



HULL WATER POLLUTION CONTROL FACILITY

November
2019

MONTHLY OPERATING REPORT



woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS



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Cover pictures: [top] EPA field workshop – flow measurement in headworks [Dave Wilson assisting the group]
 [bottom] EPA field workshop – process control [Joe Basler assisting the group]

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 November 2019.

- No lost-time incidents for the month of November.
- There were 136 effluent samples taken in the month of November. Please see page (8) for details.
- There were no effluent permit violations.
- Plant average flows were slightly higher in November in comparison to September & October. Overall rainfall was comparable to October. The average daily flow for the month was 1.66 MGD. A total of 5.48 inches of rainfall was recorded for the month.
- The plant and collection system odors were low. The Bioxide system was not service as the system was shut down for the season on 10/28/19. The H2S trending graphs through early November are attached with some interesting findings.
- Asset Management Accounts checkbook for 05M is attached, and the updated planned expenses sheets also attached. A review of the account status between W&C and Hull Sewer Dept. is an on-going process.
- There was one grinder pump call out during the month of November that the staff responded.
- O&M staff continued to assist HSD with assistance & tracking of some of the equipment off the original "Critical Equipment List".
- W&C O&M working with Engineering on multiple projects including Facility Planning & Pump Stations, Conditions Assessments, Headworks and PS Structural, Gunrock/Atlantic Ave and Nantasket Ave lining projects.
- Planning meetings held with HSD to discuss headworks bypass, capital projects, and on-going projects – effluent outfall, perimeter resiliency grant [berm], HVAC upgrade.
- Assisted with pump station shutdowns and force main drain backs as part of on-going sewer project work.
- Worked with Town for the effluent outfall inspection project and plant shutdowns as needed.
- Co-ordinated and worked with the Town to host the EPA field workshop on 11/21/19.

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



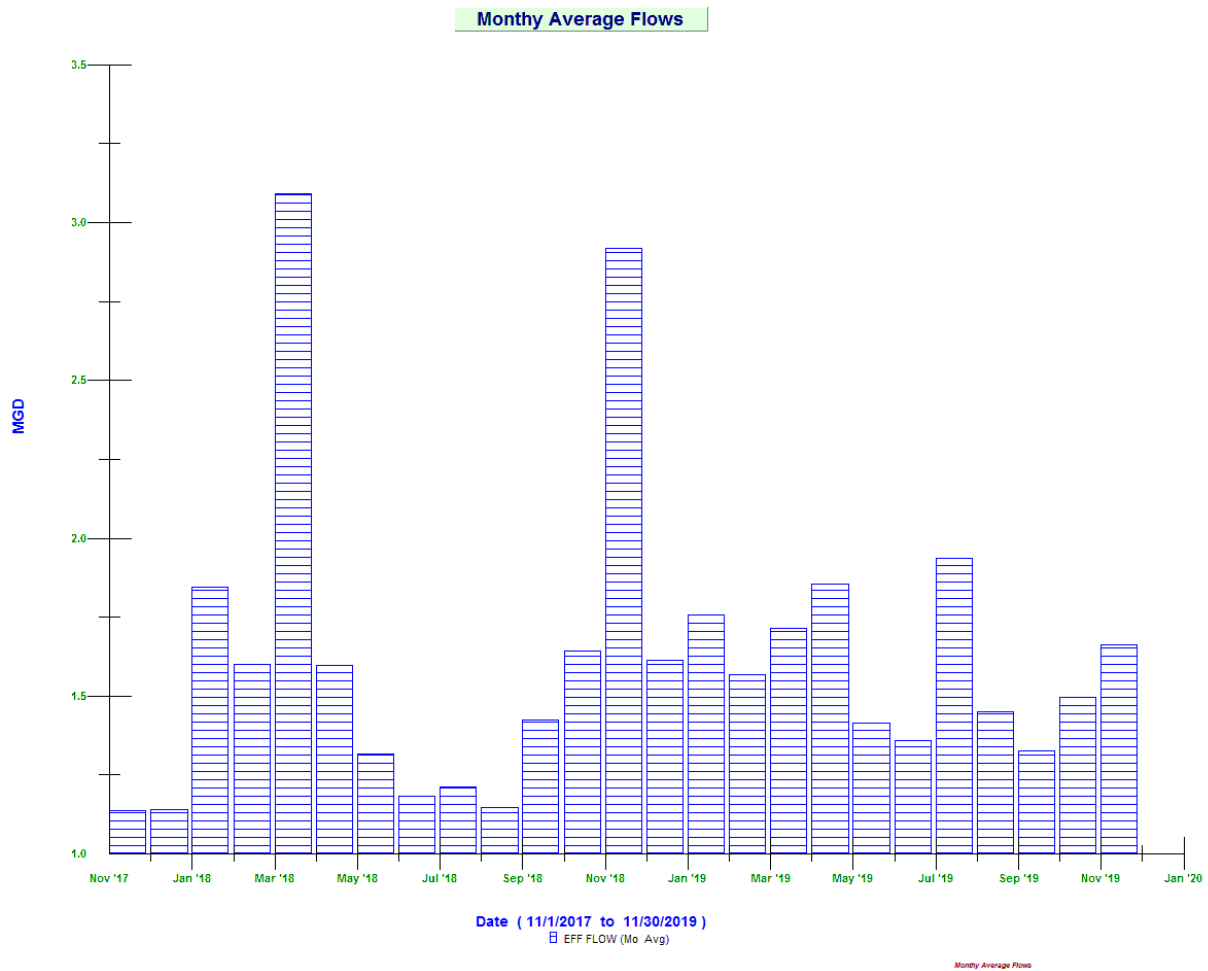
Average Daily Flows and Loadings for the Month:

	Eff Flow MGD	Inf Flow MGD	Inf BOD LBS	Inf TSS LBS	Eff BOD LBS	EFF TSS LBS
Nov 2017	1.138	1.182*	1636	2304	32	132
Nov 2018	2.919	3.310 *	1867	2604	215	432
Nov 2019	1.661	1.698*	1591**	2976**	101	231

