



# HULL WATER POLLUTION CONTROL FACILITY

August  
2018



# MONTHLY OPERATING REPORT



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

COMMITMENT & INTEGRITY DRIVE RESULTS

NPDES NO. MA0101231

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**Cover pictures:** Coastal Resilience Grant Award Announcement  
TPO Article photo –by Bill B & John S.

# 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 August 2018**

- No lost-time incidents for the month of August.
- There were **145** effluent samples taken in the month of August. Please see page (8) for details.
- There was one incident at the wastewater facility that required the filing of an SSO - sanitary system overflow notification report. On 8/8/18, the sludge truck was overfilled slightly, and a small spill occurred in the driveway area. No liquid reached the catch basins, and the area was cleaned up very quickly.
- Assisted HSD and DPW with D Street Station response to unknown diesel fuel dump into the stormwater collection system on 8/17/18.
- The Bioxide system operated throughout the month of August at PS 3. The feed rate was maintained at the July rate of approximately 200 gpd.
- Asset Management Accounts checkbook for tracking of expenses is ongoing weekly for year #4 [04M]. Review of account status between W&C and Hull Sewer Dept. is on-going.
- The electrical tie-in from the HSD trailer remains, as continued monitoring of the plant's electrical voltage continues. The infra-red thermography scan of all plant equipment electrical panels was conducted on 8/28-8/29.
- There were 3 grinder pump call outs during the month of August.
- The Underground Storage Tank Removal Project/Above Ground Fuel Storage Tank continues. Working with Comm Tank for UST tank removal planning effort, reviewing wave analysis, and structural design. Siting for future above ground tank being reviewed. Test borings done in general location for siting of new tank.
- Main [lead] generator heat exchanger replacement update – late September delivery anticipated.
- Purchase order for two new replacement pumps at PS 1 issued. Working on developing bid package for sub-contractors.
- TPO – Treatment plant Operator Magazine article to be published in September edition “The value of a dress Rehearsal” – mock drill storm drill and emergency management planning.

