspected condition and deflection. Lubed and inspected trundle bearings. Inspected trundles. Discharge trundle starting to leak. Purged out liquid from air dampers. Cleaned and lubed shaft of suction side isolation valve.	David Wilson	12/8/22	Completed
12/23/22	16669	Primary Scum Pump	Pen Valley Double Disc pumps - Quarterly		David Wilson	12/8/22	Completed
12/23/22	16652	Influent Pump 1	Monthly Check Pump Couplings	LOTO for motor swap. Inspected hub and coupling.	David Wilson	12/7/22	Completed
12/24/22	16730	Building Flood Control	Semi Annual PM of Flood Gates		David Wilson	12/15/22	Completed
12/29/22	16644	Generator #1- Emergency Kohler 750	Generator - Monthly Load Test		David Wilson	12/4/22	Completed
12/29/22	16742	High level floats	Weekly High Float Alarm test		Luis Bello	12/25/22	Completed
12/29/22	16648	Influent Sluice Isolation Gate	Weekly operate through full range		David Wilson	12/14/22	Completed
12/29/22	16754	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		David Wilson	12/18/22	Completed
12/29/22	16642	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load		David Wilson	12/19/22	Completed
12/29/22	16639	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load		David Wilson	12/19/22	Completed
12/29/22	16750	Generators "All Pump Station"	Generator Weekly - Test Run no load		David Wilson	12/19/22	Completed
12/29/22	16649	Influent Sluice Isolation Gate	Weekly operate through full range		David Wilson	12/21/22	Completed
12/29/22	16685	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		David Wilson	12/21/22	Completed
12/29/22	16691	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		David Wilson	12/21/22	Completed
12/29/22	16695	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		David Wilson	12/21/22	Completed
12/29/22	16701	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		David Wilson	12/21/22	Completed
12/29/22	16710	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		David Wilson	12/21/22	Completed
12/29/22	16706	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		David Wilson	12/21/22	Completed
12/29/22	16722	PS Kohler Trailer Mounted Generator	Generator Weekly - Test Run no load		David Wilson	12/19/22	Completed
12/29/22	16755	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		David Wilson	12/25/22	Completed
12/29/22	16661	Effluent Pumps	Effluent Pump - Monthly		David Wilson	12/15/22	Completed
12/30/22	16741	High level floats	Weekly High Float Alarm test		David Wilson	12/18/22	Completed

Asset Management Accounts - Year 8							
	FOR M.O.R. NOVEMBER 2022	Actual to date			Projected for Final Estimate		
Account		Budgeted Amount	Spent to Date	Delta	Projected costs and incl PO's	Final est	Delta
08M-101A	Preventive Maint	\$227,514.68	\$89,071.93	\$138,442.75	\$27,100.00	\$116,171.93	\$111,342.75
08M-102B	Capital and Major Repairs	\$140,000.00	\$167,849.80	(\$27,849.80)	\$54,237.00	\$222,086.80	(\$82,086.80)
08M-103A	Major Sub Contractors	\$192,737.48	\$179,221.42	\$13,516.06	\$44,000.00	\$223,221.42	(\$30,483.94)
blank							
	Asset Management	\$560,252.16	\$436,143.15	\$124,109.01	\$125,337.00	\$561,480.15	(\$1,227.99)

\$124,109.01

Budget expended	Time Status	
	NOW=	1/30/2023
	Start	5/1/2020
39.1%	275.2%	236.0%
119.9%	275.2%	155.3%
93.0%	275.2%	182.2%
77.8%	275.2%	197.3%

08S	D Street	\$7,500.00	\$8,391.00	(\$891.00)	\$0.00	\$8,391.00	(\$891.00)
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111.9%	275.2%	163.3%
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08C	Odor Control Chemicals	\$100,000.00	\$131,788.00	(\$31,788.00)	\$0.00	\$131,788.00	(\$31,788.00)
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131.8%	275.2%	143.4%
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Estimated total remaining 08M, 08C (\$33,015.99)

