



HULL WATER POLLUTION CONTROL FACILITY

June 2020

MONTHLY OPERATING REPORT



NPDES NO. MA0101231

woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

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Cover pictures:

[top] Hull WPCF staff cleaning sludge from aeration tank #1

[bottom] Liner for headworks bypass pipe lining project being installed into the pipe

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 June 2020.

- No lost-time incidents for the month of June.
- Covid-19 Safety planning and operations: Back to regular daily operations and staff scheduling. Following Town, State and Company mandated safety protocols due to the Covid-19 Emergency. On-going procurement of necessary safety supplies, signage, procedures related to Covid-19.
- There were 152 effluent samples taken in the month of June. [details on page (12).] There were two daily effluent permit exceedances on 6/24/20 – one for fecal coliform and one for enterococci.
- The average daily flow for the month was 0.97 MGD. A total of 2.91 inches of rainfall was recorded. There were no significant rain events that occurred during the month.
- The diffused aeration system grid piping in aeration tank #1 broke apart and resulted in shutting the tank down and transferring the contents into aeration tank #4. Subsequent cleaning and evaluation of tank #1 done.
- There were 2 Sanitary System Overflow Reports [SSO] submitted in June 2020.
- The plant and collection system odors were low. The Bioxide system was turned on in late May and adjustments made according to data collected in the system during June.
- The 05M Asset Management Accounts checkbook summary and the completed planned expenses sheets are attached [updated 7/2/20]. The close out of the year 5 accounts is complete, and ready for final submittal to the Town.
- There were 3 grinder pump call outs during the month of June with pump replacements.
- W&C O&M continued to support many of the Engineering projects including: SSES yard piping test pit construction support and actual onsite inspection/excavation, and the extension of the Interceptor lining work for the headworks effluent pipe coordination with engineering and GMPS. Additional coordination was also spent on the Atlantic Ave project and coordination planning for the headworks and pump station structural work.
- O&M in June provided a lot of support for the GMPS bypasses while pipe lining, manhole lining and repairs were being made. Move various items to accommodate work.
- O&M provided support for the SSES piping assessment with test pits that were dug, & start of the primary sludge pipe replacement
- There was ongoing work on the Artificial Intelligence project, as well as the associated data management, cyber security upgrades, and daily rounds improvements with the “DMZ” computer capabilities.
- All Pump station wet wells were inspected on 6/18/20.

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

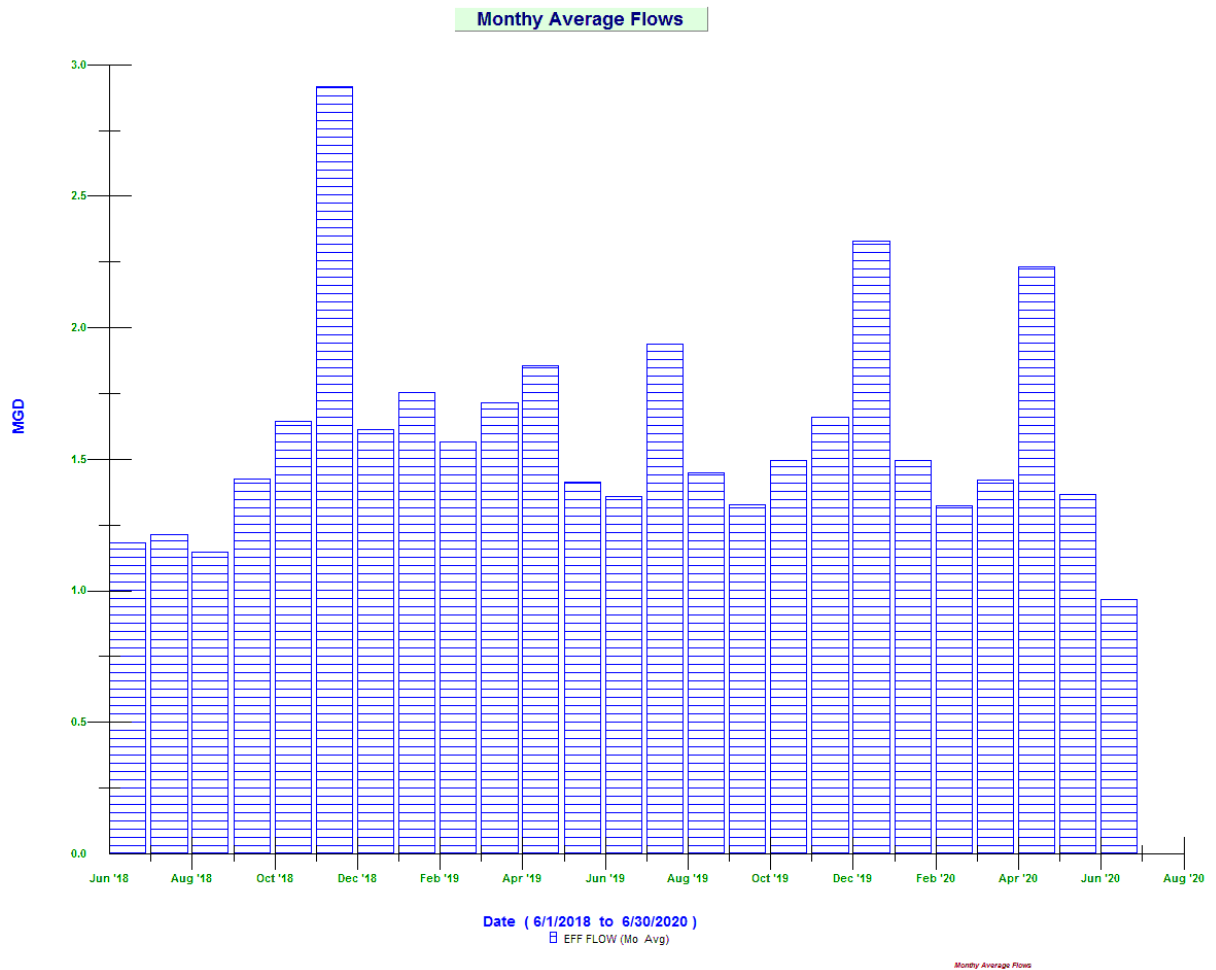


Average Daily Flows and Loadings for the Month:

	Eff Flow MGD	Inf Flow MGD	Inf BOD LBS	Inf TSS LBS	Eff BOD LBS	EFF TSS LBS
June 2018	1.183	1.602*	1084	1778	67	149
June 2019	1.359	1.617*	880	2555	60	163
June 2020	0.966	1.173*	1814	3270	40	118

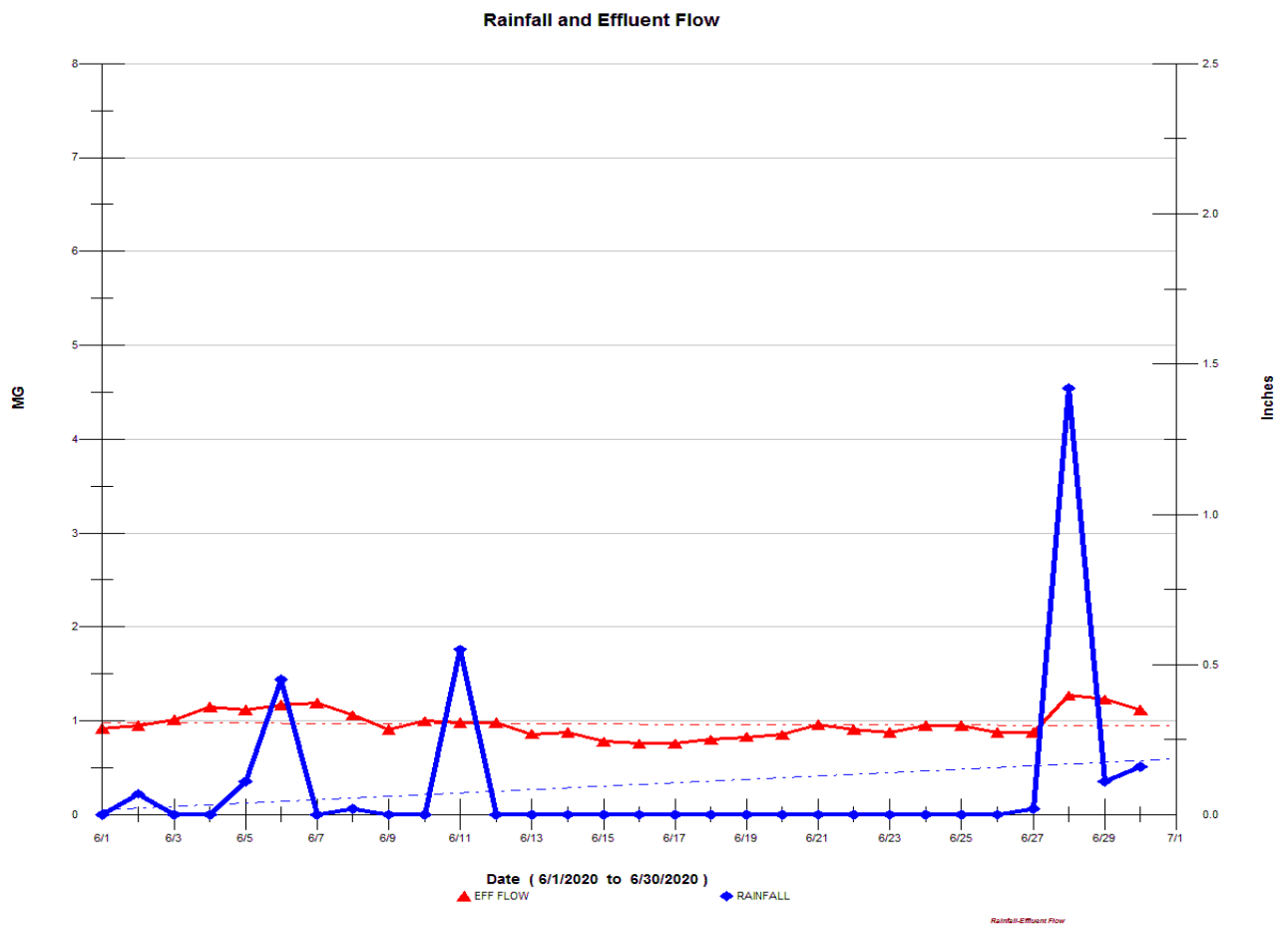
* Meter drift – influent flow meters are strap on doppler flow meters, and the internal pipe condition prevents getting a strong signal. The staff utilizes the area velocity meter in the aeration tank inlet channel as needed. All reported loadings are based on the effluent flow meter. There is an additional flow meter installed in the headworks over the Parshall flume that is monitoring influent sewage flows. This meter is now tied into the Scada system so that influent flows can be monitored.