**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

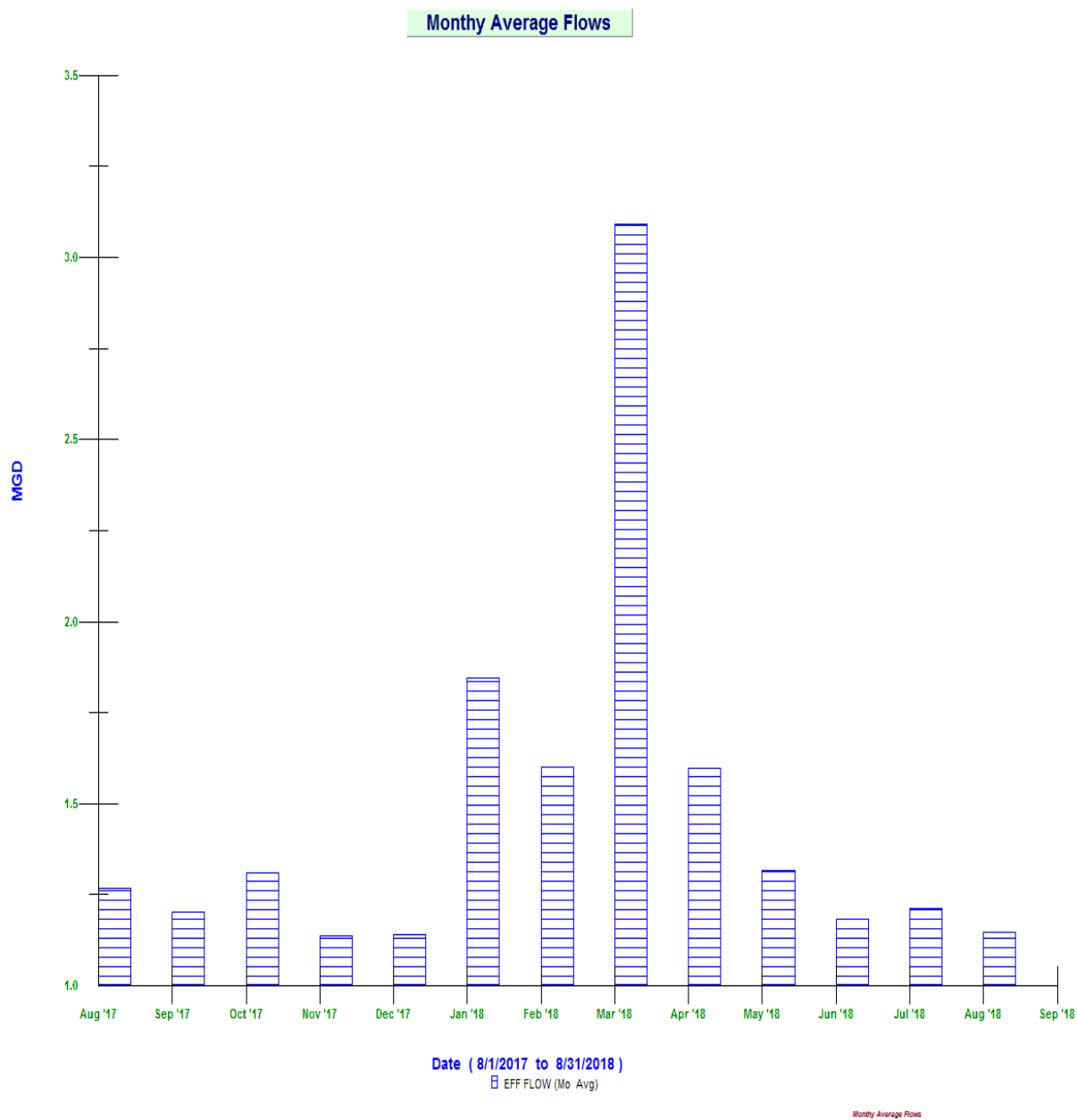


### Average Daily Flows and Loadings for the Month:

	Eff Flow MGD	Inf Flow MGD	Inf BOD LBS	Inf TSS LBS	Eff BOD LBS	EFF TSS LBS
Aug 2016	1.213	1.224 *	2678	5380	48	170
Aug 2017	1.267	1.402 *	2030	3859	70	225
Aug 2018	1.146	1.610 *	1277	2681	50	152

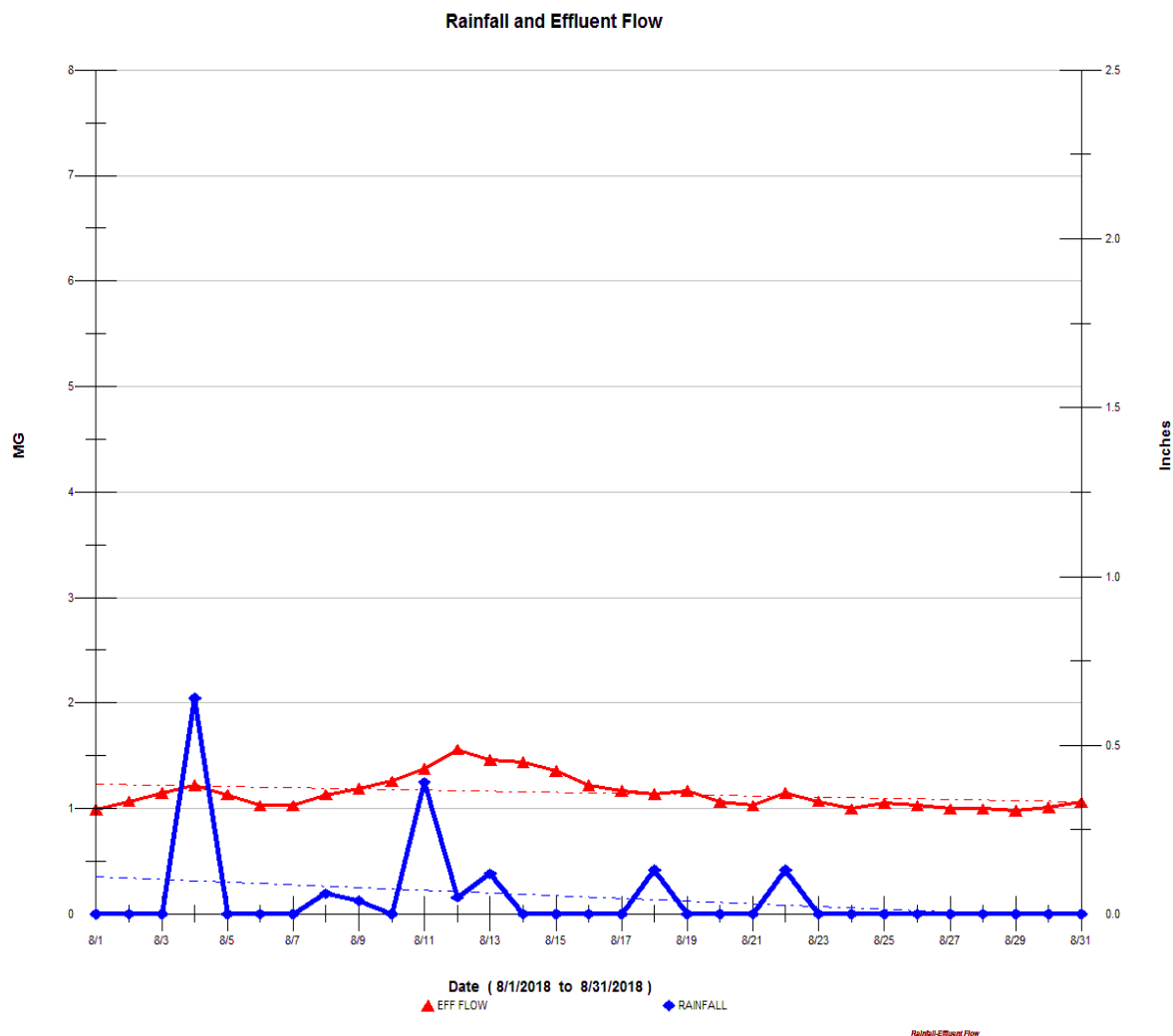
\* Meter drift is getting closer and the numbers more accurate as the staff adjust accordingly.