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

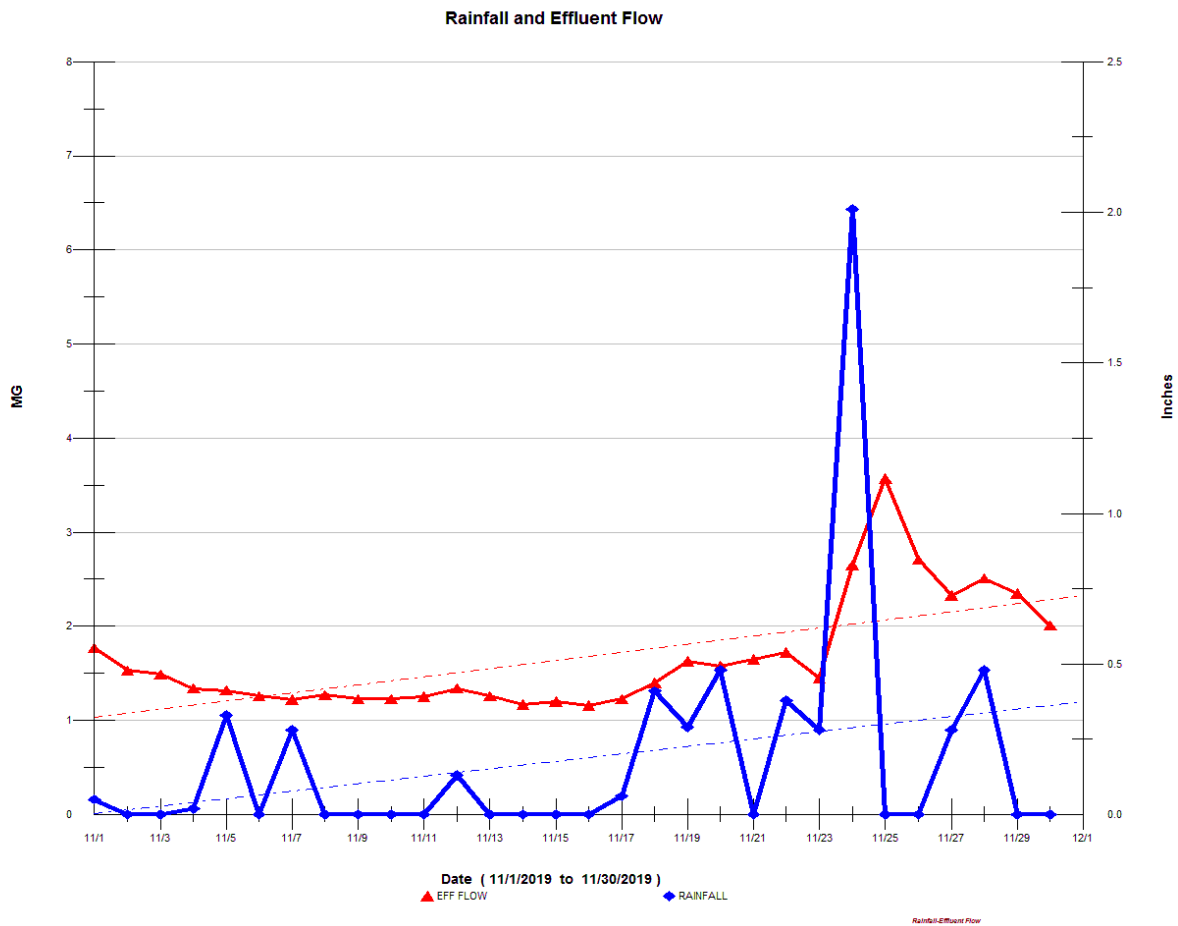
** Influent sewage dirty on less sample days, some impact on higher loading, due to interceptor cleaning project.

2.1 AVERAGE EFFLUENT MONTHLY FLOWS – TWO YEAR COMPARISON

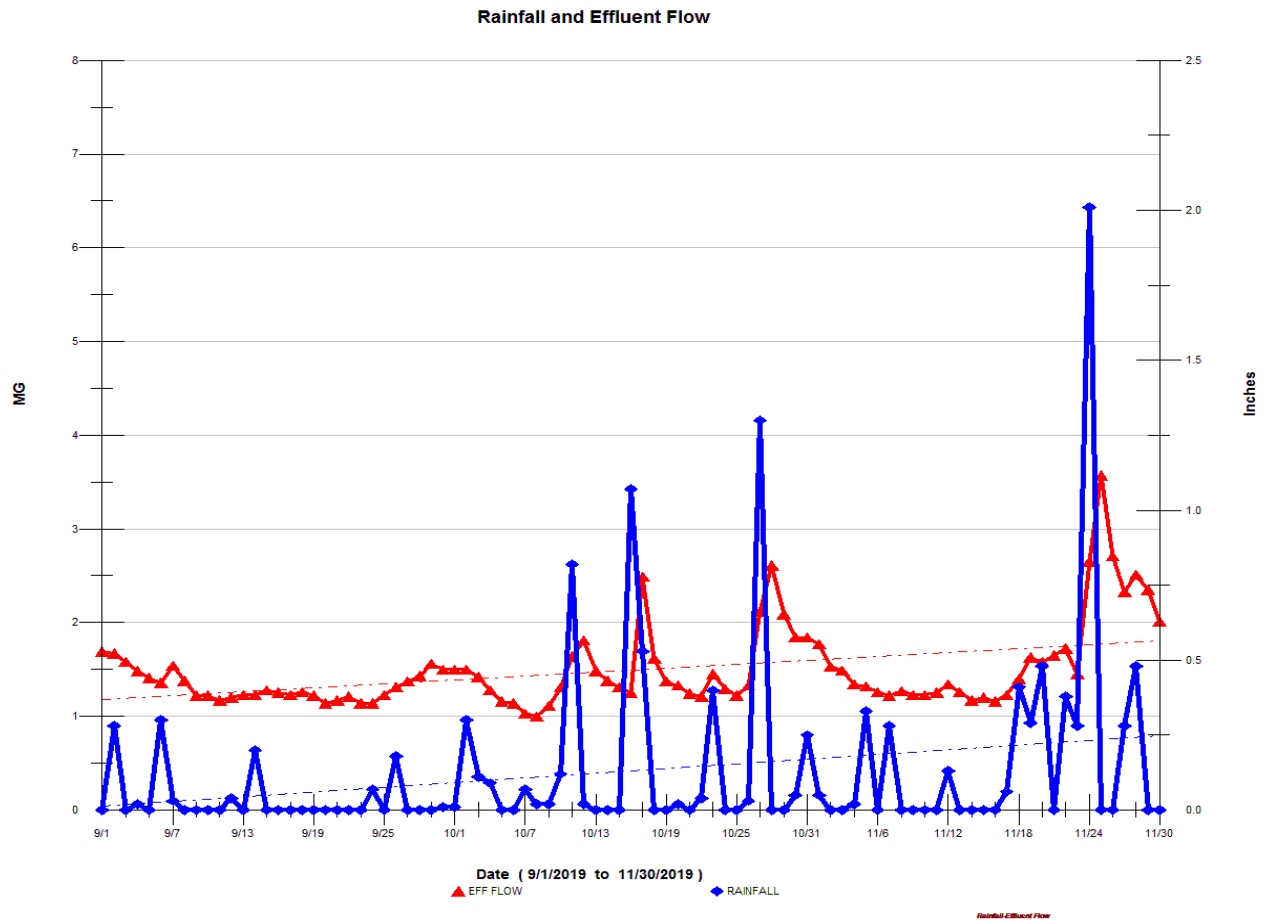


Monthly average flow for November was 1.66 MGD, slightly higher than previous 2 months. There were three significant rain events in October. The total precipitation for the month was 5.48 inches. The graph shows a 2-year summary of the monthly average flows.

2.2 MONTHLY SUMMARY OF RAINFALL AND THE INFLUENCE ON EFFLUENT FLOWS



This graph shows the days where plant flows were higher due to some rainfall [Blue Peaks]. This graph provides a good indication where flows remained higher due to wet weather conditions. On 11/23-25, rainfall in the area was higher than anticipated and this caused for a rise in plant flows during that period. Inflow and Infiltration out in the collection system has been noted in the past with the increased effluent flow values when it rains.