2.1 AVERAGE EFFLUENT MONTHLY FLOWS – TWO YEAR COMPARISON

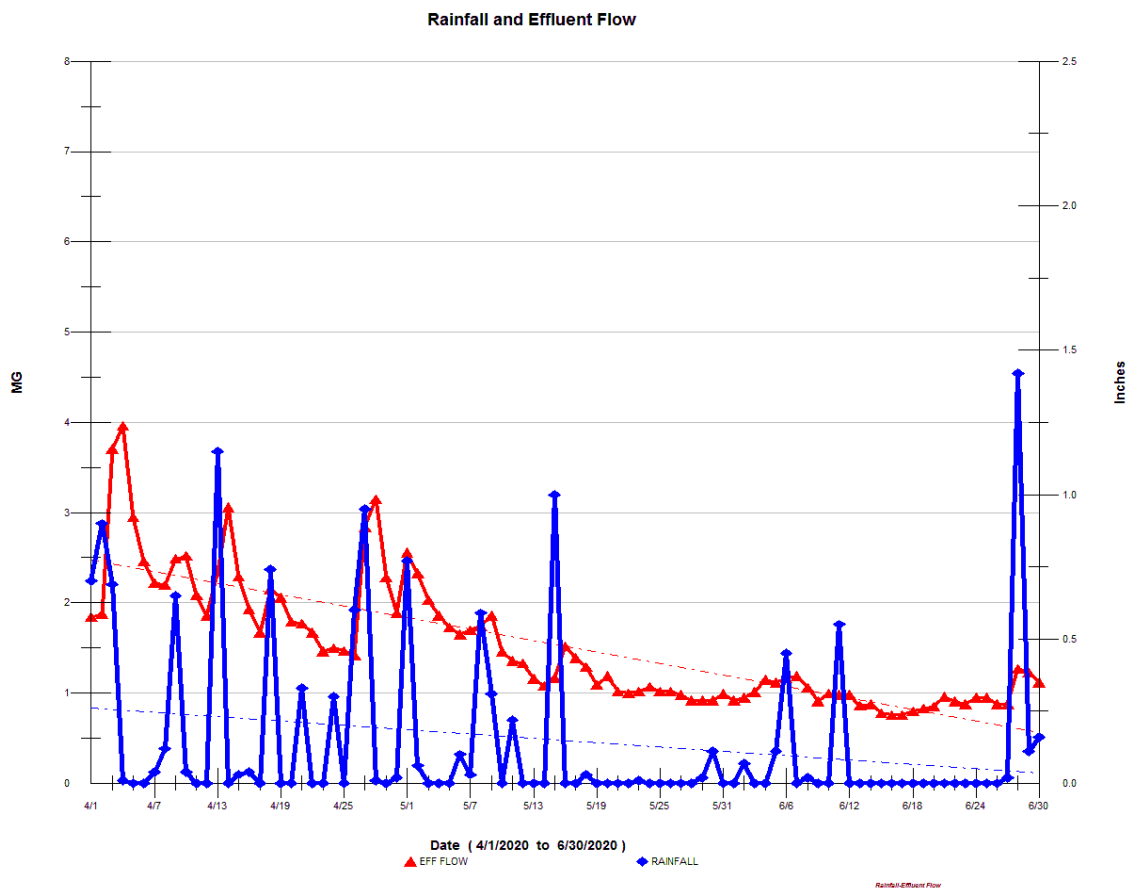


Monthly average flow for June was 0.97 MGD. The total precipitation for the month was 2.91 inches. The graph shows the 2-year summary of the monthly average flows.

2.2 MONTHLY SUMMARY OF RAINFALL AND THE INFLUENCE ON EFFLUENT FLOWS



This graph typically shows the days where plant flows were higher due to rainfall [Blue Peaks]. This graph indicates that there were very few wet days in June and the rainfall had a very low impact on plant flows. As noted in recent months, the collection system work to reduce inflow and infiltration [I&I] out in the collection system has had very positive results and lowered daily plant flows.



This graph shows the last 3 months: April, May & June, and the impacts of rainfall/precipitation on plant flows. May & June were very dry months.

3 COMPLIANCE



➤ Plant Effluent

There were two daily permit exceedances in the month of June on June 24, 2020

Fecal Coliform Max Daily Permit limit: 260 CFU/100mL; Result: 2000 CFU/100mL

Enterococci Max Daily Permit limit: 276 CFU/100mL; Result: 350 CFU/100mL

- An email was sent out informing all required agencies on 6/26, since the results were forwarded to us from our contract lab late in the day on 6/25. Further efforts in the investigation for the possible cause of these results were summarized in the email correspondence to all agencies. We suspect a probable cause for the unusual sample results might be the extremely low flows coming into the facility during the early morning hours, which lead to ongoing cycling of the effluent pumps. The effluent pumps pump the effluent up to the chlorine contact basins. This observation along with having two chlorine contact tanks [CCT] on-line, may have allowed for stagnant conditions, where denitrification was occurring and this brought up some bacteria, that may have been harbored in and around the baffles in the tank. One of the CCT's was taken off-line, and the carrier water for the sodium bisulfite was changed to a cleaner source. With the implemented changes, follow up samples were collected on 6/25 and 6/26, with compliant results seen. All results were <10 CFU/100mL for fecal coliform and enterococci. Daily updates were provided to all regulators.
- Plant process conditions were significantly affected on June 11th due to an aeration system diffuser pipe failure in tank #1. The problem arose at approximately 11:20 am and the process flow was diverted to fill aeration tank #4. The activated sludge contents in aeration tank #1 were transferred using a 6-inch trash pump and was completed by 5:30pm. The facility process efficiency did suffer during this transfer, and in the following days, efforts were made to recover the process to the level that things were before the mechanical incident. There were challenges to supply enough oxygen to the process tanks and operate the system with balanced flows. Eventually, the second

mechanical aeration tank was put on-line on 6/28. However, the process efficiency was still not optimal, as the mechanical aerators would surge a lot, causing uneven waves in the tank and poor oxygen transfer was a result.



Aeration tank #4 being filled



Aer tank #1 grid piping failure

- A Copy of the NPDES report for June 2020 was submitted to the EPA & DEP and then forwarded to the Hull Sewer Dept.
- SPCC: Regular monthly inspection of the above ground fuel storage tank [AST], fuel day tank, and waste oil storage areas was completed. Updated file.
- There were two reported releases of sewage that were reported because of on-going work and unforeseen circumstances.
 - a. 6/2/20 – release of sewage from GMPS bypass pipe at the wastewater facility at the Nantasket Ave Gate area, due to a faulty HDPE welded joint. The pipe needed to be rewelded, and there was a small release of sewage [85 gallons]. All contents vacuumed up and nearby catch basins cleaned out, and no release to waters of the U.S.
 - b. 6/11/20 – release of mixed liquor sludge due to aeration diffused air piping failure. 75 gallons of liquid was sprayed out to the area by aeration tank #1 and primary clarifier #2. Contents were contained to that area and GMPS assisted with vacuuming up all material. No release to storm drainage system.



6/2/20 spill at the wastewater plant due to defective pipe weld



6/11/20 spill due to aeration system failure – GMPS assisted with site clean up



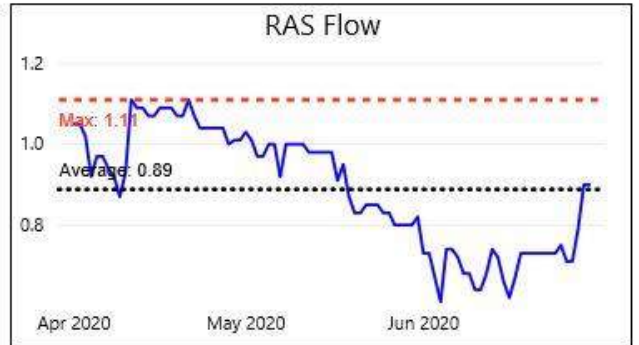
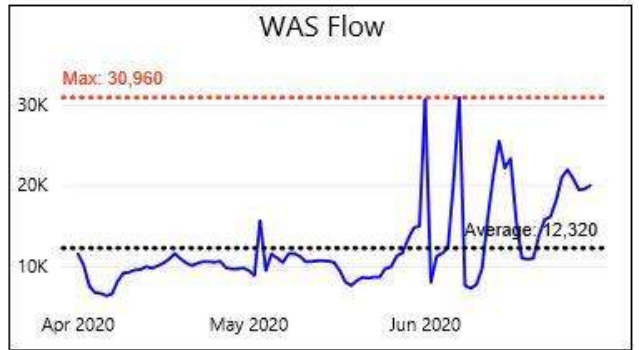
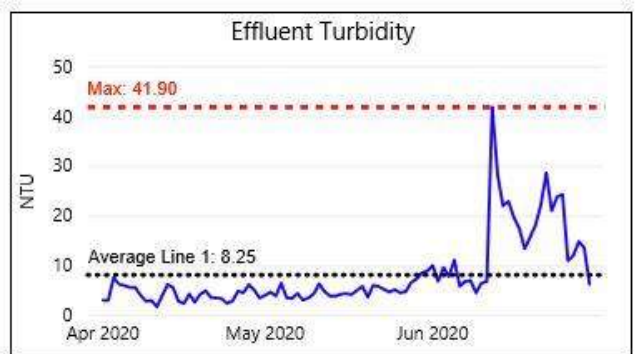
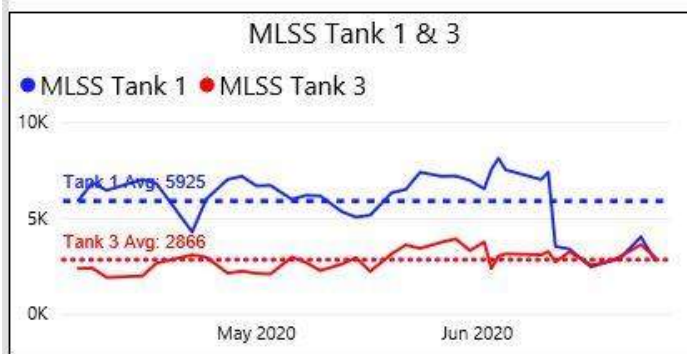
Hull Wastewater Treatment Facility

6/1/2020

6/30/2020



Monthly Process Summary graphs from power BI – June 2020.



Graphs shows trending of secondary processes using Power BI for 3-month period ending on 6/30/20. The tank solids levels under aeration did drop towards the end of June when the 3rd aeration tank was put online. Effluent turbidity on the rise in mid-June.