## 2.1 AVERAGE EFFLUENT MONTHLY FLOWS – ONE YEAR COMPARISON



Monthly average flows trending lower for past 3 months and also in comparison to 2017

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



This graph provides a good indication of the influence that rainfall has on the effluent flows. Inflow and infiltration out in the collection system is noted with the increased effluent flow values when it rains.



### 3 COMPLIANCE



#### ➤ Plant Effluent

- There were no exceedances for the month of August.
- Plant process conditions were good & maintaining very well. Continued with control of filamentous bacteria [growth that creates a dark brown slimy foam and carryover to the secondary clarifier surfaces] by chlorinating the RAS [return activated sludge]. Clarifier surfaces are very clean.
- Repairs to the #1 aeration tank were completed and the tank put back into service on 8/8/18. Used the 6-inch trash pump to transfer contents out of aeration tank #4 to the #1 tank. Hosed/cleaned out the #4 aeration tank.
- Cleaned out both chlorine contact tanks. Pump out and clean individually, all accumulated sludge from tank bottom and hose down side walls.
- A Copy of the NPDES report for August 2018 was submitted to the DEP and then forwarded to the Hull Sewer Dept. Quarterly WET [whole effluent toxicity testing & sampling] completed.
- Continued working with corporate team for planning and rollout of company /process control plan/ template. Mike Cherniak & Chibby Alloway from W&C visited the facility on 8/14/18.
- Started Drylet Trial in early August [see section 6.2]; See pictures below. The preliminary observations indicate improved effluent quality, but the trial is still in the early stages.



**Secondary Clarifier effluent**

- There was one incident to report on 8/8/18 and this report was submitted as an SSO report per direction of the MADEP for the overfilling of the sludge hauling truck. The staff, sludge truck driver, and Rosano-Davis assisted with the small spill clean-up operation. All of the washdown water was contained within the bermed sandbags. No liquid or solids reached the storm drain system.



Spillover occurred due to truck driver error



Used sand bags to contain spill and vacuum  
Up all washdown water.



## 4 KEY PERFORMANCE INDICATORS



### 4.1 WATER QUALITY - AUGUST

Parameter Info		Permit Requirements					Results				
Parameter	Units	Daily Max	Daily Min	Weekly Avg. Max	Monthly Avg. Max	Freq	Period Avg.	Period Min	Period Max	# of Samples	# of Violations
Eff TSS	MG/L	50		45	30	1 X Week	15.8	10.0	20.0	4	0
Eff TSS	LBS			1152	768	1 X Week	151.5	85.9	240.2		0
% TSS Rem	%		85			1 X Month	94.6				
Eff BOD	MG/L	50		45	30	1 X Week	5.4	3.0	12.0	7	0
Eff BOD	LBS			1152	768	1 X Week	49.6	25.8	100.1		0
% BOD Rem	%		85			1 X Month	96.0				
Eff Chlorine	MG/L	1			0.7	3 X Day	0.33	0.03	0.86	93	0
Eff Fecal	#/100 ML	260			88	1 X Week	13	10	20	5	0
Eff pH	SU	8.5	6.5			1X Daily	7.0	7.3	7.5	31	0
Enterococci	#/100 ML	276			35	1 X Week	11	10	20	5	0

- There were 145 effluent samples taken in the month of August with zero [0] NPDES Permit exceedances.
- Gallons Treated vs Sludge Disposed

Month	Effluent Treated, MG	Sludge Disposed, Gals
August 2016	37.62	90,000
August 2017	39.29	98,000
August 2018	35.54	62,500