Hull 2022-2023 - 08M Projects, Tasks, and Needs - (AV)								
Maintenance Account - Year 8 - 05_01_22 to 04_30_23								
FOR December 2022 M.O.R.					\$125,337.00			1/30/2023 11:25
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	\$10,000.00			Placeholder for Jody St. George, Paul Horigan & WC Support Staff - Total budget \$25,000; adjust 8/30; adjust budget 9/20.Adjust budget 11/28; adjust budget 12/19 by 2K.
1	Pump and Motor Repairs/Replacements [invoiced and pcard]	On Going		101A				to keep existing equipment running - utilize various outside contractor repair shops, new purchases. orig budget \$20,000; adj 8/30; adj 9/26; adj 11/28 to \$9,000; Reduce budget to ZERO [PS4 rebuilt assy]
1	Lubricants	On Going		101A				Various Suppliers for oil and grease. Budgeted \$2000. Cut placeholder \$\$ to \$900; Adjust to zero 1/3/23
1	Generator Prev. Maintenance and Repairs	On Going		101A	\$10,000.00			Orig budget \$20,000. General PM and CM Repair Work - Placeholder - New PO needs to be issued; reduce by minor PM costs/invoices paid 11/28 - reduce by \$3,500. Adj placeholder down to \$10,000 [12/19].
1	Fire Alarm Inspections and Service	On Going		101A				Semi Annual - Hart Security [October & April , central station, & Service]budget \$3000. Semi-annual services completed in mid April. Adj 8/30; Oct Service completed. Adjust budget down to ZERO.
2	Universal waste disposal	completed		101A				Placeholder - \$500 - Unlikely to be used in year 8. Will use these funds for electronic waste disposal. Completed Dec 2023
1	Service the Forklift	completed		101A		\$231.00		Placeholder \$400 - Annual cost - outside vendor. Completed June 2022
1	Overhead Hoist Inspection & repairs	completed		101A		\$1,666.52		Annual task - Applied Dynamics - Inspection Work - May 2022 \$1500 plus some corrective actions, \$1500 left to do for repairs [completed Aug 2022];
1	Flow meter verification and calibration	completed		101A		\$1,175.00		Placeholder - Annual - Ray Ferland or other 1 visit annually - Targeting June 2022. Vendor needs to be contacted. Early Nov targeted date. Nov. Service completed.
1	Facility Building - Roof Inspection	completed		101A		\$2,800.00		\$2800 Annual Placeholder - Established contract with Tecta America. Completed May 2022
2	Jerome H2S Meter Inspection	Pending		101A	\$1,100.00			Placeholder if meter is sent out for calibration - \$1,100; Update Sept 2022 - meter evaluation needed and if new meter should be considered.
1	Janitorial Supplies	On Going		101A				Orig budget \$3,000 - Estimated annual expenditures - adjust 8/30; Adjust 10/31. Adjust to zero 1/3/23
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 \$20,000, adjust tdown as year progresses; adj 8/30; adjust in Sept to 5,000. Adjust 11/28 to \$3,000; Adjust t zero on 1/3/23
1	Thompson Pump repairs 6TS-244 [6A]	completed		101A				Rotating assembly failure - bearings, shft, mech seal parts & labor. Est labor \$6500. Seacoast repair. All bills to post by end of September
2	Large Hoses & fittings	On Going		101A				Orig budget \$3,000. Replacements and/or Service - On-Going - As Needed; adj budget Sept. NIR and Wolf Creek. ZERO out the budget 12/19/22
1	hypo room access/entry door	Pending		102B	\$10,737.00			D&C Quoted - waiting for updated quote with FRP door - Estimate \$6,500; updated estimate, confirmed with email to D&C & HSD approval.
3	Misc. Materials	on Going		101A				Hardware Store - \$200.00 per month - reoccurring expense; budget \$2,400; Adjust 8/30; Adj 9/20; adj 11/28. Adjust to zero 1/3/23
	New Hach Spec Meter for chlorine	completed		101A				replace older/failing unit [DR700]; new unit purchased May 2022
1	Lab Equip Calibration	completed		101A				Annual service \$640