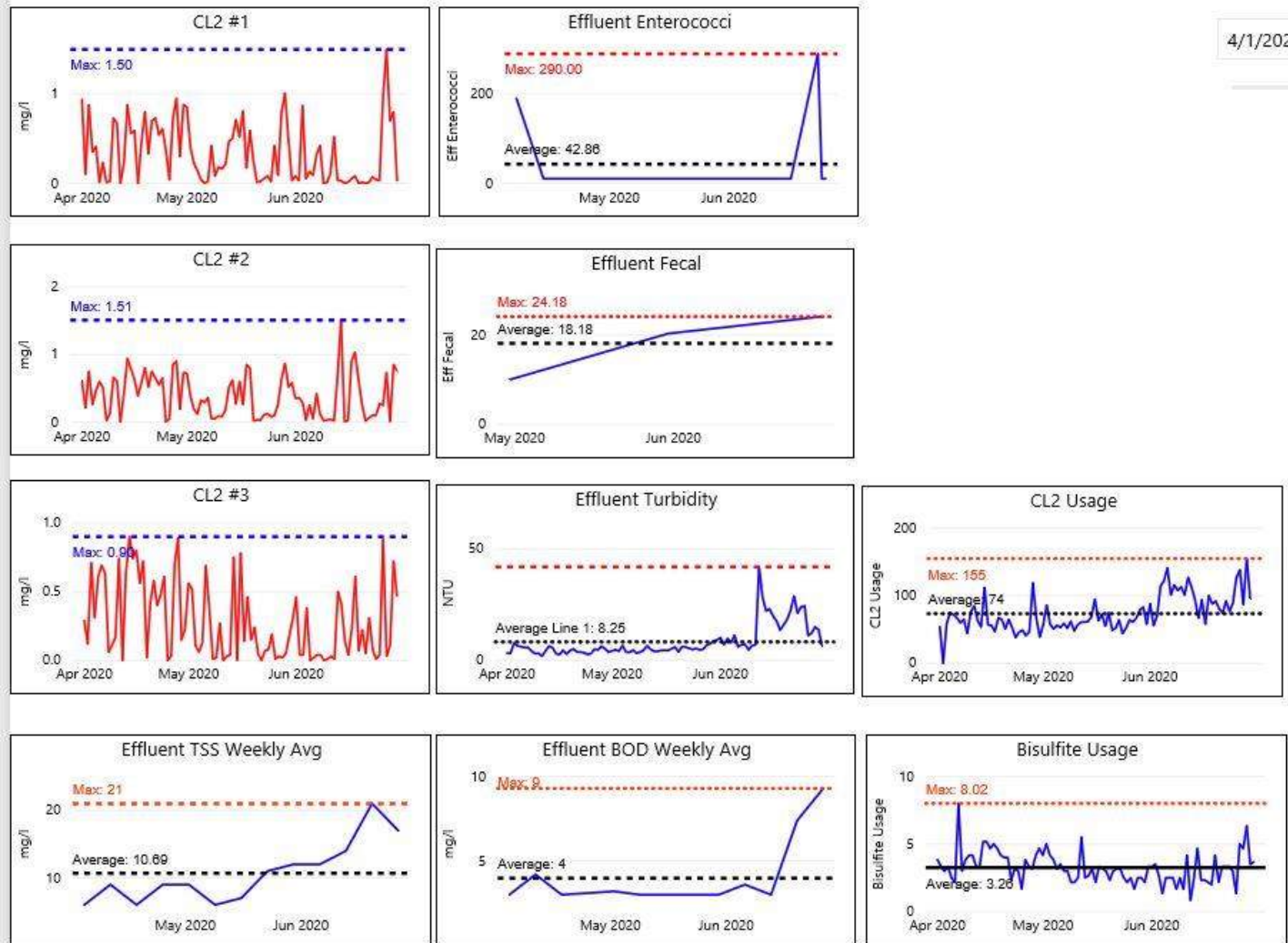
4 KEY PERFORMANCE INDICATORS



4.1 WATER QUALITY – JUNE 2020

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	15.6	12.0	21.0	5	0
Eff TSS	LBS			1152	768	1 X Week	118.0	95.1	133.1		0
% TSS Rem	%		85			1 X Month	96.3				0
Eff BOD	MG/L	50		45	30	1 X Week	5.4	3.0	9.3	5	0
Eff BOD	LBS			1152	768	1 X Week	40.4	22.8	68.3		0
% BOD Rem	%		85			1 X Month	97.7				0
Eff Chlorine	MG/L	1.0			0.7	3 X Day	0.26	0.01	0.79	90	0
Eff Fecal	#/100 ML	260			88	1 X Week	24	10	2000	6	1
Eff pH	SU	8.5	6.5			1X Daily	7.2	6.7	7.4	30	0
Enterococci	CFU/100 ML	276			35	1 X Week	18	10	290	6	1

There were 152 effluent samples taken in the month of June.

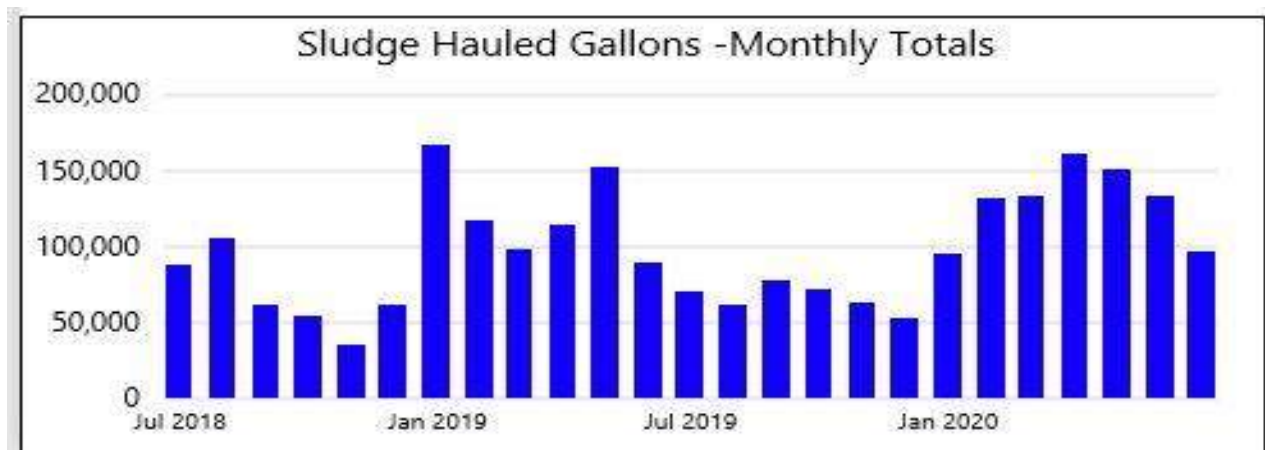


Power BI graphs showing effluent compliance for the last 3 months, chlorine residuals, effluent compliance, & chemical use. Bleach [sodium hypochlorite] use increased significantly because of the process issues.

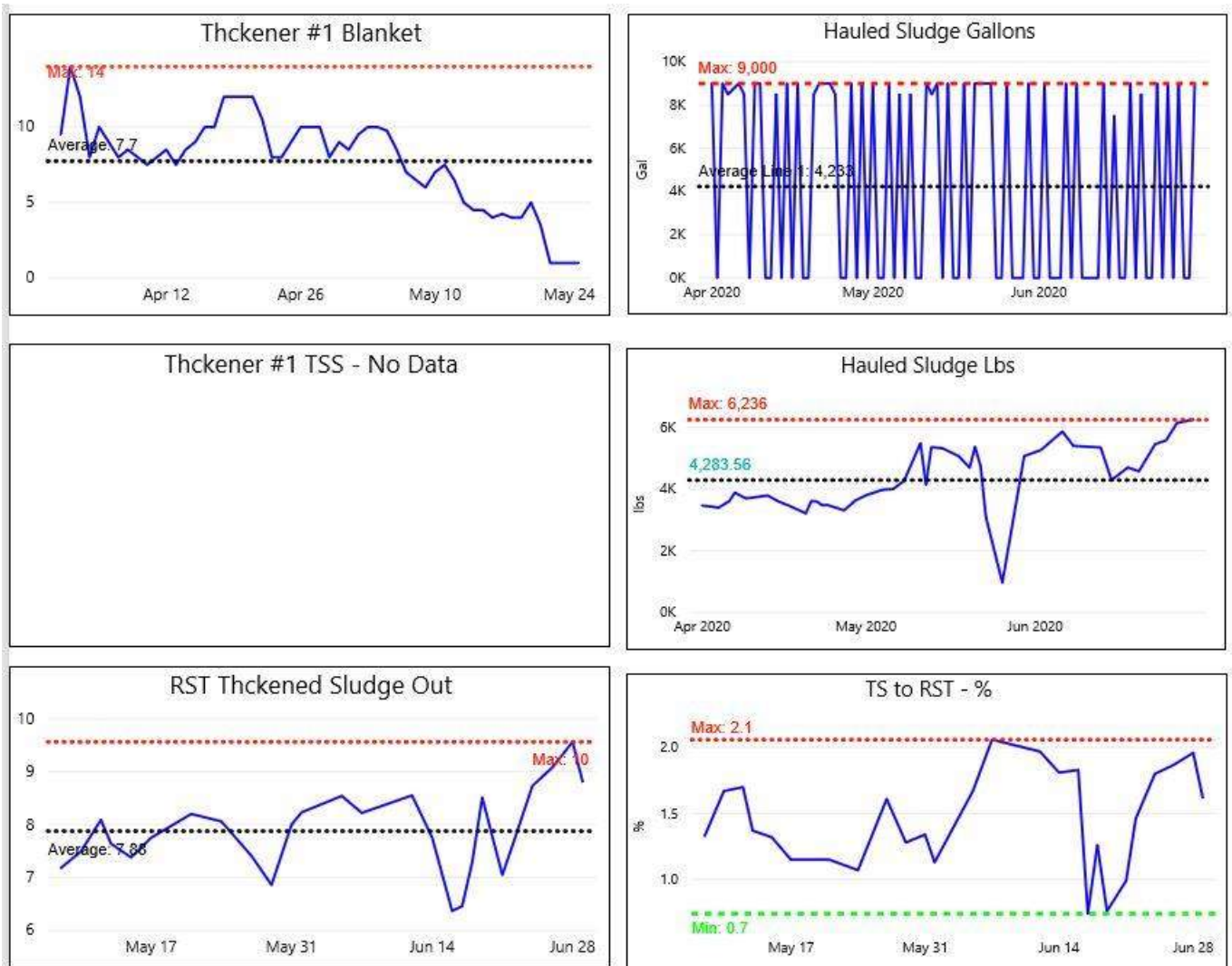
Gallons Treated vs Sludge Disposed

Month	Effluent Treated, MG	Sludge Disposed, Gals
June 2018	73.10	193,500
June 2019	40.77	70,500
June 2020	28.99	97,000

Power BI graphs for sludge solids & gallons hauled for past three years



Additional Power BI graphs for sludge solids & gallons hauled for June



5 ODOR CONTROL

There were no odor complaint calls during the month of June. The gravity thickener and primary clarifier both were offline. Other plant operations no changes – i.e. scum well pumping, tank cleaning, aeration trough flushing was conducted regularly to avoid/minimize odors. Letters were distributed to inform the neighbors of the GMPS work [bypass of operations building and various manhole rehab and line cleaning] and for aeration the tank cleaning.

- The Evoqua system controls were in place and on-line for remote monitoring of the odor logger at XYZ street and for the chemical feed system adjustments. The second unit installation for Nantasket Ave is still pending due to the on-going manhole rehab project along Nantasket Ave near Water Street. Working to learn system dynamics and fine tune chemical feed addition.
- “In-Pipe” bacteria addition continued with all 24 Microbe Dosing Stations [MDU] operational. The full monthly bacteria unit replacements were completed on 6/10/20. The bi-weekly change outs of the bacteria bottles at three lift stations in the wet wells or manhole just prior to the station. [PS 3, PS 5, PS 9] completed on 6/25/20.
- Mixing systems/aerators all functional at the pump stations, except for pump station #3. The compressor PS1 was replaced.
- Hydrogen sulfide monitoring units [H₂S] are recording and being trended on the odor scrubber for monitoring inlet and outlet H₂S levels. Weekly neighborhood monitoring done with portable Jerome meter.