This graph shows the last 3 months and the impacts of rainfall on plant flows.

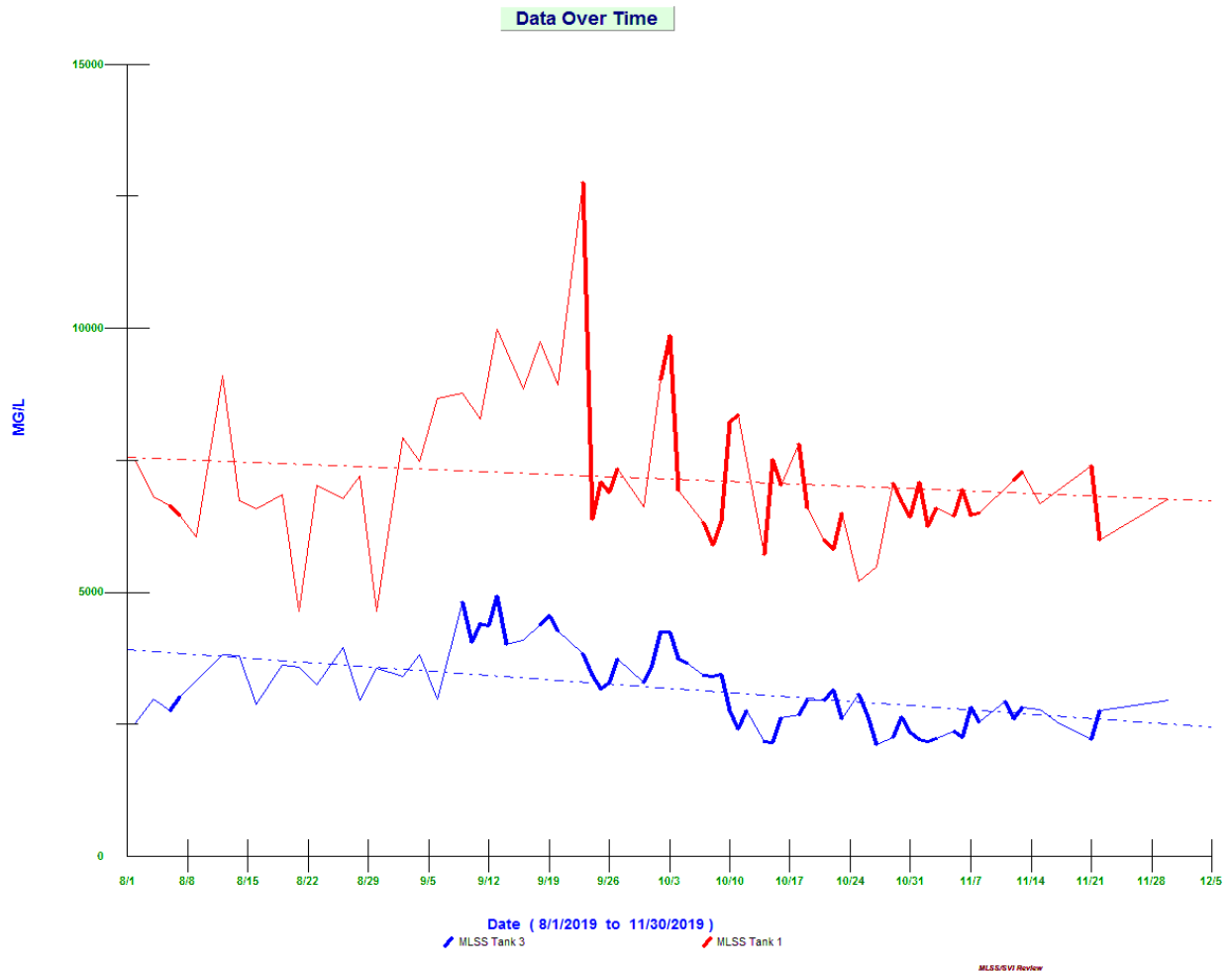
3 COMPLIANCE



➤ Plant Effluent

- There were no permit exceedances for the month of November.

Plant process conditions continued to be maintaining very well, with the aeration tank solids inventory more consistent, since the Nantasket interceptor cleaning is nearing completion. Wasting rates were somewhat lower during the month. Effluent clarity remained good. There was only one secondary clarifier for much of the month, until the rain event on 11/24-25. Plant flows peaked at around 6.5MG, and the additional secondary clarifier and both primary clarifiers were put online. Sludge settleability remained good. No chlorination of the RAS was needed. The aeration process mode remained in contact stabilization mode, with a limited flow into aeration tank #1. The current split is approximately 10-15% to aeration tank #1, with all RAS flow going to aeration tank #1, and approximately 85-90% of flow going into aeration tank #3. This process mode allows for lower solids loading to the secondary clarifiers, minimizes filamentous bacteria formation, and nitrifying bacteria predominance, while maintaining a higher system solids inventory and good sludge settling characteristics. W&C held off placing the primary clarifier and gravity thickener online to minimize odors around the facility [11/24/19]



Trend showing MLSS levels in the aeration tanks over the past four months, after the interceptor cleaning began. The trend shows the rise in concentrations through late September, however, the concentrations moderated through the end of November, as a result of increased wasting of sludge and lesser amounts of cleaning days.

- A Copy of the NPDES report for November 2019 was submitted to the DEP and then forwarded to the Hull Sewer Dept. The Whole effluent Toxicity results for the sample collected in November was compliant.
- Corporate team [Frank C & Alan F] continued work with the Scada to Hach Wims data management computer data export and transitioning data sharing between SCADA, HACH, and Power BI for analysis. This also supports additional energy tracking work for the AI project setup.
- The Use of Drylet continued. The additive continues to show improved secondary effluent quality and bacterial augmentation of the process. This observation was seen during the heavier loaded days and during higher flow periods. Also, the clarity of the facility effluent has increased. The costs for use of the Drylet product is being paid for by W&C. The goal to be achieved is that the product costs will be offset by the lower sludge generation and lower sludge disposal costs. The

daily dose of Drylet product was decreased to “1 scoop” dosed (1 pound), since the primary clarifier is back online, and the amount of food [loading] to the aeration system is lower.

Photos below show the typical November conditions with the plant in the contact stabilization mode process flow mode, with some feed to aeration tank #1 also. The flow split is ~90% to aeration tank #3 and ~10% to aeration tank #1. Overall, the system solids inventory has been lowered.

Continued good settling characteristics in the secondary sludge and low [slightly higher] turbidity in clarified effluent. Moderate brown system color in aeration tank #3, and no odors. The month progressed where the aeration color has gotten lighter, to a more normal color, due to the lighter load of solids from the interceptor cleaning.