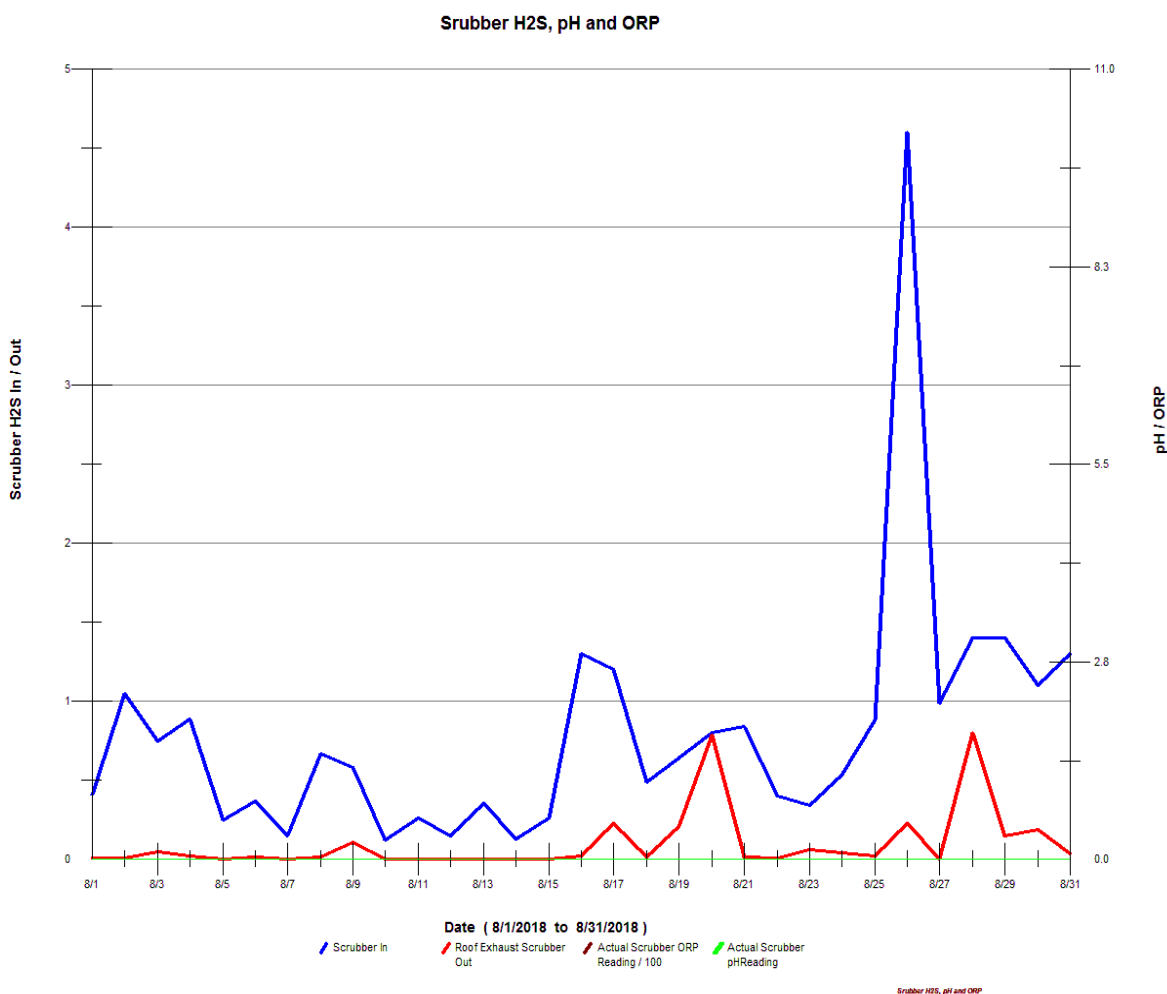
## 5 ODOR CONTROL

There was one odor complaint reported in August. On 8/30 a call from 6 Gallops Hill Rd was reported. W&C responded and found no issues at the plant but did confirm odors were coming from the Bayside at the low tide period. Decaying organic matter appeared to be the cause. This finding was consistent with other nearby areas with similar odors at low tide.

Additional air and mixing to the sludge holding tank continued. No changes made to Bioxide feed at PS 3. Higher feed rate maintained. The only ferric chloride feed was done on Labor Day weekend. However, sampling data from Evoqua indicated elevated H2S levels at the discharge point for the PS 3 force main. As was the case last year, the elevated levels were from the PS 4 discharge to this same manhole. The sewage pumped from PS 4 is not treated for H2S.

The gravity thickener and primary clarifier remained off line. All influent sewage flow directed to the aeration tanks. The waste activated sludge currently is being pumped to the underground sludge holding tank #2, via the blend box. Aeration tank troughs are being flushed, to minimize build-up of odors.

The odor scrubber system was on line for the entire month. As noted last month, the recovery from the cleaning was fair, and media removal and replacement is being researched. A replacement media will be selected in the near future. The system pH and ORP probes were checked. Scrubber operation is good.