[pictured below: trending graphs for H₂S levels recorded from the vapor link system cellular at manhole at Nantasket Ave and XYZ Street. Trend shows rising H₂S levels as the month progressed



6 MAINTENANCE SUMMARY

6.1 TASKS COMPLETED THIS MONTH

The SEMS monthly work order summary for June compiled and attached for review.

Key items of note are listed below.

- Support headworks bypass for plant shutdown and restart up after GMPS work completed for the week and at end of the project. Headworks area, wet wells, and screenings box operations, sampling, level transducers moved as needed and maintenance, as necessary.
- Work on PSL building plant water valve in primary pump room. Internal components corroded. New valve ordered.
- Influent wet wells 1 & 2 cleaned by GMPS. All probes and chain supports were cleaned and inspected by W&C. Install new counterweight in wet well #2.
- Derag RAS pump as needed due to headworks bypasses and operating on the screenings box.
- For the rotary drum thickener: High level switch failed because float snap ring corroded. Float and snap ring replaced & sealed junction box.



- Kohler service Rep on site for port generator start-up on 6/4. Added diesel fuel [90 gal] to tank. He performed start-up and load-bank testing. Then provided staff training on the unit.
- Work on tank level probe unit for SHT1, old unit no longer working. New unit needs additional programming at PLC [wire change]
- High Voltage [electrician] onsite - set up moisture protection relays for Effluent Pumps 4 & 1 - seal circuit failure alarms in a control box.
- Fellows Electrical working on the weather station installation, new circuit at PS3 for dehumidifier, and D Street generator hook-up.

- PS #4 - Found graffiti on pump station building. Took picture for report. Follow up required to clean up. Area affected will need to be painted. Reported to HPD. [vandalism is an on-going issue].



- Sec Clarifier #1 – gear box issue – lower drainpipe rotted off, causing minor loss of oil. Repaired temporarily until the gear box is changed out.



- Clean out of aeration tank #1 due to failed air diffuser piping. Plant staff and JHoadley vac truck. Residuals pumped out from landfill pit by Rosano-Davis Pumping for disposal.
- DW/JS/RH – Confined Space Entry - Repaired failed PVC unions and mounting hardware for entire distributor arm where it failed. Two of the unions were broken when the hardware failed to support the leg. All 8 of the floor anchors were re-drilled and new 1/2" 304 SS [stainless steel] was used instead of the original 3/8" 304 SS. Also, replaced 8 locating plates, guide support hardware brackets and straps with 1/2" sized components. Yellow arrow in picture shows the row where repairs made.



- On-going emergency lighting issues addressed with component replacement.
- Headworks oxygen sensor replaced – faulty and at end of service life.
- PS #1 – redrag pumps 1 & 2 due to low output flow. Removed debris from impellers. Rags and liner trimmings found in the pumps.
- PS #3 – Low pump output. Separated pump from volute and saw that impeller was clear of debris. Discharge elbow had a large accumulation of rags and the clog went all the way up to check valve. Removed the check valve cover and removed the debris that was wrapped around the flapper. Reassemble and test.



- Assist with PS3 pump station shut down for Aqualine work and GMPS work at Nantasket & Water Street. Drain back FM. Pumps remained off until approximately 6pm when the station was put back online. Rosano-Davis did the pump & haul.
- Respond to D Street area on 6/28 & inspected several times in Central Ave and G Street area. Station pumps were on at PS and some flooding [minor]. Area was ok by 430pm.



6.2 ASSET MANAGEMENT ACCOUNTS

Please see the attached summary of the Asset Management accounts for contract year (5). Most recent through 08/11/20.

Notes for planned 06M expenditures list included in this report.

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 June.
- Monthly PM's - Emergency eyewash and shower inspections, fire extinguisher and emergency lighting inspections completed. The electrician worked on list of emergency lighting deficiencies.
- On-going Coronavirus Covid-19 updates discussed – staff separation planning, facility visitors, personal hygiene & company initiatives. Non-contact temp checks for staff & visitors. Work with onsite contractors to ensure that Covid-19 procedures in place and being followed.



- Review supply of necessary safety items. – face shields, face masks, hand sanitizer, gloves, etc. If possible, participation in weekly calls with MADEP and USEPA and follow up on their website for new information/updates.
- Ongoing - Daily safety briefing meetings, review site safety policies with sub-contractors, safety tailgate topics. Pure Safety topic– June – Hazard Communication.

- Monthly staff safety meeting conducted on 6/30/20 RH prepared a folder for a self-directed safety meeting for the staff. Reminders for daily safety briefing topics and discussion points & documentation, Coronavirus updates. Review “Lessons Learned” from May 2020, Near misses and incidents from other company projects. OSHA top 4 fatal hazards, work hours/irregular hours safety and concerns.
- June safety Stand-down discussion – hand laceration
- Updated facility EAP – emergency action plan
- All electrical gloves sent out for bi-annual testing.

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 May discussed.
- Regular operational updates and process control discussions, pump station operations, especially with all sewer projects going on in the town, dig-safes, etc.
- Declan Baggett’s returned [mid-June] and working as part-time employee for the summer months.
- Staff working of company mandated Harassment and Discrimination training modules.

Staffing related items:

- Staffing schedule – return to full/regular hours with awareness for staff separation, social distancing, face masks, other safety protocols on days where the full staff was on site [Tues, Wed, Thurs].
- Mass Maritime [MM] internship program on hold due to the Covid-19 emergency. Will consider a candidate in Fall 2020 if safe to do.
- No changes on the Sunday schedule plan. Coverage by Aram V., Roger B., Bill B., and Joe B. If Bill or Aram are not scheduled for a Sunday, they will be working on a Monday-Friday schedule.
- Supplementing staff needs with O&M tech support where needed. Limited due to Covid-19 emergency. Jody S providing coverage when staff levels are lower due to sickness, vacation, or training.

9 COLLECTION SYSTEM

9.1 WET WELL CLEANING

The actual schedule for wet well cleaning: May 2020 to April 2021:

(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, 2020	X				X			
June, 2020								
July, 2020								
Aug., 2020								
Sept. 2020								
Oct.,2020								
Nov, 2020								
Dec., 2020								
Jan., 2021								
Feb., 2021								
March 2021								
April 2021								

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 June.

- In-Pipe units – on-going battery change out, dosing unit repairs & cleaning and inspection. Circuit board troubleshooting, dosing pump repairs and replacement as needed. Working with “In-Pipe” on these issues.
- All Pump station generator loaded, and non-loaded generator runs were done for the month.
- Three grinder pumps replaced – see utility cloud summary.

Manholes:

- Staff continues to respond to numerous rattling manhole covers, because of on-going work by GMPS and SSES projects. Replace manhole cover cushion rings as needed.

Dig Safe mark outs:

- Dig-Safe mark outs were completed throughout the Town of Hull to assist/facilitate emergency gas repairs, broken water mains, other town projects.

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

10 PROJECT MANAGEMENT & ADMINISTRATION



10.1 ON-GOING PROJECTS AND SUPPORT ITEMS

- The #2 secondary clarifier and #1 gravity thickener [GT] tanks are out of service. Lydon Contractors in to remove and replace the gear box drive for SC #2. Amwell representative came to facility on 6/30 and performed the equipment start-up. Adjustments made and all new oil lubrication completed. Lydon is working on the tank assessment report for the steel tank components and proposed additional corrective repairs [turnbuckles and scum post supports] to allow for problem free operation over the next 2 years. The GT work is still pending, as W&C is coordinating with contractor for a start date. Pictured: clarifier bridge removal so that the gear box could be replaced.



- Weather Station was installed in June, with data tie into SCADA planned and trending.
- A significant amount of the SSES yard piping investigation took place in June, with test pits of the influent and effluent force mains [FM] as well as other two other locations, one for primary clarifier [PC] effluent and PC sludge piping. CPI performed thickness analysis and W&C O&M help support all this effort with coordination to keep the plant operations going. Additional work and planning was provided, since the primary sludge line was found to be in very poor condition and could not be repaired. The line replacement project began in late June with D'Allessandro Corp performing the work, and continued into early July.
- Significant increase in Rap-O ring (MH cover silencers/cushions) around town due to the amount of MH's being opened for I/I / MH investigations throughout Town.
- Bill has continued two weekly calls and other daily coordination and data review with the Aquasight team. Additional coordination in June to kick off to launch the secondary / process efficiency milestone. Additional AI work related to the cybersecurity new hardware and firewalls work started in June.
- Significant O&M support for construction and bypass of the headworks effluent pipe. While GMPS was on site place O&M helped provide a new access point for the new liner, thru the block wall of the headworks to make the liner installation more feasible. This change involved coordination with Structural engineering and O&M. The work went around the clock with many challenges addressed that O&M team helped work with and around to get the project completed.
- Continued support and involvement with facility planning/resiliency project, PS #5, and effluent pump room projects. Final comments on the PS5 and effluent pump room project design and call with the Town to get the project out to bid with engineering.
- Co-ordinated a meeting with Xylem/Sanitaire to discuss aeration system grid piping components, membranes, and support hardware. Some membranes were sent out for evaluation, and hardware materials discussed, since the 304 SS components were failing. The extent of repairs was discussed as well as the possibility to replace the entire aeration grid. Evaluation of future system changes also discussed with W&C engineering, as it related to the facilities planning.
- On-going work with D'Allessandro Corp on the PSL pipe replacement project for issues encountered during the excavation and replacement. [i.e. coring of holes for piping, unexpected electrical issues with underground conduit, hypo solution line, and general issues related to the construction]. This work rolled into July and was partly funded by SSES project with some additional work under 06M.
- Worked on and submitted additional sludge costs change order to Town related to the GMPS cleaning for the additional residuals processed.
- PS#9 DBR kick off coordination with the Town and engineering.
- Set up for maintenance service inspection for the smaller air blowers in basement [Aerzen]

Asset Management Accounts - Year 5							
		Actual to date			Projected for Final Estimate		
Account		Budgeted Amount	Spent to Date	Delta	Projected costs and incl PO's	Final est	Delta
05M-101A	Preventive Maint	\$206,323.41	\$137,731.89	\$68,591.52	\$0.00	\$137,731.89	\$68,591.52
05M-102B	Capital and Major Repairs	\$140,000.00	\$190,279.85	(\$50,279.85)	\$0.00	\$190,279.85	(\$50,279.85)
05M-103A	Major Sub Contractors	\$174,785.44	\$193,395.64	(\$18,610.20)	\$0.00	\$193,395.64	(\$18,610.20)
blank					\$0.00		
	Asset Management	\$521,108.86	\$521,407.38	(\$298.52)	\$0.00	\$521,407.38	(\$298.52)

(\$298.52)

Budget expended	Time Status	
	NOW=	8/11/2020
	Start	5/1/2019
66.8%	128.3%	61.6%
135.9%	128.3%	-7.6%
110.6%	128.3%	17.7%
100.1%	128.3%	28.3%

05S	D Street	\$7,500.00	\$7,500.00	\$0.00	\$0.00	\$7,500.00	\$0.00
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100.0%	128.3%	28.3%
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05C	Odor Control Chemicals	\$100,000.00	\$99,355.23	\$644.77		\$99,355.23	\$644.77	99.4%		-99.4%
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For June M.O.R.