Aeration tank #1- less & lighter foam



Sec clarifier #1 [clear/low turbidity]



Aeration tank #3 [moderate brown color]

- There were no SSO reports submitted in November.
- SPCC: Regular inspections of the new AST and fuel day tank, as well as container storage of waste oil. Updated file. Materials were received for the containment system for the Godwin pump secondary containment from Vortex Turnkey Solutions. Vortex will install the liner under the Godwin pump unit, as well as install the additional “honey bucket screens” on the suction and discharge lines in early to mid-December

4 KEY PERFORMANCE INDICATORS



4.1 WATER QUALITY – NOVEMBER 2019

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 Max	Period Daily Max	# of Samples	# of Violations
Eff TSS	MG/L	50		45	30	1 X Week	16.8	12.0	27.0	4	0
Eff TSS	LBS			1152	768	1 X Week	231.3	132.1	301.7		0
% TSS Rem	%		85			1 X Month	92.5				0
Eff BOD	MG/L	50		45	30	1 X Week	7.4	3.6	14.0	4	0
Eff BOD	LBS			1152	768	1 X Week	100.7	39.6	156.5		0
% BOD Rem	%		85			1 X Month	93.6				0
Eff Chlorine	MG/L	1.0			0.7	3 X Day	0.24	0.01	0.86	90	0
Eff Fecal	#/100 ML	260			88	1 X Week	10	10	10	4	0
Eff pH	SU	8.5	6.5			1X Daily	7.0	6.7	7.2	30	0
Enterococci	#/100 ML	276			35	1 X Week	25	10	70	4	0

- There were 136 effluent samples taken in the month of November with zero [0] NPDES Permit exceedances.

Gallons Treated vs Sludge Disposed

Month	Effluent Treated, MG	Sludge Disposed, Gals
November 2017	34.14	117,000
November 2018	87.57	62,500
November 2019	49.83	53,000 *

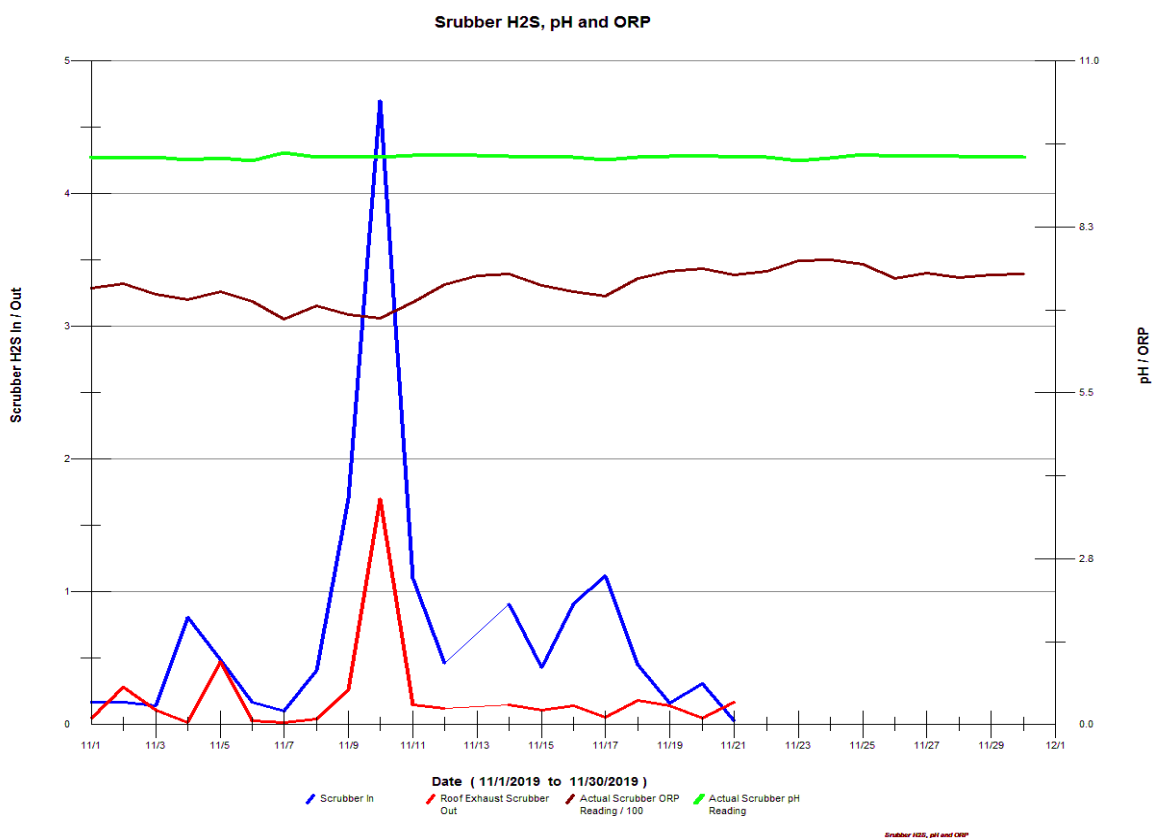
* Some Impact from interceptor cleaning, with increased solids processed/disposal quantity

5 ODOR CONTROL

There were no odor complaint calls during the month of November. The gravity thickener and primary clarifier remained off-line for most of November as these tanks have historically are the source of a lot of the odors within and around the facility, if in service during the warmer weather months. With the recent sewer interceptor project work, the #2 PC was readied for potential service, and the gravity thickener was cleaned, inspected, and readied for service. However, due to the sensitivity to odors in the immediate area, we held off putting the tanks into service, until needed after the high flow event on 11/25. The remaining scraper/plows for the primary clarifier were fabricated and installed in the #2 primary tank.

The above ground sludge storage tank was in service all month to receive thickened sludge from the RST thickening process, and this tank is typically emptied typically during the weekday Monday through Friday period, lessening the chance for odors during the filling of the truck. There were some Saturday pick-ups for sludge due to processing rates and limited sludge storage capacity. The goal is to avoid any potential odors over the weekend period. The tank will remain on-line into December, if weather permits. The secondary scum well is also pumped out during the week, to avoid odors on the weekend. There is continued flushing of the aeration tank troughs to minimize build-up of solids that can cause odors. The off-line aeration tanks and clarifiers kept empty to prevent odors.

The odor scrubber system was on-line for entire the month. The scrubber fan speed remains at the mid-range due to moderate levels of hydrogen sulfide production. With the continued addition of Bioxide at PS 3, the H₂S levels have been stable. The facility realizes electrical savings, when the fan operates at a lower speed. Adjustments to setpoints were made due to fluctuation in loading on the scrubber and temperatures.