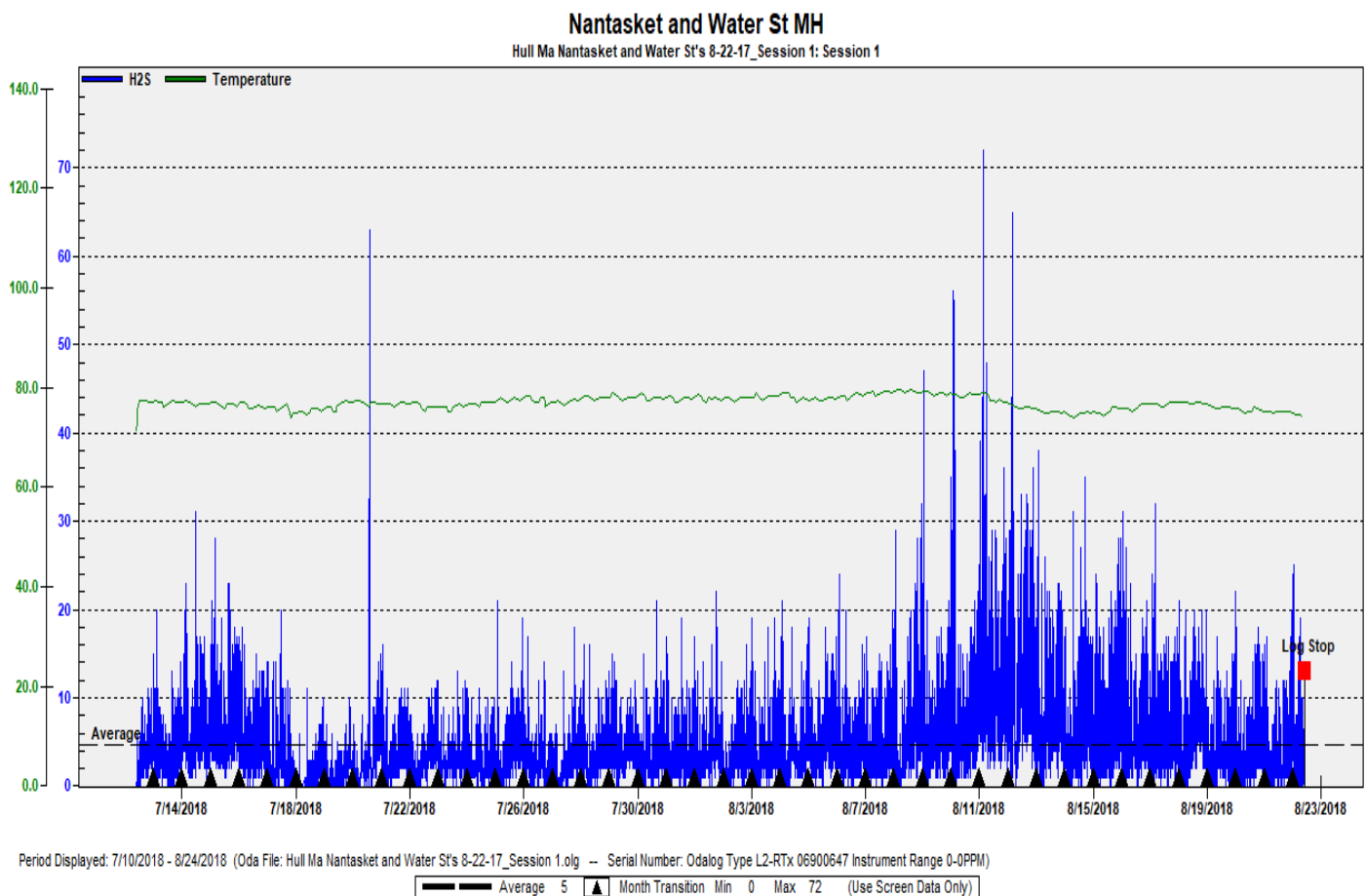


**Graph shows rise in H2S levels in late August, which correlate to the very high ambient air temperatures**

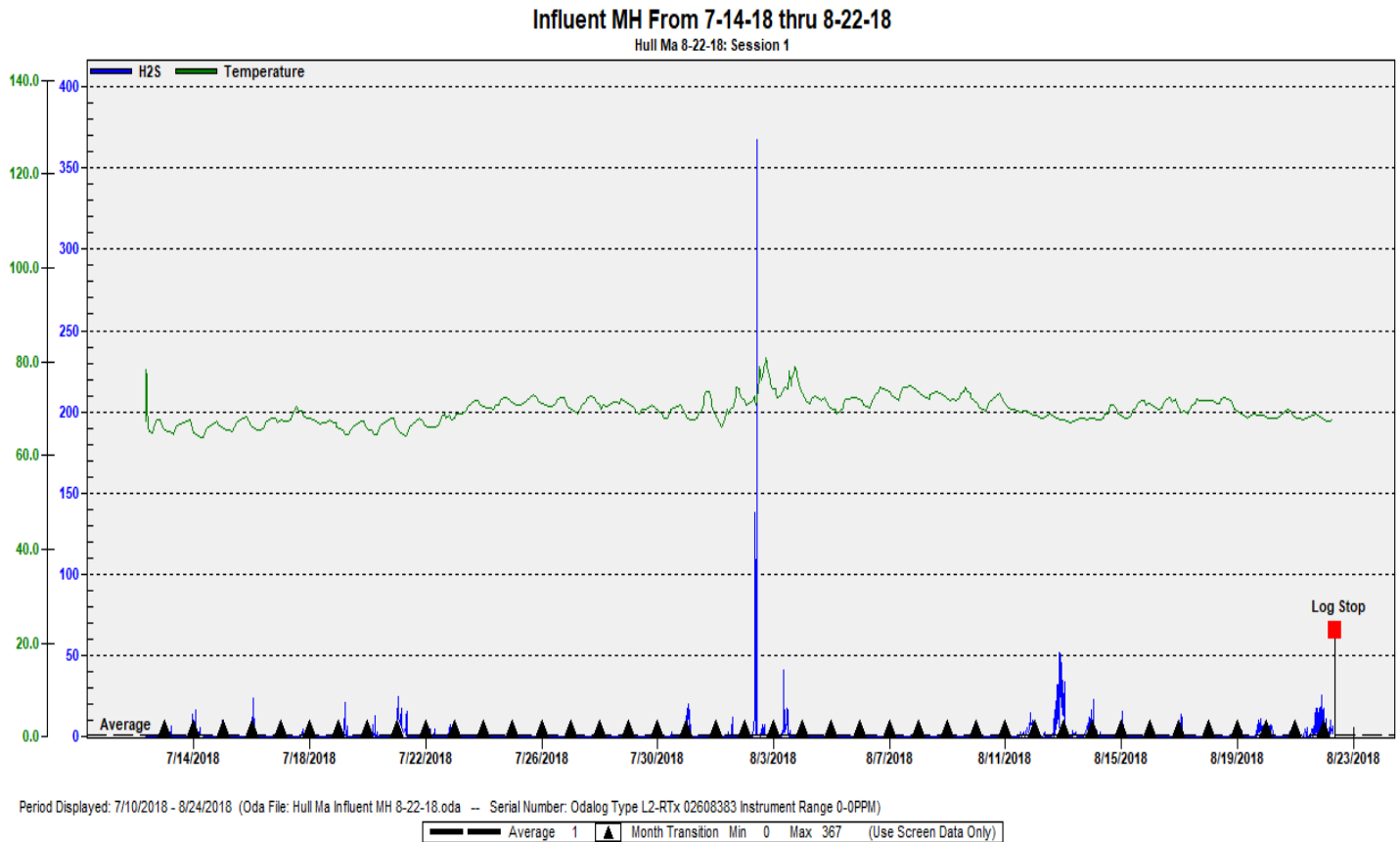
- “In-Pipe” bacteria addition continued with all 24 dosing stations operational. No additional actions taken for headworks sulfide reduction plan proposed by “In-Pipe. The inspection/replacement with full bottles took place on 8/2-3/18.
- Continued the bi-weekly change outs of the bacteria bottles at 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 over the summer months, for pump stations and at the plant.
- On-going – frequent pumping of the secondary scum wells. Took aeration tank #4 quickly off line, completed tank cleaning, once the process change to aeration tank #1 was completed.
- Evoqua [Bioxide] product was being pumped into the system daily. The current feed rate of almost 200 GPD was maintained during the month. The sulfides were being controlled at the Nantasket Intersection. PS #4 sulfide is most likely what is seen on the graph. Nitrate residual is reaching “A - Street” which is similar to what was seen last year. Manhole H2S data-loggers are set up at various manholes.

**Below Are the results of the recent sampling rounds and Odalog data:**

### **Nantasket MH: Average H<sub>2</sub>S 5 PPM / Peak 72 PPM**



## Hull WWTP Influent MH: Average 1 PPM / Peak 367 PPM



### Onsite Sampling of Nantasket Waste Line and Bioxide Feed Rates by Evoqua

- Verified feed rates: No changes of feed rates since last report.