Asset Management Accounts - Year 6							
		Actual to date			Projected for Final Estimate		
Account		Budgeted Amount	Spent to Date	Delta	Projected costs and incl PO's	Final est	Delta
06M-101A	Preventive Maint	\$210,555.68	\$22,588.83	\$187,966.85	\$127,650.00	\$150,238.83	\$60,316.85
06M-102B	Capital and Major Repairs	\$140,000.00	\$0.00	\$140,000.00	\$150,000.00	\$150,000.00	(\$10,000.00)
06M-103A	Major Sub Contractors	\$178,370.75	\$32,229.94	\$146,140.81	\$208,400.00	\$240,629.94	(\$62,259.19)
blank					\$0.00		
	Asset Management	\$528,926.43	\$54,818.77	\$474,107.66	\$486,050.00	\$540,868.77	(\$11,942.34)

\$474,107.66

Budget expended	Time Status	
	NOW=	8/11/2020
	Start	5/1/2020
10.7%	28.1%	17.3%
0.0%	28.1%	28.1%
18.1%	28.1%	10.0%
10.4%	28.1%	17.7%

06S	D Street	\$7,500.00	\$452.85	\$7,047.15	\$0.00	\$452.85	\$7,047.15
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6.0%	28.1%	22.0%
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For June 2020 M.O.R.

Hull 2019 - 06M Projects, Tasks, and Needs - 05-06-2020 (AV)

Maintenance Account - Year 6 - 05_01_20 to 04_30_21

\$486,050.00

8/11/2020 11:07

Priority	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
1	Mechanical Work Labor	On Going		101A	\$30,000.00			Jody St. George, and WC Support Staff - estim \$3000/month; Total budget \$36,000; incl annual scrubber cleaning, remove old blowers [mech]
1	Pump and Motor Repairs	Pending		101A	\$20,000.00			to keep existing equipment running - utilize various outside contractor repair shops, new purchases. Duperon motor, RST euro drives,
1	Lubricants	Pending		101A	\$2,700.00			Various Suppliers for oil and grease. Budgeted \$3500; adj
1	Generator Repairs	Pending		101A	\$2,500.00			General Repair Work - Placeholder
1	Fire Alarm Inspections and Service	On Going		101A	\$3,000.00			Semi Annual - Hart Security [October & April, central station, & Service]
1	Universal waste disposal	Pending		101A	\$500.00			
1		Pending		101A				
1	Service the Forklift	Pending		101A	\$400.00			Annual cost - outside vendor
1	Overhead Hoist Inspection	Pending		101A	\$1,500.00			Annual task - Applied Dynamics - PO usually is issued in April,
1	Flow meter verification and calibration	Pending		101A	\$1,000.00			Annual - Ray Ferland 1 visit annually Aug/Sept
1	Facility Building - Roof Inspection	Pending		101A	\$2,900.00			Annual - Established contract with Tecta America
1	Pump Station #9 - Repairs Immediate	pending		101A				New valve, new check valve, replace pump assembly - Jody St. G. to assist; items rec'd [used up approx 50% of orig 4,000]; pending to be used if needed.
1	Jerome H2S Meter Inspection	Pending		101A	\$1,100.00			Annual Inspection - sent out includes annual service \$1100
1		Pending		101A				
1	butterfly valves for PW pumps 4 valves	Pending		101A	\$2,500.00			purchase and install
1	Hoisting platform ladder for the AST	Completed		101A				Completed, purchased for use with screenings box - \$800.00
1	Weather Station	completed		101A				Installed by Glenn F, June 2020, programming by SCADA group
1	Janitorial Supplies	On Going		101A	\$4,000.00			Estimated annual expenditures
1	Backflow device testing	Pending		101A	\$400.00			done by, 3rd party
1	Manhole Inspections	Pending		101A				As required, and/or scheduled
2	General mechanical and electrical items/supplies	Pending		101A	\$18,000.00			Grainger, FWWebb, EJP, Hoadley, McMasterCarr, etc.

11 of 5 8/11/2020

2020_05_01_06M_Checkbook_YTD

06M Planned Costs

FOR June M.O.R.

Hull 2019 - 06M Projects, Tasks, and Needs - 05-06-2020 (AV)

Maintenance Account - Year 6 - 05_01_20 to 04_30_21

\$486,050.00

8/11/2020 11:07

Priority	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
2	Vibration Analysis Survey	Pending		101A	\$4,000.00			Annual - 2 to 3 Days - Aeration System Blowers, Pump Station Pumps, etc./tbd; Paul H from W&C.
2	Valves	Pending		101A	\$4,000.00			Replacements and/or Service - On-Going - As Needed;
2	Hoses	Pending		101A	\$3,000.00			Replacements and/or Service - On-Going - As Needed;
2	Sump Pumps	Pending		101A	\$1,200.00			Replacements and/or Service - On-Going - As Needed -
2	Install 6" or 8" drop pipes in secondary clarifier #1 and #2	Pending		101A	\$2,000.00			In-house staff to fabricate, ? go to 8" pipe?
2	Effluent pump room pump bracket testing	Pending		101A	\$1,000.00			by Lightship Group
2		Pending		101A				
2	Misc. Materials	On Going		101A	\$2,400.00			Hardware Store - \$200.00 per month - reoccurring expense.
2		Pending		101A				
2	PS 1 impellers/flow	Pending		101A	\$5,000.00			look at increasing size of impellers, after Gunrock work completed
2	Lift Station A	Pending		101A				Pump efficiency lower than desired
2		Pending		101A				
3	Install new aeration channel angle iron for a slide gate	Pending		101A	\$2,500.00			Jody S to install - 2 days, if we do.
3	Install a flow meter on the generator cooling water system - plant water	Pending		101A				Have an estimate [Oct 2018]; possible after 5/1/20
3	Lockers for the staff - Install	Pending		101A	\$1,500.00			Additional lockers to replace those removed years ago;
3	Purchase (1) spare Euro drives for the RST drum drive	On Going		101A				spare part item now in stock [\$800]
3	Purchase an LMI pump for the RST	Completed		101A				spare part item now in stock [\$1700]
3	Purchase an equipment lift or gantry	Pending		101A	\$2,500.00			planned cost \$2,500 for moving elec hoists around, & other equip
	Dehumidifiers for pump stations LS A & PS4, PS5	Pending		101A	\$3,300.00			for 3 pump stations at \$3300.00; 3 left to do
		Pending		101A				

Hull 2019 - 06M Projects, Tasks, and Needs - 05-06-2020 (AV)

Maintenance Account - Year 6 - 05_01_20 to 04_30_21

\$486,050.00

8/11/2020 11:07

Priority	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
	Lab Equip Calibration	Pending		101A	\$600.00			Annual service - usually Jan/Feb.
		Pending		101A				
	Mech seal[s] for RAS pumps 1 & 2	Pending		101A	\$1,800.00			for RAS pumps 1 & 2
		Pending		101A				
		Pending		101A	\$500.00			
	Purchase Two 6" valves for PS 4	Pending		101A	\$1,450.00			Pending, have not purchased yet [4/12/20]; Estim cost \$1450
	Springs for check valves	Pending		101A	\$400.00			
1	Tecta Roof Repairs - proposed per 2020 inspection	Pending		102B	\$8,000.00			
1	(GT) Steel rake mechanism inspection and needed repairs	Pending		102B				place holder estimate (2) guys for (3) days - welding and materials - coating - These may be able to go under the Town bond account - \$10,000
1	(SC#1) Steel rake mechanism inspection and needed repairs	Pending		102B				place holder estimate (2) guys for (3) days - welding and materials - coating - These may be able to go under the Town bond account - \$7500
1	(SC#2) Steel rake mechanism inspection and needed repairs	Pending		102B				to be done from crit spares bond account Lydon (2) guys for (3) days - welding and materials - coating. \$11,500
1	Pri D-Box repairs	Pending		102B	\$15,000.00			possibly by D&C Construction as part of structural repair project; place holder \$\$
1	Replace scrubber recirc pump	Pending		102B	\$4,000.00			need for a spare pump
1	Sludge transfer pump #1 rebuild	Pending		102B	\$5,000.00			rebuild pump needed
1	Dynablend System is obsolete - mixing valve worn - need in kind or like system	Pending		102B	\$12,000.00			May or may not proceed with replacement, since unit still functioning, and polymer addition point changed and yielding good results. Removed cost \$11,000
2	grit classifier spare parts	Pending		102B	\$3,500.00			based on limited spare parts currently.
2	Pump Station Ladders	Pending		102B				We are complete except for PS #9
2	Sanitaire hardware purchase for aer tk 1	On Going		102B	\$3,500.00			Purchased July 2020
2	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, may hold until after 5/1/20; orig planned cost \$3,000.
2	Purchase and Install (4) additional yard hydrants	On Going		102B	\$12,000.00			hydrants already purchased, and materials & contractor installation [2 days]; Waiting for D'Alessandro proposal

Hull 2019 - 06M Projects, Tasks, and Needs - 05-06-2020 (AV)

Maintenance Account - Year 6 - 05_01_20 to 04_30_21

\$486,050.00

8/11/2020 11:07

Priority	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
2	PS 4 valves, check valves	Pending		102B	\$7,500.00			After structural work, replace. Valves and check valves. May be a changeorder for D&C Constr.[\$4,000] Also 1 day for pump & hauling 2 trucks [\$3200]
3	SHT1 - demo a	Pending		102B				Contracted Project - During Headworks Bypass or possibly move to after May 1st 2020
3	Influent Distribution Box - Aerate Primary/Influent D-Box/Overflow Project	Pending		102B				Contracted Project - need State Approval - Facility/Process modification. Facilities Plan possible modification
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
1	Jerome meter replacement	Pending		102B				replace unit, if done \$11,000
	Rotating Sludge Thickener - Thickened Sludge Pump - rotor/stator	Completed		101A				purchased spare stator
		Pending		102B				
		Pending		102B				
		Pending		102B				
		Pending		102B				
	Electrical LS A hook up	Pending		102B	\$4,500.00			estimate look at 2 options
1	Electrical Work	On Going		103A	\$25,000.00			Electricians: Glen Fellows, HiVoltage, other; remv old blowers.lighting, sec bldg elec outlets
1	SCADA Work	On Going		103A	\$25,000.00			Steve Rose and the SCADA Support Team
1	E-One Repairs and Replacement	On Going		103A	\$25,000.00			Based on historical costs. E1 repairs where cost-effective & new replacement pumps; control panels, other equip
1	Annual Generator inspection	Pending		103A	\$4,200.00			Annual - Highland Power - Generator PM/Service work - due in November
1	Automatic Transfer Switch inspection and servicing	Pending		103A	\$2,400.00			Annual Service planned for April Highland Power - NETS - Transfer Switch;
1	Wetwell Inspections and Cleaning - Pump Stations	On Going		103A	\$10,000.00			As Required - \$2500 per day; orig budget \$12,500; reduce to \$10,000; Adj Jan 2020; adj Feb 2020; adj 3/9/20; Will need 1 day of service by either Jhoadley, BMC, or WRE; cleaning on 4/28
1	Wetwell Inspection and Cleaning- Plant	On Going		103A				Annual - pending until HW project gets underway; Orig budget \$4500; remove from targeted expenses 10/21/19. To be done under GMPS interceptor changeorder
1	Sewer Line Cleaning - Emergencies	On Going		103A	\$10,000.00			Placeholder - As required for various sub-contractors; could be Hoadley, Truax, WindRiver, BMC, or other.
1	Collection System - Jetting & CCTV work	On Going		103A	\$20,000.00			TBD for contractor
4 of 51	Collection System - Jetting Work & CCTV	On Going		103A	\$35,000.00			up to 35K - roadway proj work related - TBD for contractor [Truax]