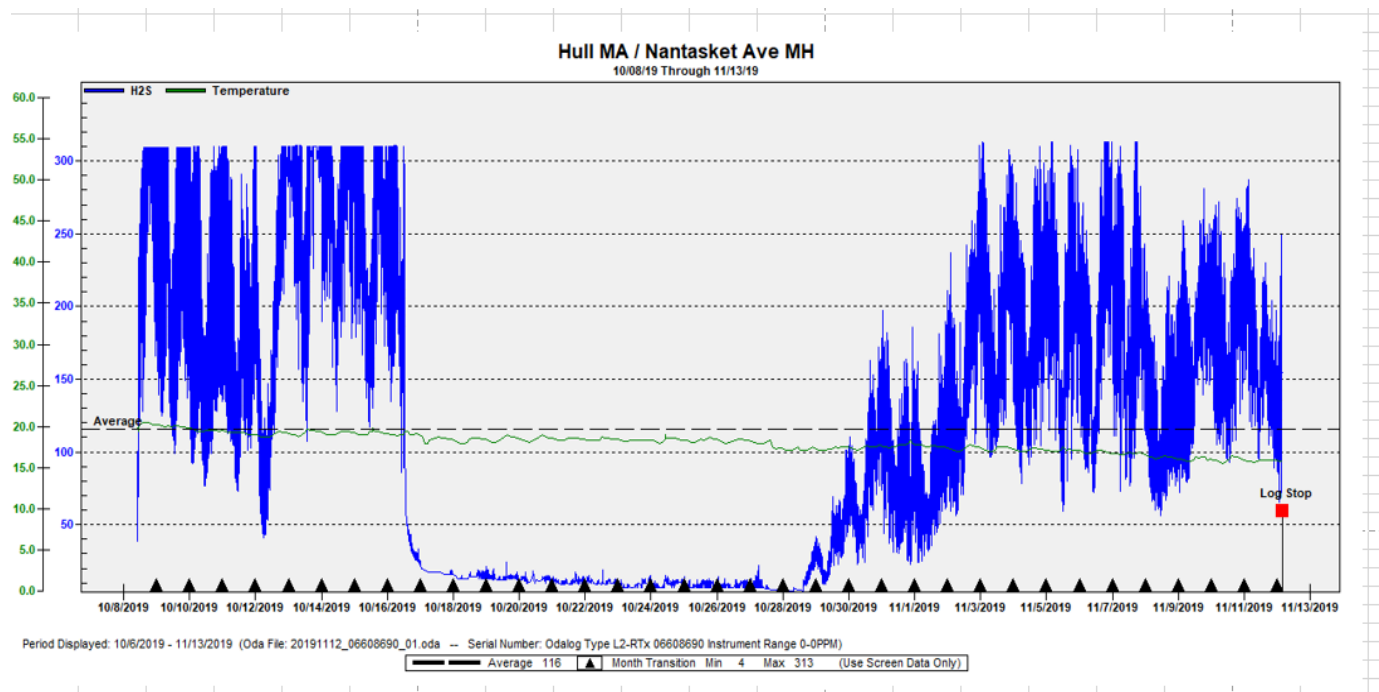
Graph shows some very small peaks for H₂S to the scrubber, and most of these are below 1.0 ppm. These [blue] peaks are due to the H₂S peaks, at the time of the Jerome meter sampling, which is a grab [one-time] sample. The time of day when the grab sample was collected can affect the H₂S reading observed. The Jerome meter stopped working on 11/21 & service is pending.

- The Evoqua odalog data logging units in the manholes were removed on 11/13/19 for the season. The odalog units were allowed to log data after the Bioxide was shut off to track H2S levels. The data collected showed that H2S levels still were high in the system, even though there were no apparent issues at the plant or reported by residents. For 2020, with the new data logging, the chemical feed may be left on to run for a longer period, based upon the findings this Oct/Nov period.
- “In-Pipe” bacteria addition continued with all 24 dosing stations operational. No additional actions taken for headworks sulfide reduction plan proposed by “In-Pipe. The inspection/replacement with full bottles took place on 11/14/19. Additional kick-start vegetable protein and bacteria was added in November. The kick-start program will continue to follow the monthly plan, with the addition of more bacteria to the system. All work being tracked on the Utility Cloud [UC].
- Continued the bi-weekly change outs of the bacteria bottles at three lift stations Microbe Dosing Stations (MDU's) with installation just in front of the three largest pump stations [in the wet wells or manhole just prior to the station. [PS 3, PS 5, PS 9] The re-load plan is delivering an additional 5.4 liters per month in total (1.8 liters x 3 locations). The goal is to see if we get a step change and reduce odors, while at the same time potentially reducing sludge. This change is being monitored closely. There is no additional fee.
- The Jerome portable H2S meter is currently out of service and will be sent in for evaluation. Due to the age of the unit, the factory will not warrantee the unit, as was done in past, with a service contract. There may be some consideration to trading the old unit in towards a new meter.
- On-going – frequent pumping out of the secondary scum wells. Tank cleaning performed quickly and as needed. For the warmer weather months, this activity is scheduled during the week, to avoid unforeseen odor issues on the weekends. The use of the primary scum well was resumed in late November.
- Mixing systems/aerators all functional at the pump stations, except for pump station #3. New Medora Gridbee mixing system for PS 3 not installed yet. Mixer/Aerators at PS 1, PS4. PS6 & PS 9 are on timed control through SCADA.

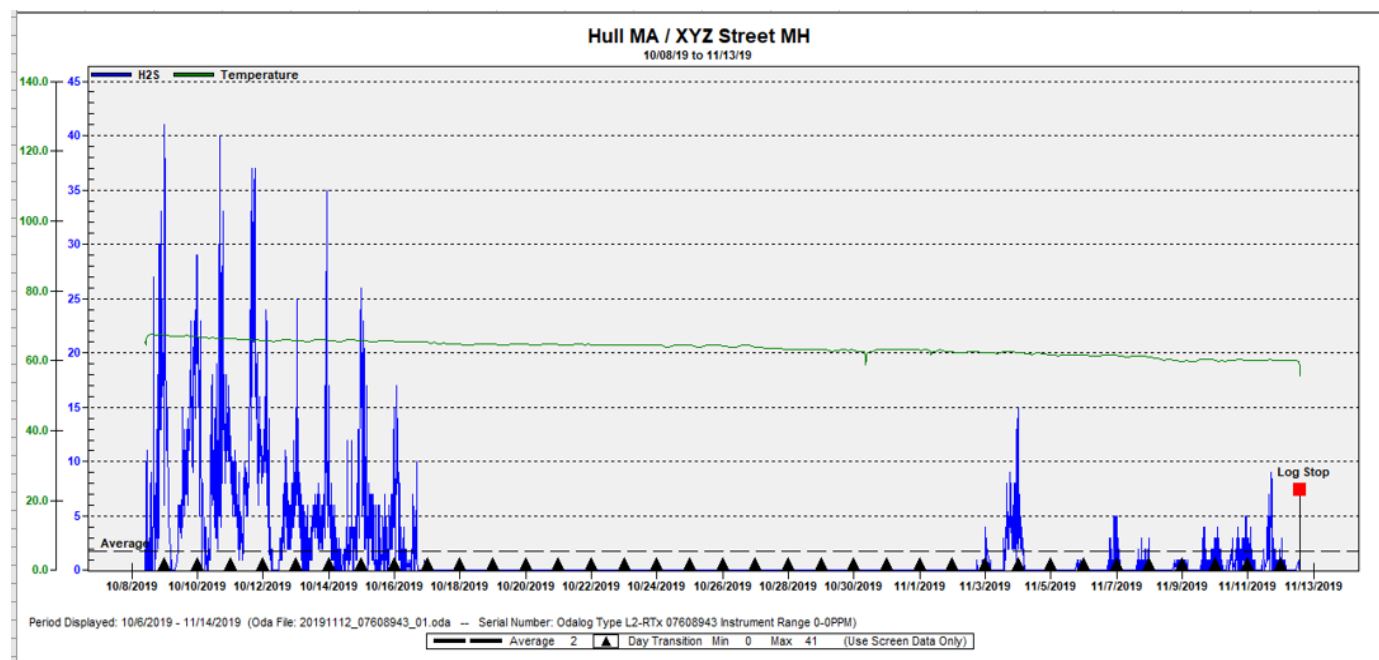
The latest odalog data collected by Evoqua through the November 13th operating period is noted below.