P#1 480 ml/mn = 182.6gpd on 24/7

P#2 60 ml/mn = 17.1gpd on 6am-12am/18hrs

Total 199.7gpd total

- **MH across from WWTP (last MH before WWTP)**

Nitrate 0; Sulfide 0.3 Mg/l; PH 7.3; Temp 20.3 C; Time 9am

- **MH at "XYZ" Street**

Nitrate 0; Sulfide 0.03 Mg/l; PH 7.4; Temp 21.5 C; Time 10:00 am

- **Nantasket Intersection MH**

Nitrate 20; Sulfide 0; PH 7.6; Temp 22.4 C; Time 9:30am

- 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.
- Still under consideration - Vetting of ideas/discuss options for headworks area to reduce corrosion and odors. These items part of the discussion with Tighe and Bond's HVAC evaluation/upgrade.
  - Rubber mats to cover all channels
  - Tarp with a constructed frame to cover the aerated grit chamber
  - New "ducting/pipes" to connect channels to scrubber ductwork – to pull air from the room into the channel and then into the scrubber – i.e., to not let odorous air into the room ... capture it in the channel and send directly into the scrubber – channel will be under a slightly negative air pressure
  - Possibly add hydroxyl radical ozone unit to air in above ground sludge tank ...
  - Seal all pipe penetrations entering/leaking the headworks
  - Remove all unused pipes
  - Possibly control/reduce air flow to the aerated grit chamber



# 6 MAINTENANCE SUMMARY

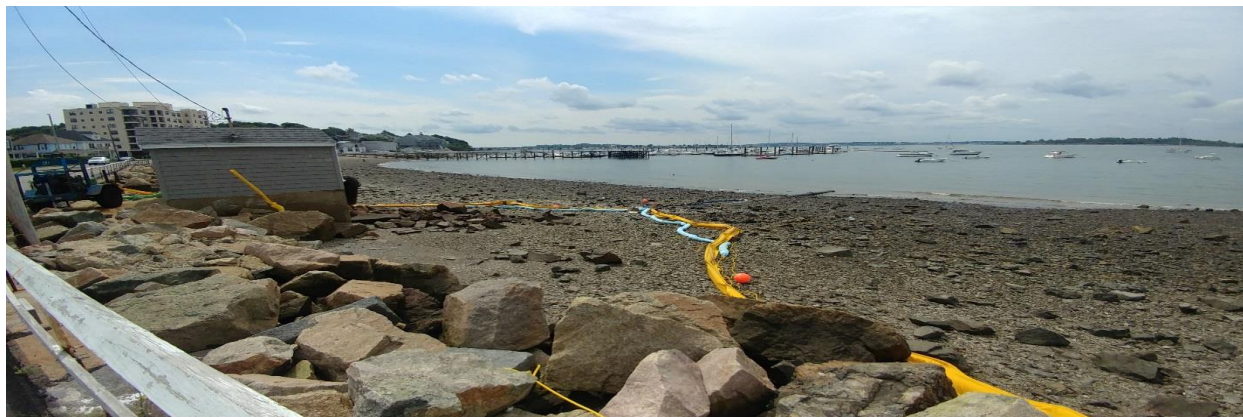
## 6.1 TASKS COMPLETED THIS MONTH

Monthly work order summary for August compiled and a report summary can be found on page 25.

- 1) Pump Station #5 wet well cleaned with Windriver vactor truck support.
- 2) Windriver also assisted inspection of SC#2 sludge draw off piping under the center column. Team verified the sludge draw off piping has a large rot-hole as suspected. Photos taken with the go-pro.



- 3) Chlorine Contact Chamber cleaning of both trains completed. Also exercised and greased the CCT influent gates
- 4) Aeration Tank work completed – See next section 6.2
- 5) On 8/17/18 – W&C Staff - Eric S discovered during daily D Street PS inspection a diesel fuel odor and sheen. He immediately called for Hull WWTF staff for assistance. Multiple staff members responded, as well as John S., DPW, & HFD, who contacted the MA DEP. MA DEP responded to evaluate, and the team continued looking for the source. The following day, things look much better than the previous day. The odors from the station had lessened with barely a noticeable trace, no sheen visible throughout the Bay or at the outlet discharge, lots of wildlife (seagulls and the like) on the beach and the booms are all in tact with no signs of fuel. Per directive of HFD, multiple applications of “Dawn” dish detergent were applied to assist with the breakdown of the remaining amounts of fuel oil sheen. Collectively over 20 hours of support service was provided by the Hull WWTF staff to address this storm water issue.