06M Planned Costs

Hull 2019 - 06M Projects, Tasks, and Needs - 05-06-2020 (AV)

Maintenance Account - Year 6 - 05_01_20 to 04_30_21

\$486,050.00

8/11/2020 11:07

Priority	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
1	Aer tank repairs [labor]	Completed		103A	\$3,800.00			2 days - millwrights - Lydon
1	Pump Station communication - changover to radio - phase 1	Pending		102B	\$75,000.00			Equipment purchase to come from 05M on the Critical Spare List; based on latest quote from Doug Tirrel. \$14,200; Addit hardware cost \$900.00; 4/19 -adj down due to expenses coming in. Final costs to post w/e 4/24
1	Pump Station communication - changover to radio - phase 2	Pending		102B				labor to come from 05M on the Critical Spare List; based on latest quote from Doug Tirrel. \$11,500.00; Addit programming costs for aer controls. Adj down due to expenses coming in. Final costs to post w/e 4/24.
1	Pump Station communication - changover to radio - phase 3	Pending		102B				
1	Pump Station communication - changover to radio - phase 4	Pending		102B				Electrical wiring and tie into the SCADA system -
2		Pending		103A				
2	Regen Aeration System - Pump Station #5	Pending		103A	\$1,500.00			Orig est \$1,500 -Tie into the SCADA system - Glen Fellows; may wait until after 5/1/20
2	Dehumidifiers at three pstat - equip and install	Pending		103A	\$6,000.00			approx 2K per station - PS A,4, &6
2	SHT1 - demo of equip, air piping & diffuser install/materials	Pending		103A	\$30,000.00			In-house O&M project and staff labor \$10,000; demo of tank equip \$5,000; air piping \$10,000; materials \$5,000 - rough estimate
2	Generators - Load Bank Testing	Pending		103A	\$3,000.00			Look at under 05M - PS#1, PS#3, PS#4, PS#5, PS#6, and PS#9 [\$3,000]
		Pending		103A				
		Pending		103A				
		Pending		103A				
		Pending		103A				
	Highland Power - Servicing the heat exchangers, fuel filters, etc	Pending		103A				Per proposal \$4,550.00
	Front building window repairs	Pending		101A				To be done under Engin project
1	Low pressure sewer valve box insp & mtce	Pending		103A	\$7,500.00			placeholder for contractor O&M inspections and potential repairs; Looking at Rosano-Davis & W&C to investigate
1								
1								
TOTAL					\$486,050.00			

Date	Asset ID	Asset Description	Asset Class	Name	Workflow Class	View
6/10/2020 9:49	Bacteria UNIT #21	UNIT #21	Hull In Pipe Bacteria Unit	Sutton, Eric	Generic WO	View
6/10/2020 9:55	Bateria UNIT #15	UNIT #15	Hull In Pipe Bacteria Unit	Sutton, Eric	Generic WO	View
6/10/2020 19:13	Bateria UNIT #9	UNIT #9	Hull In Pipe Bacteria Unit	Sutton, Eric	Generic WO	View
6/25/2020 10:44	MH-20125	MH-20125	Sanitary Manhole	Sutton, Eric	Generic WO	View
6/25/2020 10:41	MH-20221	MH-20221	Sanitary Manhole	Sutton, Eric	Generic WO	View
6/25/2020 10:34	MH-20796-1	MH-20796-1	Sanitary Manhole	Sutton, Eric	Generic WO	View
6/25/2020 10:37	MH-20813-2	MH-20813-2	Sanitary Manhole	Sutton, Eric	Generic WO	View
6/10/2020 16:36	1 Worrick Rd	1 Worrick Rd Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Hull - Grinder Pump Maintenance	View
6/10/2020 16:39	22 Rockview Rd	22 Rockview Rd Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Hull - Grinder Pump Maintenance	View
6/25/2020 15:08	63 Gosnold St	63 Gosnold St Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Hull - Grinder Pump Maintenance	View
6/26/2020 14:43	Bacteria UNIT #22	UNIT #22	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:26	Bateria UNIT # 8	UNIT # 8	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:20	Bateria UNIT #1	UNIT #1	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:22	Bateria UNIT #1	UNIT #1	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:27	Bateria UNIT #10	UNIT #10	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:34	Bateria UNIT #11	UNIT #11	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 10:02	Bateria UNIT #12	UNIT #12	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 10:01	Bateria UNIT #13	UNIT #13	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 10:00	Bateria UNIT #14	UNIT #14	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:37	Bateria UNIT #15	UNIT #15	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:36	Bateria UNIT #16	UNIT #16	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:28	Bateria UNIT #17	UNIT #17	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:29	Bateria UNIT #18	UNIT #18	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:31	Bateria UNIT #19	UNIT #19	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:22	Bateria UNIT #2	UNIT #2	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:35	Bateria UNIT #20	UNIT #20	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 10:02	Bateria UNIT #23	UNIT #23	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:16	Bateria UNIT #24	UNIT #24	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:30	Bateria UNIT #3	UNIT #3	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:13	Bateria UNIT #4	UNIT #4	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:25	Bateria UNIT #5	UNIT #5	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:23	Bateria UNIT #6	UNIT #6	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/10/2020 9:25	Bateria UNIT #7	UNIT #7	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
6/26/2020 14:26	02-009	4 MILDRED ST	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/23/2020 15:19	02-049	1 ADDUCI WAY	Hull Parcels	Sutton, Eric	Hull - Markout	View

6/18/2020 14:33	05-077	71 HIGHLAND AVE	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/18/2020 10:53	13-059	34 S STREET	Hull Parcels	Boornazian, Bill	Hull - Markout	View
6/18/2020 14:10	15-034	40 K STREET	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/18/2020 14:02	16-057	19 F STREET	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/18/2020 13:36	21-121	46 COBURN ST	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/18/2020 13:47	22-014	15 PACKARD AVE	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/18/2020 13:26	25-044	93 REVERE ST	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/18/2020 13:06	29-101	3 SECOND ST	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/18/2020 13:12	29-101	3 SECOND ST	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/18/2020 13:17	30-052	2 EIGHTH STREET	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/1/2020 15:18	33-109	13 SAGAMORE TERRACE	Hull Parcels	Holman, Ryan	Hull - Markout	View
6/11/2020 10:09	33-148	28 MERRILL RD	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/18/2020 13:28	35-074	1 HILLSIDE RD	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/18/2020 12:54	36-025	13 MORELAND AVE	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/19/2020 12:15	54-026	46 SUMMIT AVE	Hull Parcels	Sutton, Eric	Hull - Markout	View
6/19/2020 20:45	MH-20153	MH-20153	Sanitary Manhole	Sutton, Eric	Hull - Sewer Backup	View
6/19/2020 20:38	MH-20956	MH-20956	Sanitary Manhole	Sutton, Eric	Hull - Sewer Backup	View
6/15/2020 14:43	MH-20116	MH-20116	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/15/2020 14:38	MH-20117	MH-20117	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/2/2020 14:44	MH-20128-1	MH-20128-1	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/2/2020 14:39	MH-20197	MH-20197	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/2/2020 14:37	MH-20224	MH-20224	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/26/2020 14:29	MH-20335	MH-20335	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/2/2020 14:28	MH-20381	MH-20381	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/26/2020 14:33	MH-20429	MH-20429	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/17/2020 15:07	MH-20441	MH-20441	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/2/2020 14:31	MH-20456	MH-20456	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/23/2020 15:26	MH-20458	MH-20458	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/2/2020 14:34	MH-20469	MH-20469	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/2/2020 14:24	MH-20536	MH-20536	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/2/2020 14:18	MH-20561	MH-20561	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/2/2020 14:22	MH-20582	MH-20582	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/10/2020 9:06	MH-20695	MH-20695	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/19/2020 10:54	MH-20720	MH-20720	Sanitary Manhole	Boornazian, Bill	MH Frame & Cover Inspection	View
6/10/2020 9:10	MH-20727	MH-20727	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
6/2/2020 11:51	MH-20743	MH-20743	Sanitary Manhole	Holman, Ryan	MH Frame & Cover Inspection	View

6/15/2020 15:12	MH-20897	MH-20897	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
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Maintenance History Report