Hull 2022-2023 - 08M Projects, Tasks, and Needs - (AV)								
Maintenance Account - Year 8 - 05_01_22 to 04_30_23								
FOR December 2022 M.O.R.					\$125,337.00			1/30/2023 11:25
Priority [1=high]	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
1	RAS pumps - spare impeller	On Going		101A	\$3,000.00			4-6 week lead time ARO. Ordered July 2022; Waiting for updated delivery date. Confirmed Nov 2022 piece is being made.
	Duperon Service Call	completed		101A		\$2,500.00		Service done - September 2022. Recommendations made.
2	6" plug valves [4]	completed		101A		\$3,713.40		RAS pump #3 discharge & other. Pratt plug valves -Qty 4. ordered May 2022; received Aug 2022. GT1 outlet valve repaired and install flush connection. Difficult to remove due to limited access.
1	Duperon Service Call - Additional needs	completed		102B				Issued PO 105426 - \$8,269; work completed late Nov 2022.
2	New Magnetic flow meters for RAS and WAS	Pending		102B				hardware - does not include installation [estimate for Equip - \$8,500] May or may not occur. Remove from planned projects for 08M.
2	yard hydrants - installation	completed		102B				sub-contractor labor - pending; Have materials on hand. Spring 2022. Targeting Nov 2022. Completed Dec 2022 including conduit trench from Sec building to CCT.
1	Mech seals for new PS4 pumps & barrier tanks	completed		102B		\$10,068.55		Items ordered after approval. Installed & in service Aug 2022.
1	Pump Station #4 -New Pumps install	completed		102B		\$12,237.61		by D & C. Late June 2022 - revised estimated installation cost. Work completed July 2022.
1	Effluent Pump #3 - repairs	completed		102B		\$26,840.20		pump has been returned to facility
3	Sanitaire hardware purchase for aer tk 1	Pending		102B				Purchase more hardware ??
1	D&C plant water and potable water system repairs, upgrades various. Replace 6" potable water valve in basement and misc. valves	completed		102B		\$43,499.70		Also check/replace 1 1/4 valves as needed - Requires a water shutdown, other drainage piping, etc. T&M. Estimate \$43,000
2	new effluent P1 - Flowserve	completed		102B				Update 2/8 to AquaSolutions - purchase of new spare effluent pump #1 - 60HP pump delivered in late September. Cost encumbered in 07M. Pump received and paid for 07M.
2	Pump Station #3 - spare rotating, assy, or pump	Pending		102B				TBD- estimates being obtained
3	New 4-inch valves for pri building between the tanks Installation	Pending		102B				Valves - cost: \$3000, sub-contracted labor - either WC or outside co.\$5,000 - totl estim \$8,000
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; evaluating options
3	Gravity Thickener #1 sandblasting/painting	Pending		102B				Estimate \$50,000+ - would need to go out for competitive bid request
2	Duperon Sumitomo Gear boxes	completed		102B		\$8,500.00		one spare gear box for flex rake and wash compactor [Delte Elec] ordered June 2022. Received in late August 2022. Waiting for invoicing. On Purchase order.