			Total			Chem	Vapor Phase Data			Adjusted	Tank	
			Sulfide		Temp.	Res	Min.	Max.	Avg.	(Target) Dose	Drop	
Date	Sample point	Time	mg/L	pH	C	mg/L	ppm	ppm	ppm	GPD	GPD	
11/13/19	XYZ ST	1:00 PM	1.2	7.3		0.0	0	41.0	2.0			Bioxide is off - high sulfide
11/13/19	Nantasket Ave	1:15 PM	15 +	7.3		0.0	4	313.0	116.0			Bioxide is off - high sulfide
11/13/19	Bay Street	1:30 PM	10+	7.1		0.0	0	215.0	7.0			Bioxide is off - high sulfide

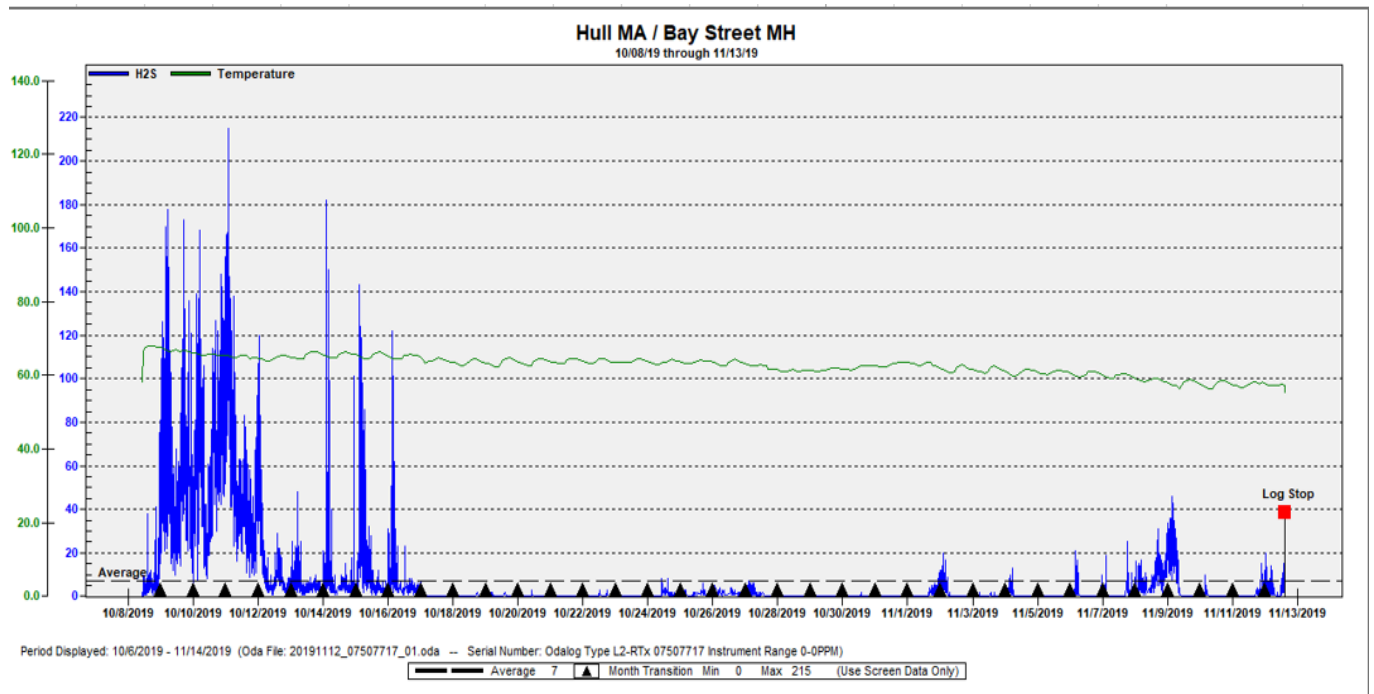
Nantasket & Water Street below: Oct-Nov graph shows high H2S as the product ran out on 10/5-10/6. Levels dropped when Bioxide feed resumed on 10/16. Then with rainfall and higher flows, the system levels dropped down. When the bioxide was shut off on 10/28 for the season, H2S levels climbed back up. In part the higher levels were from the PS4 discharge.



XYZ Street Manhole on Nantasket Ave below: Some H2S seen in this manhole, since the Bioxide was off [waiting for delivery]. The chemical feed was resumed on 10/16, and then the H2S levels dropped back down. When the system was shut off for the season on 10/28, the H2S levels stayed relatively low.



Bay Street Manhole before Water Street below: Typical H2S levels, no chemical addition in this part of the system.



Manhole #20125: Nantasket Ave just before WPCF and receives flow from Spinnaker Island. No data logged for November.

6 MAINTENANCE SUMMARY

6.1 TASKS COMPLETED THIS MONTH

The SEMS monthly work order summary for November is compiled and attached as a pdf file for review.

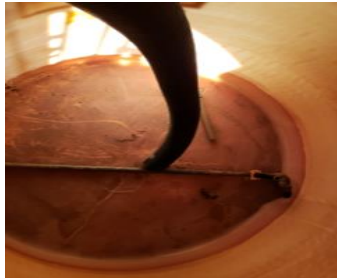
Key items of note are listed below.

- 1) In-Pipe units – battery change out, dosing unit cleaning and inspection and circuit board troubleshooting and replacement as needed.
- 2) There was one grinder pump call in November. 37 Elm Ave station had become overwhelmed with excess water due to infiltration of groundwater. Staff responded to the system alarm on 11/24 after a call was received from the homeowner. Upon arrival, we found can full of ground water and the electrical cord was submerged under the water. The safety switch had tripped out the pump. The can was pumped down to a level below the power cord, and pump operation was restored. Advised homeowner and informed the HSD of the corrugated chamber holes allowing groundwater in. The surrounding area is ledge and backfilled material is suspect. [Flooded E-1 Pump Chamber] below.



- 3) On-going issue – continuing to add oil to sec clarifier gear boxes, since only one S.C. is online. All the existing Amwell units have leaks [lower gear box seals are no good]. The only exception is primary clarifier #2, where the unit is currently ok. Continuing to use a flowable grease product that is of heavier consistency to lessen the amount of leakage of oil. The estimated use of product with SC1, SC2, and GT1 on-line is 3-4 gallons per week.
- 4) Weekly exercise without loads and Monthly load tests completed on all generators including the portable generator and pump stations.
- 5) Ladder replacements at PS1 completed.
- 6) Scrubber fan unit maintenance – monthly maintenance performed – belts and motor are good.