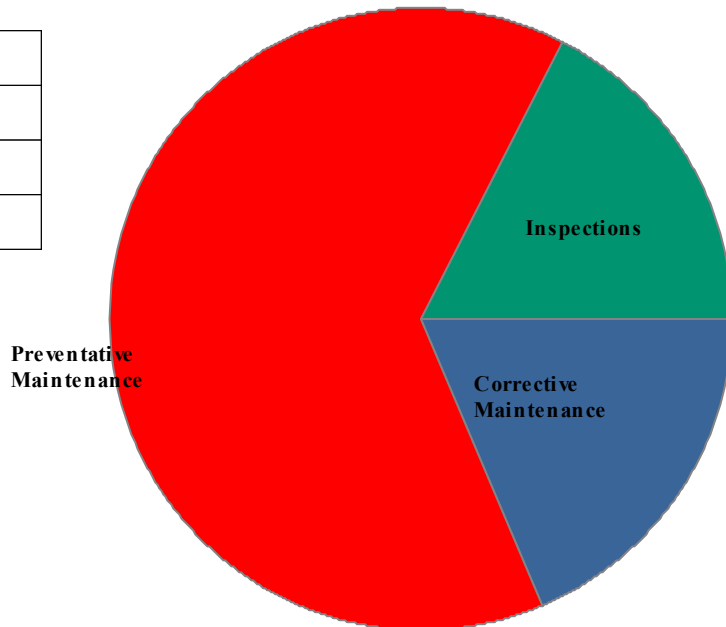
Hull Wastewater

Start Date: 6/1/2020

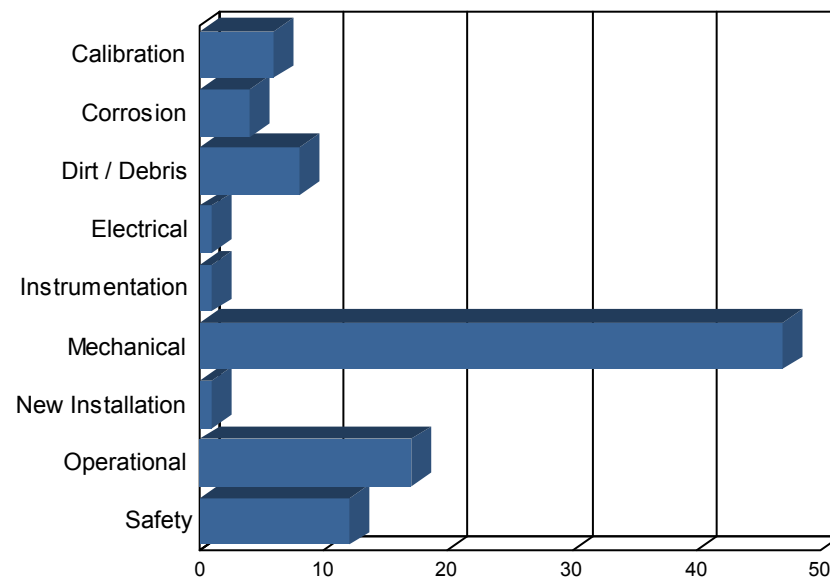
End Date: 6/30/2020

Work Order History By Type

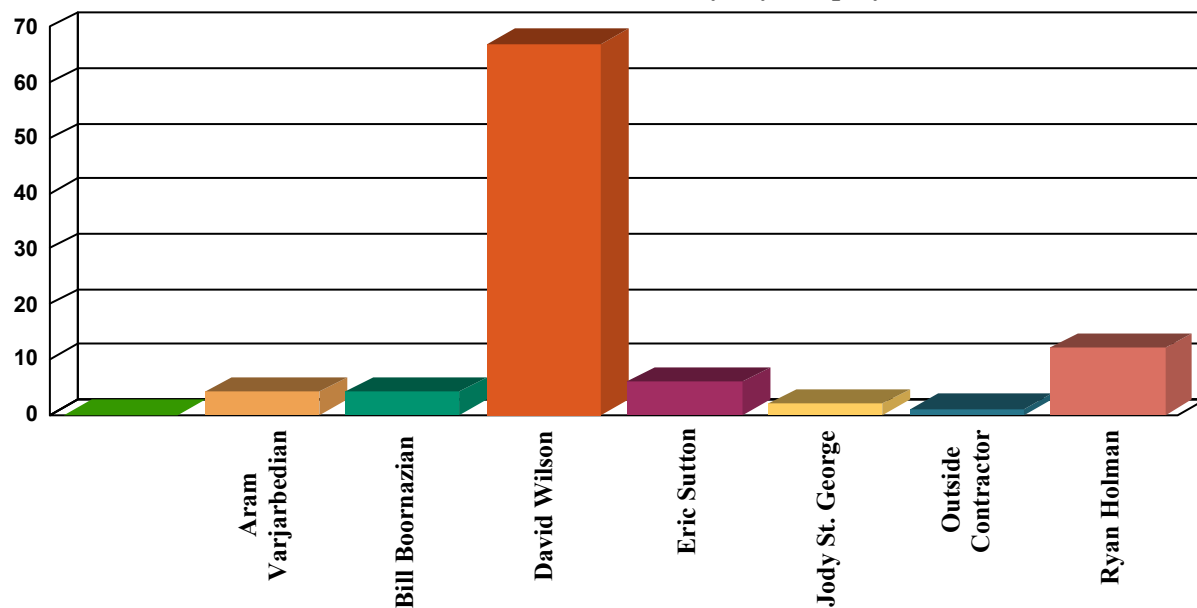
Corrective Maintenance	18
Inspections	17
Preventative Maintenance	62
Total Work Orders	97



Work Order History by Reason



Work Order History By Employee



Employee	WO Count	Labor Hours
Aram Varjarbedian	4	24
Bill Boornazian	4	6
David Wilson	67	29
Eric Sutton	6	3
Jody St. George	2	3
Outside Contractor	1	2
Ryan Holman	12	12
Unassigned	1	4
Totals	97	83

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
6/1/20	12221	RAS Pump 1	Derag pump	Bb/Dw derag and loto ras 1. Half gallon rag ball removed.	Bill Boornazian	6/1/20	Completed
6/3/20	12222	Primary Building	Plant water valve hard to operate. Dismantle and clean	Needs to be repaired, replaced	Jody St. George	6/3/20	Completed
6/5/20	12223	RAS Pump 1	Derag ras 1	Increased rags from headworks bypass . Additional cleaning done and loto	Bill Boornazian	6/5/20	Completed
6/8/20	12224	Secondary Building	Replace rotted 4 inch summer discharge piping	Completed		6/8/20	Completed
6/8/20	12225	RAS Pump 1	Clean and inspect impeller.	LOTO of equipment. Seperated pump from volute and cleaned impeller. Rags removed. Leading edge of impeller showing wear. Reassembled RAS assembly and returned to service.	David Wilson	6/8/20	Completed
6/11/20	12376	Influent Wet Well 2	Wetwell cleaning and return to service	GMPS cleaned wetwell and transducer and counterweight put back in wetwell by staff	Aram Varjarbedian	6/11/20	Completed
6/11/20	12375	Influent Wet Well 1	Wetwell cleaning and return to service	GMPS cleaned wetwell and transducer and counterweight put back in wetwell by staff	Aram Varjarbedian	7/5/20	Completed
6/12/20	12226	RAS Pump 1	Derag pump	Derag and loto of ras 1 . Increased rags from headworks bypass. 1 gallon rags removed.	Bill Boornazian	6/12/20	Completed
6/14/20	12227	PS 4 Building	Graffiti on pump station.	Found graffiti on pump station building . Took picture for report. Follow up required to clean up paint.	David Wilson	6/14/20	In Process
6/14/20	12228	Sludge Transfer Pump 1	Auto greaser failure.	Isolated pump and bled off pressure . Remove nipple, coupling and auto greaser. Auto greaser is cracked and nipple is corroded. Replaced assembly. Cleaned up area and documented.	David Wilson	6/14/20	Completed
6/15/20	12229	RST unit	RST hopper high level switch failure.	High level switch failed because float snap ring corroded. Float and snapping lost. Isolated circuit and removed failed switch. Sealed junction box and wired in new switch. Re-energized circuit and tested switch. Good	David Wilson	6/15/20	Completed
6/19/20	12230	Secondary Clarifier 1	Gear box sight glass failure, oil leak	Ryan found gear box sight glass nipple broken off , previous failure that repeated. This creates issues leaking oil out. Nipple was attempted to be repaired but all parts too corroded. BB made custom plug with a 3 inch bolt and sealant. Drove bolt into nipple to be permanent plug until gear box replacement. Ryan fill gear box back up with fluidized grease and start back up.	Bill Boornazian	6/19/20	Completed
6/23/20	11579	Emergency Lighting & exit signs	Monthly emergency lighting inspection	glenn fixed	Outside Contractor	2/13/20	Completed
6/24/20	12231	PS 1 GridBee Compressor	Replace old with rebuilt one	Completed	Jody St. George	6/24/20	Completed
6/25/20	12232	Aeration Tank 1	Repair of failed header.	DW/JS/RH CSE Repaired failed unions and mounting hardware. Two unions were broken when the hardware let go. Replaced 8 anchors. Used 1/2" 304 instead of 3/8" 304 anchors. Replaced 8 locating plates, brackets and straps with 1/2" instead of 5/16".	David Wilson	6/25/20	Completed
6/28/20	12236	Chlorine Contact Tank 1	Clean tank	Set up of pump on prev day by staff. Tank pumped out with contents pumped back to influent manhole. Retrieve debris found in tank. Pictured below.	Aram Varjarbedian	6/28/20	Completed

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
6/29/20	12234	PS 1 Pump 2	Low output	LOTO of equipment. Removed lower and side cleanout. Removed debris from impeller. Rags and liner trimmings clogged pump. Returned to service. 250gpm with low wetwell.	David Wilson	6/29/20	Completed
6/29/20	12235	PS 3 Pump 1	Low output	LOTO of equipment. Separated pump from volute. Impeller was clear of debris. Discharge elbow had a bunch of rags. Pumped out fluid for a better look. Rag ball went up to check valve. Removed check valve cover. Debris wrapped around flapper. Removed debris almost filled a 5 gallon bucket. Reassembled check valve and pump assembly. Returned to service. Pump output 750gpm.	David Wilson	6/29/20	Completed

Inspections

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
6/2/20	11706	Gravity Thickener Electrical Power Manhole	Inspect Gravity Thickener Electrical Manhole	Electrical manhole is dry. No seal on cover.	David Wilson	5/5/20	Completed
6/3/20	11862	Fire Extinguishers	WWTF Fire Extinguisher Inspections - Monthly	Inspected all fire extinguishers throughout the plant.	Ryan Holman	6/1/20	Completed
6/5/20	11605	Eyewash Stations	WWTF Eyewash Inspection - Weekly	Inspected and tested all emergency eye wash and shower stations throughout the plant.	Ryan Holman	5/31/20	Completed
6/10/20	11865	Truck 1 - 2010 Dodge Ram 1500	Monthly vehicle inspection on do-Forms	Inspected vehicle. Oil change required. Tire pressure set all fluid levels correct.	David Wilson	6/1/20	Completed
6/10/20	11884	Truck 3 - 2015 Chevy 3500 HD	Monthly vehicle inspection on do-Forms	Inspected vehicle. Tire rotation, oil and filter change required. Coordinating to have serviced at Wilder Bros.	David Wilson	6/1/20	Completed
6/11/20	11777	Eyewash Stations	WWTF Eyewash Inspection - Weekly	Inspected and tested all emergency eye wash and shower stations throughout the plant.	Ryan Holman	6/7/20	Completed
6/18/20	11823	PS 1	PS #1 Inspection - Monthly	Inspected wet well and fire extinguisher. Tested sump pump and high level alarm. Aerator not functioning properly. Removed from service.	David Wilson	6/4/20	Completed
6/18/20	11829	PS A	PS #A Inspection - Monthly	Inspected wet well and fire extinguisher. Tested sump pump and high level alarm. Pump 1 discharge pressure is down 5psi. Wet well has about 70% surface solids.	David Wilson	6/4/20	Completed
6/18/20	11824	PS 3	PS #3 Inspection - Monthly	Inspected wet well and fire extinguisher. Tested sump pump and high level alarm. No issues found.	David Wilson	6/4/20	Completed
6/18/20	11825	PS 4	PS #4 Inspection - Monthly	Inspected wet well and fire extinguisher. Tested sump pump and high level alarm. Wet well has about 50% surface solids.	David Wilson	6/4/20	Completed
6/18/20	11826	PS 5	PS #5 Inspection - Monthly	Inspected wet well and fire extinguisher. Tested sump pump and high level alarm. No issues found.	David Wilson	6/4/20	Completed
6/18/20	11827	PS 6	PS #6 Inspection - Monthly	Inspected wet well and fire extinguisher. Tested sump pump and high level alarm. Wet well needs to be cleaned.	David Wilson	6/4/20	Completed
6/18/20	11828	PS 9	PS #9 Inspection - Monthly	Inspected wet well and fire extinguisher. Tested sump pump and high level alarm. No issues found.	David Wilson	6/4/20	Completed