Hull 2022-2023 - 08M Projects, Tasks, and Needs - (AV)								
Maintenance Account - Year 8 - 05_01_22 to 04_30_23								
FOR December 2022 M.O.R.					\$125,337.00			1/30/2023 11:25
Priority [1=high]	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
1	Grit classifier system parts	On Going		102B	\$3,500.00			waiting for wear shoes - charge is to 07M - estim \$3500. Wear shoe Items received July 2022. Plan for additional tail shaft assy and housing & bushings. Pricing out items/costs by various vendors incl Mfr.
	Plant Water System [Pump and/or parts]	On Going		102B				consider spare motor or complete unit. Under review/hold [est \$6,000].
1	Replacement Pumps LS A [see notes]	completed		102B		\$9,749.96		Repair of rotating assembly - at IPS shop. Returned in September 2022.
1	Electrical Work	On Going		103A				Orig budget \$25,000. Electricians: Glen Fellows, HiVoltage, or other; adjust 8/30; adjust budget Sept 20th. Adjust for addit exp 9/28; adj down on 11/28. Adjust to ZERO on 12/19/22.
1	SCADA Work	On Going		103A	\$7,000.00			Steve Rose and the SCADA Support Team; budget \$20,000; Adj for cyber security protection subscr to \$14k; Reduce placeholder budget to \$7,000.
1	E-One Repairs and Replacement	On Going		103A				Orig budget: \$38,000. Based on historica/recent costs. E1 repairs where cost-effective & new replacement pumps; control panels, other equip; Adjust 8/30. Adj 9/28 to Zero.
1	Automatic Transfer Switch inspection and servicing	completed		101A		\$1,800.00		\$2400 - Annual Service planned for NETS - Transfer Switch; Work comleted July 2022
1	Wetwell Inspections and Cleaning - Plant/Pump Stations	On Going		103A	\$3,000.00			As required, plant or pump stations; orig budget \$8,000; Update acct 9/28;
1	Sewer Line Cleaning - Emergencies, pump & haul	On Going		103A	\$5,000.00			Placeholder - As required for various sub-contractors; could be Hoadley, Truax, WindRiver, BMC, or other, collection system & plant; budget \$10,000 Update acct 9/28;
1	Collection System and plant - emerg & unplanned calls - Jetting & CCTV work - various contractors	On Going		103A	\$5,000.00			Budget - 15,000, 8/30 - reduce budget due to recent work; Update acct 9/28;
1	Effluent Composite sampler	On Going		102B				Replace "tired" effluent composite sampler. Waiting for PO to be issued. PO issued Dec 2022 for \$9760
3	Pump Station #5 jet lines to wetwell and WW cleaning	completed		103A				included with wetwell/collection system work
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: \$31k to 35K ??. Maybe year 09M project ?
4	Generators - Load Bank Testing Plant & Pump Stations	Pending		103A				Look at under 08M or 09M - recently done under 06M.
1	Rosano Davis Pump & Haul PS9	completed		103A		\$28,800.00		for FM inspection
1	EESCO MCC work at the Pump Stations	Pending		103A				TBD 2 days - request for quotation. Site visit done 10/27 by EESCO & waiting for proposal.
3	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
1	Est grit screw installation	Pending		102B	\$40,000.00			\$40,000 placeholder installation - TBD year 8 or year 9
1	Est Grit screw purchase	Pending		102B				placeholder hardware purchase. PO issued Oct 2022 \$48,122
1	AUMA actuator repairs & service	On Going		101A				PO# 105407 - issued for service call and 2 motors. \$4,000

Hull 2022-2023 - 08M Projects, Tasks, and Needs - (AV)								
Maintenance Account - Year 8 - 05_01_22 to 04_30_23								
FOR December 2022 M.O.R.					\$125,337.00			1/30/2023 11:25
Priority [1=high]	Description	Status	<i>completed</i>	Task	Estimates & funds remaining	Final Completed Cost	<i>Lead</i>	Comments
	HDWK fiberglass slide gate	Pending		101A	\$3,000.00			Soliciting estimates for at least one new slide gate. Placeholder [Jan 2023] \$3,000
1	SC #2 Structural Steel Repairs	completed		103A	\$24,000.00			Based on T&M - center supports, scrapers, other - IPC Lydon. Invoice pending
TOTAL					\$125,337.00			