- 7) RAS pumps – continued ragging of pumps – frequent cleaning performed several times during the week.
- 8) GT #1 – tank cleaning with BMC. Inspected tank and removed grit & various pieces of debris.
- 9) Hypo tank #2 cleaned out – sediment/debris. Completed manifold piping in hypo storage room.



Top view looking inside Tank #2



Repaired manifold piping from Tank #2

- 10) PC #2 – completed fabrication of the remaining 8 plow blades and performed a confined space entry [CSE] to install new pieces in the tank on the rake mechanism.



- 11) The mechanical bar screen [flex rake] had on-going drive system faults. Several call-ins for the alarms. Eventually changed the programming sequence to avoid timed operation. The motor was failing [bad bearings] that was causing the start-up faults. Eventually the motor stopped working on 11/27. A new motor was ordered and installed on 11/29. While waiting for the new motor, the bypass influent channel was opened, and the influent flow was run through the manual fine screen. This manual bypass screen was adequate but did allow rags and debris to pass through into the plant. There were no further issues after the new motor was installed. Additional alarms and trending were requested from the Scada group.



Top view of bypass manual bar rack



New replacement explosion-proof motor

- 12) New Human-Machine-Interface [HMI] panels installed for the flex screen control panel for interface with the VFD's in the electrical cabinet. Displays are visible and reset is possible if needed without opening the electrical cabinet.
- 13) Tecta America onsite for roof investigation, due to a leak in roof on the operations building above control room - found multiple potential leak areas in base cap flashing and sheet flashing areas. Made repairs to membrane, and caulked areas. Leakage into the building has stopped. Roof pictures below.



- 14) PS3 – clean pumps after 11/24-25 rain event. Low output gpm seen and this prompted the additional inspection. The pump rotating assemblies were separated from the volutes. Debris was found in each. Pump #1 debris included rags and a PVC pipe section. The pipe section will need to be flushed back into the Wetwell and a station bypass set up. Pump #2 had rags and brick pieces lodged in the impeller.



PVC pipe piece [unknown source] in Pump #1



Bricks and rags – pump #2

15) Annual PM for all facility and pump station generators. No issues found. Planning for some additional PM of the heat exchangers and the fuel strainer.

16) All Pump Station wet wells inspected. No wet well cleaning was performed



Please see the attached summary of the Asset Management accounts for contract year (5). Most recent through 01/02/20.

**Updates & notes made to the planned expenditures list.
Items grouped by task – 101A, 102B, 103A**

While the projected costs and actual costs combined total exceeds the 05M planned budget, adjustments and decisions are being made on a regular basis based upon priorities and unforeseen costs. The planned list was initially set up to layout a planned budget for the contract year. Some items are shaded in comment section that most likely will be planned for next contract year.

If a capital project is completed the cost to complete is noted under “final cost.” All the capital “102B” items have been listed together in the planned expenditures list.

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 November.
 - Ongoing - Daily safety briefing meetings, review site safety policies with sub-contractors, safety tailgate topics. Pure Safety topic– November "Cold Stress" safety.
 - Annual tasks updated – Hearing protector attenuation.
 - Power point presentation on hearing loss.
Discuss PPE needs
 - Monthly staff safety meeting conducted on 11/27/19 - AV and RH presented.
 - Safety Stand-down on 11/5 – Head contusion/concussion
-
- Reminders for daily safety briefing topics and discussion points & documentation. Review "Lessons Learned" from October 2019 - Near misses and incidents from other company projects.
 - Pure Safety reminder – "Cold Stress"
 - Toolbox topics – Confined space entry safety and why use of PPE important
 - Natural Gas safety – tool-box discussion
 - Electrical Emergency and contact release methods
 - Article – "Essentials of effective fire protection"

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 October discussed.
- Operational updates and process control discussions, especially with recent electrical issues and plant shut-downs, pump station operations, odor issues, dig-safes, etc.
- RCM – Reliability Centered Maintenance workshops – on-going held at the facility – several days in November. Focused on the plant’s electrical & Scada systems and power distribution system.
- Off-site training - Dave W and Ryan H started the intermediate wastewater short course in Nov.

Staffing related items:

- Continued involvement with Mass Maritime [MM] internship program/career fair for future interns. Corporate human resources department leading the effort for future intern for next year’s winter and summer months. Winter intern selected for Jan-March 2020 period. Declan Baggett from Hull, MA.
- Sunday rotation schedule in place with Jim Gagliard working every other Sunday, and remaining weekends being filled by Roger B., Aram V., and Bill B. When Bill is not scheduled for a Sunday, he will be on a Monday-Friday schedule.
- Supplementing staff needs with O&M tech support where needed. Jody S providing coverage when staff levels are lower due to sickness, vacation, or training. Had Richard [Dick] Gould from the Linden Ponds project in for various fill-in coverage as needed. Mostly with daily pump station rounds/inspections, weekend lab tasks, and if additional staffing needed for special projects.

9 COLLECTION SYSTEM

9.1 WET WELL CLEANING

The actual schedule for wet well cleaning: May 2019 to April 2020:

(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, 2019				X	X			
June, 2019								
July, 2019								
Aug., 2019	X			X	X		X	
Sept. 2019								
Oct., 2019	X		X	X				
Nov, 2019								
Dec., 2019								
Jan., 2020								
Feb., 2020								
March 2020								
April 2020								

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 November.

- D Street Outfall pipe
- Co-ordinate pump & haul for Hing PST while Nantasket Ave MH work continued
- Sewer main cleaning and CCTV – Samoset & Warren
- 98 Bay Street – oversight of sewer lateral break due to gas company work.
- 11 James Ave – back up call/insp.
- PS 5 Station shut down/restart for GMPS as needed.
- 37 Elm Ave [grinder pump].

Manholes:

- Staff continues to respond to rattling manhole covers, broken manhole covers/rims and sunken manholes covers/rims.

Dig Safe mark outs:

- Dig-Safe mark outs were completed throughout the Town of Hull in order to assist/facilitate the Town's paving projects and the emergency repairs of the broken water lines, broken sewer laterals due to gas main work.