Inspections

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
6/19/20	11778	Eyewash Stations	WWTF Eyewash Inspection - Weekly	Inspected and tested all emergency eye wash and shower stations throughout the plant.	Ryan Holman	6/14/20	Completed
6/19/20	11885	Truck 4 - 2015 Nissan Frontier	Monthly vehicle inspection on do-Forms	Truck in for oil chg, safety Insp for sticker, and tire rot. Topham Auto	Aram Varjarbedian	6/1/20	Completed
6/24/20	11779	Eyewash Stations	WWTF Eyewash Inspection - Weekly	Inspected and tested all emergency eye wash and shower stations throughout the plant.	Ryan Holman	6/21/20	Completed
6/30/20	11781	Emergency Lighting & exit signs	Emergency Lighting Inspection - Monthly	Tested and inspected all emergency lighting throughout the plant.	Ryan Holman	6/10/20	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
6/1/20	11808	Aeration Tank 3 Oxygen Probe	AT #3 DO Probe Clean and Calibrate - Monthly	Inspected LDO probe and tested calibration. Indicated ~.25mg/l higher than comparator. Adjusted slope to match.	David Wilson	6/2/20	Completed
6/1/20	11799	Mechanical Screen & Washpress System	Monthly Maintenance	Cleaned all flights and inspected linkage. Inspected drive system components. No issues found.	David Wilson	6/1/20	Completed
6/1/20	11866	PS Trailer Mounted Generator	Generator Weekly - Test Run no load		Eric Sutton	6/1/20	Completed
6/1/20	11896	Generators "All Pump Station"	Generator Weekly - Test Run no load		Eric Sutton	6/1/20	Completed
6/2/20	11788	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load	Inspected all fluid levels. Brought up to operating temp and recorded all run data. No new issues found.	David Wilson	6/1/20	Completed
6/2/20	11783	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load	Inspected all fluid levels. Brought up to operating temp and recorded all run data. No new issues found. Cleaned strainer basket.	David Wilson	6/1/20	Completed
6/2/20	11807	Aeration Tank 1 Oxygen Probe	AT #1 DO Probe Clean and Calibrate - Monthly	Inspected LDO probe and tested calibration. Indicated ~.1mg/l higher than comparator. Adjusted slope to match.	David Wilson	6/2/20	Completed
6/2/20	11863	Meters - 4 Gas Confined Space #1	4 gas meter calibration - monthly	Zeroed and tested calibration. No issues found.	David Wilson	6/1/20	Completed
6/2/20	11700	Meter #3 - 4 Gas	4 Gas Meter #3 Calibration - Monthly	Zeroed and tested calibration. No issues found.	David Wilson	5/28/20	Completed
6/2/20	11701	Meter #4 - 4 Gas	4 Gas Meter #4 Calibration - Monthly	Zeroed and tested calibration. No issues found.	David Wilson	5/28/20	Completed
6/2/20	11890	Meters - 4 Gas Confined Space #2	4 gas meter calibration - monthly	Zeroed and tested calibration. No issues found.	David Wilson	6/1/20	Completed
6/2/20	11699	Meter #2 - 4 Gas	4 Gas Meter #2 Calibration - Monthly	Meter fell into tank. Out of service.	David Wilson	5/28/20	Completed
6/2/20	11702	Meter #5 - 4 Gas	4 Gas Meter #5 Calibration - Monthly	Meter does not charge battery. Out of service.	David Wilson	5/28/20	Completed
6/2/20	11703	Meter #6 - 4 Gas	4 Gas Meter #6 Calibration - Monthly	Failed sensor board. Out of service.	David Wilson	5/28/20	Completed
6/6/20	11722	High level floats	Weekly High Float Alarm test	Tested all high level floats and alarms throughout the plant.	Ryan Holman	5/31/20	Completed
6/8/20	11900	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY	Inspected and set fluid level in all online clarifier gearboxes. SC1- 1qt flowable grease added.	David Wilson	6/7/20	Completed
6/9/20	11795	Influent Sluice Isolation Gate	Weekly operate through full range	Exercised gate. No issues found.	David Wilson	6/3/20	Completed
6/9/20	11870	PS Trailer Mounted Generator	Generator - Monthly Load Test		Eric Sutton	6/7/20	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
6/9/20	11895	Generators "All Pump Station"	Generator - Monthly Load Test		Eric Sutton	6/7/20	Completed
6/9/20	11794	Grit Screw Drive	Grit Screw Drive PM - Quarterly	Packing gland has minimal fluid passing through. Gearbox is not serviceable.	David Wilson	6/5/20	Completed
6/10/20	11800	Influent Pump 1	Monthly Check Pump Couplings	Inspected hubs and coupling. Good fit. No issues found.	David Wilson	6/3/20	Completed
6/10/20	11801	Influent Pump 2	Monthly Check Pump Couplings	Inspected hubs and coupling. New hubs on order. Coupling recently replaced.	David Wilson	6/3/20	Completed
6/10/20	11802	Influent Pump 3	Monthly Check Pump Couplings	Inspected hubs and coupling. No issues found.	David Wilson	6/3/20	Completed
6/10/20	11803	Influent Pump 4	Monthly Check Pump Couplings	Inspected hubs and coupling. No issues found.	David Wilson	6/3/20	Completed
6/10/20	11804	Influent Pump 5	Monthly Check Pump Couplings	Inspected hubs and coupling. Minimal wear since last inspection.	David Wilson	6/3/20	Completed
6/10/20	11892	Recirculation pump #1	Monthly Check Pump Couplings	Direct drive. No hubs or coupling.	David Wilson	6/3/20	Completed
6/11/20	11796	Influent Sluice Isolation Gate	Weekly operate through full range	Switched from bypass back to regular plant flow, and used the gate to regulate the flow coming into the plant.	Ryan Holman	6/10/20	Completed
6/14/20	11901	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY	Inspected and set fluid level in clarifier gearbox. 1qt flowable grease added to SC1.	David Wilson	6/14/20	Completed
6/14/20	11822	Sludge Transfer Pump 2	Monthly Check Pump Couplings	LOTO of pump. Inspected hubs and coupling. Good	David Wilson	6/3/20	Completed
6/15/20	11821	Sludge Transfer Pump 1	Monthly Check Pump Couplings	LOTO of pump. Inspected hubs and coupling. Good	David Wilson	6/3/20	Completed
6/15/20	11861	Plant Water Pump 2	Monthly Check Pump Couplings	Direct drive.	David Wilson	6/3/20	Completed
6/15/20	11860	Plant Water Pump 1	Monthly Check Pump Couplings	Direct drive.	David Wilson	6/3/20	Completed
6/15/20	11897	Generators "All Pump Station"	Generator Weekly - Test Run no load		Eric Sutton	6/15/20	Completed
6/15/20	11867	PS Trailer Mounted Generator	Generator Weekly - Test Run no load		Eric Sutton	6/15/20	Completed
6/16/20	11789	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load	Inspected all fluid levels. Brought up to operating temp and recorded all run data.	David Wilson	6/15/20	Completed
6/18/20	11776	Portable Generator - Honda	Portable Generator Inspection - Monthly	Checked all fluid levels. Ran generator up to operating temp. No issues found.	David Wilson	6/3/20	Completed
6/18/20	11784	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load	Inspected all fluid levels. Brought up to operating temp and recorded all run data. No issues found. Cleaned strainer basket.	David Wilson	6/15/20	Completed
6/18/20	11864	GODWIN Portable Pump	Test Run Godwin Pump-Monthly	Inspected all fluid levels. Brought up to operating temp. No issues found. Pumped out containment area.	David Wilson	6/3/20	Completed
6/18/20	11793	Fixed Gas Monitoring System	Quarterly Calibration Headworks room gas meters	Zeroed and spanned fixed gas meters. All calibrations passed.	David Wilson	6/3/20	Completed
6/19/20	11887	High level floats	Weekly High Float Alarm test	Tested all high level floats and alarms throughout the plant with ES.	Ryan Holman	6/14/20	Completed
6/21/20	11902	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY	Inspected gearbox fluid level. Added .5qt flowable grease to SC1.	David Wilson	6/21/20	Completed
6/21/20	11813	RAS Pump 3	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found. Returned to service.	David Wilson	6/3/20	Completed
6/21/20	11812	RAS Pump 2	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found. Returned to service.	David Wilson	6/3/20	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
6/21/20	11819	Primary Sludge Pump 1	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found. Returned to service.	David Wilson	6/3/20	Completed
6/21/20	11820	Primary Sludge Pump 2	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found. Returned to service.	David Wilson	6/3/20	Completed
6/22/20	11814	RST Feed Pump 1	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found.	David Wilson	6/3/20	Completed
6/22/20	11815	RST Feed Pump 2	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found.	David Wilson	6/3/20	Completed
6/22/20	11810	Wet Scrubber Fan	Scrubber Exhaust Fan PM - Monthly	LOTO of equipment. Inspected belt tension. Lubricated pillow block bearings and motor bearings. Returned to service. No unusual noises or vibration.	David Wilson	6/10/20	Completed
6/22/20	11811	RAS Pump 1	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found.	David Wilson	6/3/20	Completed
6/22/20	11816	Primary Scum Pump	Pen Valley Double Disc pumps - Quarterly	LOTO of equipment. Inspected belt tension. Lubed all bearings and purged air dampers of liquid.	David Wilson	6/11/20	Completed
6/22/20	11818	Secondary Scum Pump 2	Pen Valley Double Disc pumps - Quarterly	LOTO of equipment. Inspected belt tension. Lubed all bearings and purged air dampers of liquid.	David Wilson	6/11/20	Completed
6/22/20	11817	Secondary Scum Pump 1	Pen Valley Double Disc pumps - Quarterly	LOTO of equipment. Inspected belt tension. Lubed all bearings and purged air dampers of liquid.	David Wilson	6/11/20	Completed
6/23/20	11790	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load	Inspected all fluid levels. Brought up to operating temp and recorded all run data. No issues found.	David Wilson	6/22/20	Completed
6/23/20	11785	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load	Inspected all fluid levels. Brought up to operating temp and recorded all run data. No issues found. Cleaned strainer basket.	David Wilson	6/22/20	Completed
6/23/20	11805	Aeration Blower 1	Aeration Blower #1 Air Filter Inspection - monthly	Inspected air filter element. Filter is clean. Blower on standby.	David Wilson	6/23/20	Completed
6/24/20	11797	Influent Sluice Isolation Gate	Weekly operate through full range	Tested the influent gate in its full range of motion.	Ryan Holman	6/17/20	Completed
6/24/20	11886	High level floats	Weekly High Float Alarm test	Tested all high level floats and alarms throughout the plant.	Ryan Holman	6/7/20	Completed
6/25/20	12233	Secondary Clarifier 2 Drive System	Fluid change after installation	Drained fluid from NORD gear reducer. Filled with .48qt gt220. Drained upper worm and pinon gear. Filled with about 2qt gt 460. Greased pinion gear with about 1.5oz with ngli 2. Drained lower ring gear. Filled with about 5qts gt460. Oiled drive chain with 30w oil. Cleaned work area and disposed of old fluids.	David Wilson	6/24/20	Completed
6/27/20	11888	High level floats	Weekly High Float Alarm test	Tested and inspected all high level floats and alarms throughout the plant.	Ryan Holman	6/21/20	Completed
6/28/20	11903	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY	Inspected and set fluid level in SC1 gearbox. 1qt flowable grease added.	David Wilson	6/28/20	Completed
6/30/20	11791	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load	Checked all fluid levels and brought up to operating temp. Recorded all run data. No unusual noises or vibration.	David Wilson	6/29/20	Completed
6/30/20	11786	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load	Checked all fluid levels and brought up to operating temp. Recorded all run data. No unusual noises or vibration. Cleaned strainer basket.	David Wilson	6/29/20	Completed