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

10 PROJECT MANAGEMENT & ADMINISTRATION



10.1 ON-GOING PROJECTS AND SUPPORT ITEMS

- The current summary for the account status for and the year 5 asset management accounts, as of 01/02/120, is included as an attached pdf file with this report. The 05M checkbook spreadsheet with proposed maintenance task plan for the year was set up and presented as an attachment with this report. The plan is regularly updated to reflect recent changes in the spending plan, with adjustments made as projects are completed, and priorities changed. Unexpected work also is factored in. There is some on-going adjustment. [i.e. sub-contractors, goods and services, etc.]
- Assist the sewer department with proposed items for purchase from encumbered funds, primarily from the critical spares list. Received quotations [RFQ] for the Amwell drives installation. The delivery of the Amwell gear drives was been delayed until late November/early December, at the earliest due to production backlog.
- The Flygt effluent submersible pump, and the plant water strainer are all in production and W&C is waiting for delivery. Worked to finalize the portable generator purchase through the "Sourcewell" purchasing contract. A Town purchase order was issued. The new lawnmower was ordered from Stewart's Power Equipment.
- The procurement of D Street equipment items continued – new pumps and electrical VFD's. The portable trash pump remained set up at the station with float control for remote starting capability, as well as the existing pumps. The pump is tested regularly to confirm readiness and ran as needed during excessively wet periods and when tide levels were high. The new pumps that were sent back to the factory were retested and reshipped to the facility. Working to obtain quotes for installation.
- W&C assisting the Town and Tighe & Bond with information and recommendations on the HVAC upgrade plan and operations building layout changes.
- EPA Region 1 out of Boston hosted the National EPA Inspector's Training Workshop this week and 130 EPA staff members from all around the country came in for the event. As part of the training each year, they select a local Facility to conduct their field training portion of the Workshop. The Hull WWTF was selected as the site and they accepted the invitation to have 30 Inspectors come to the Project for the day on Wednesday 11/20/19 to learn how to conduct an inspection and what to look for at the site

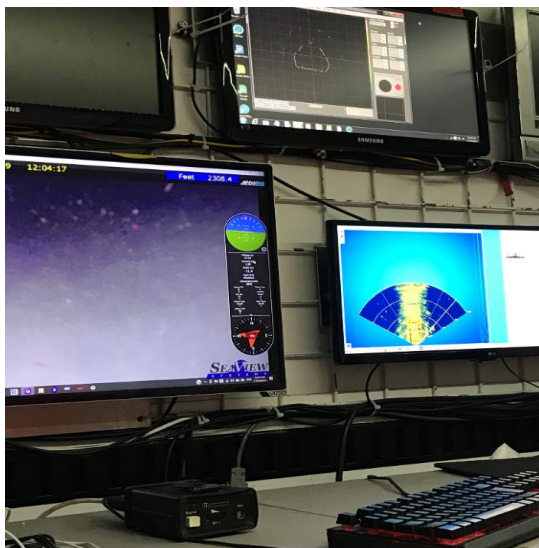
during the inspections. The Hull staff hosted this event and received praise from the EPA for their coordination efforts, cooperation, and all-around kindness to the guests, while being very professional and diligent expressing and upholding the Woodard & Curran site safety expectations.



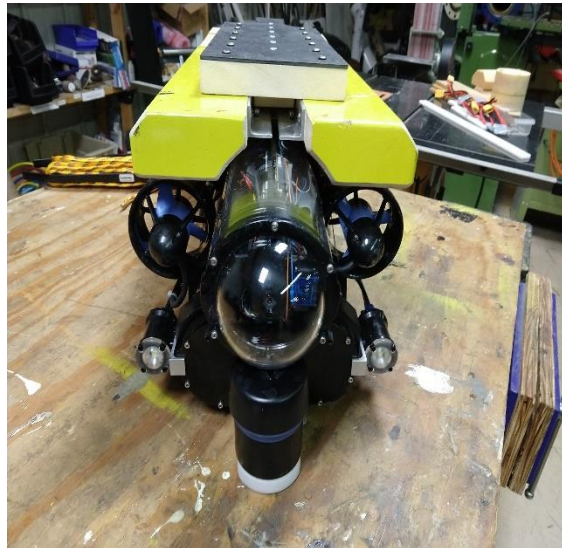
- On-going work continuing in the back room - spare parts storage areas being worked on to improve on inventory control and plant orderliness. Utilized interns from X-Cel Program out of Boston at no cost to Town for their assistance. The team of three assisted with the consolidation and boxing up of materials. W&C arranged for the disposal of the failed and unusable electronic items on 11/19/19 by "Complete Recycling Solutions", a recycling company [failed UPS units, old computers with hard drives removed, other electronic items that are not functional]. Over 900 pounds of items/materials were properly recycled/disposed of.



- RS continued work on the Annual Operating Report for contract years 3 and 4 with an expected delivery at the close of January 2020.
- Bill has continued work on planning for effluent flow isolation valve replacements. Work includes all construction related activities that may allow for rehabilitation of the effluent pump room valves through O&M services and coordination of the potential work with the on-going facilities plan.
- Bill and Brian working on getting plans and pricing for Pump Station 5 bypass improvements related to the engineering support and recommendations previously concluded. The bypass improvements will provide a new FM isolation valve and allow for protection of the pump stations function if pump failures were to occur in the dry-pit pump room.
- Drylet bacterial process enhancement continued in November. There were no changes in the process plan. The product's effectiveness and costs are regularly tracked and reviewed. [See effluent/compliance section]. The interceptor cleaning project phase has had a significant impact on increasing the solids inventory in the facility, resulting in more days of sludge thickening, and disposal costs. A review of the impact and added disposal costs will be presented.
- Roofing repair work – working with Tecta America to get the repairs to the stairwell roofs in progress. Tecta has been pre-qualified by W&C and currently preparing their health and safety plan [HASP] to our corporate H&S department for review and approval before performing the repairs. Along with these repairs, the annual roof inspection will be made for all building roofs.
- Pump Station 9 [PS 9] – Currently operational, with both pumps. The “special order” check valve was received from the manufacturer in July, however, the replacement work is on hold due to the station's structural issues.
- The pump station ladder replacement project is underway with Boston Forging and Welding completing the fabrication and the installation of new ladders at PS 1. The next phase will be to perform the same at PS 3.
- Assisted with effluent outfall inspection 10/19 & 20. W&C staff worked with W&C engineering, HSD, and Seaview to allow for inspection of the effluent outfall pipe using an underwater roving device. The plant flow was diverted to off-line tanks, increased at times, and influent stopped for periods over the two days, so that the inspection could take place.



View of monitors inside Seaview Systems' trailer



Rover used to inspect the outfall pipe

- PS4 FM planning for early Dec work
- CommTank site visit with Bill to look at incinerator demo as part of facility plan and its recommendations.
- Due to an emergency situation in Cohasset a declaration was made and per the terms of the Inter Municipal Agreement the Town of Hull accepted diverted flow from the Town of Cohasset via the Hingham Pump Station on 11/7/19 and continued receiving diverted flows daily throughout the month of November. Cohasset will provide a detailed summary of the gallons diverted for tracking and billing purposes.
- Bill and W&C assist Town with flood berm planning project thru state coastal grant. Provide Woods Hole group and surveyors information and site access. Coordinate with Brian/Town and the Hatch engineers with information they need and sit in on design meetings for support. Distribute neighborhood flyers.
- Change Orders – Litigation Support & Aquasight Intelligence
- Facility Planning Meetings
- Headworks structural meetings
- Final site visits for RCM analysis held in November and a project summary and presentation planned for first week in December at the Dedham office for RCM and Criticality Analysis.
- D Street – Work with HSD on co-ordination of work by Ted Berry [slip lining of outfall pipe]. Assist with existing pump removal [bay side vault]; additional trash pump operation and station monitoring while the station was off-line for the slip lining and pipe cleaning.



11-26-19 street flooding while pipe slip lining being done
Central Ave & G Street



D Street Stormwater Station with trash pump in operation