- 6) Noisy blower room roof exhaust fan inspected and found bad bearings in exhaust fan #1 – The motor was replaced, however, there is still a higher than normal level of noise. The back-up blower was put on line. The corrective actions were the result of a noise complaint that was reported to the HSD.
- 7) Aqualine Utility contractor preformed exploratory digging in the AST area to locate air blower piping to the underground storage tanks and document with swing ties for AST work (see next sections)
- 8) Effluent backup control panel in the process of being upgraded to 24-volt battery backup system due to electrical issues also noted in next section. Additional wiring and controls.
- 9) A floor drain leaving the Rotary Sludge Thickener (RST) room was found completely clogged and suspended piping had to be taken apart in the garage and cleaned out then re-installed
- 10) Tecta New England roofing contractor inspected the WWTF building roof for possible points of repairs to the membrane roof (additional information to follow)
- 11) North East Geotech completed two borings in the AST/UST area (see next sections)
- 12) Weekly No loads and Monthly load tests completed on all generators including the portable generator and pump stations
- 13) Plant Water chemical injection pump failed – Replaced with new peristaltic head & spare parts
- 14) PS#6 water pump cap for generator was replaced [dry rotted] by Highland Power and tested
- 15) Portable Jerome H2S meter had to be sent back out to manufacturer for service. A loaner unit is still in use by the staff.
- 16) On-going wheel replacement on the RST – Rotary Sludge Thickener
- 17) Continued outside yard maintenance being done that includes the Hull Life Saving Museum
- 18) Infra-Red inspections done at the Plant, Pump Stations, & on the plant main transformer. Work performed by EESCO and Pioneer Electric see next section for related details
- 19) Fellows Electric installed new outlets at PS#6 [to eliminate extension cords] and inspected sump pumps – found one sump pump needing replacement
- 20) Fan belts on PS#1 generator replaced by on site staff.
- 21) Steel scrap at plant was loaded onto a trailer and taken down to the DPW for disposal in their scrap metal dumpster. [for eventual transport to scrap yard]. SPCC regulations and classification of “zero discharge” limit any accumulation of scrap materials at the wastewater plant site, unless covered.

- 22) Aqualine Utility contractor assisted with moving storage sheds for better access to the UST/AST area, and to allow for upcoming UST tank removal and future permanent AST tank placement.
- 23) Measurements of ladders at all pump stations taken for a pump station ladder replacement project for safety reasons – weight limits, bring ladders up to current standards, and improve anchoring to existing structures.
- 24) Inspected effluent pump #4 check valve and found it sticking at times causing vibration – lubrication done where possible.
- 25) Lift Station A structural review performed by W&C structural engineer on 8/16 to evaluate repairs needed around the door frame. Door frame is weakened due to building shift/settling.



- 26) Highland Power replaced the thermostatic valves and solenoids for both plant generators.

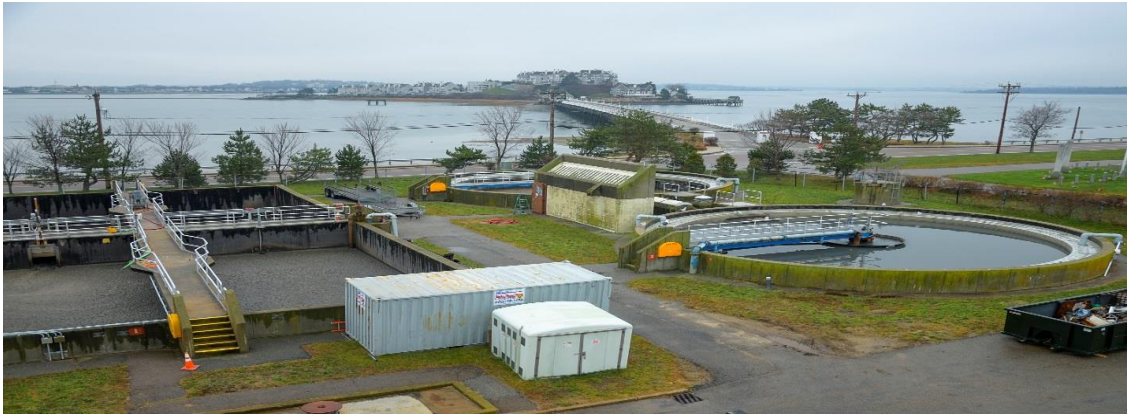


- 27) Sub-basement exhaust fan on roof belt replaced due to dry rot/wear.
- 28) Pioneer Electric replaced corroded wiring connections that fed both exhaust fans on the secondary gallery.
- 29) PS#6 pump#1 - deragging preformed multiple times in August



- 30) Fiberglass vendor came onsite to look at possible fiberglass grating to be used as SC launder screens. The old grating is corroded and debris clogs the grating, restricting flow out of the tank.
- 31) On-going Dig-Safe mark outs completed, due to emergencies, upcoming paving projects, and responded various rattling manhole covers, broken manhole covers/rims, sunken manholes covers/rims. All work that W&C completed is documented in the monthly Work Order Report.
- 32) There were three grinder pump call outs during the month of August.
  - a. 37 Elm Ave. – Pat Cannon repaired housing on plugs [corroded]
  - b. 25 Elm Ave – Replaced pump
  - c. 96 Salisbury– Replaced pump

## 6.2 ON GOING PROJECT UPDATES

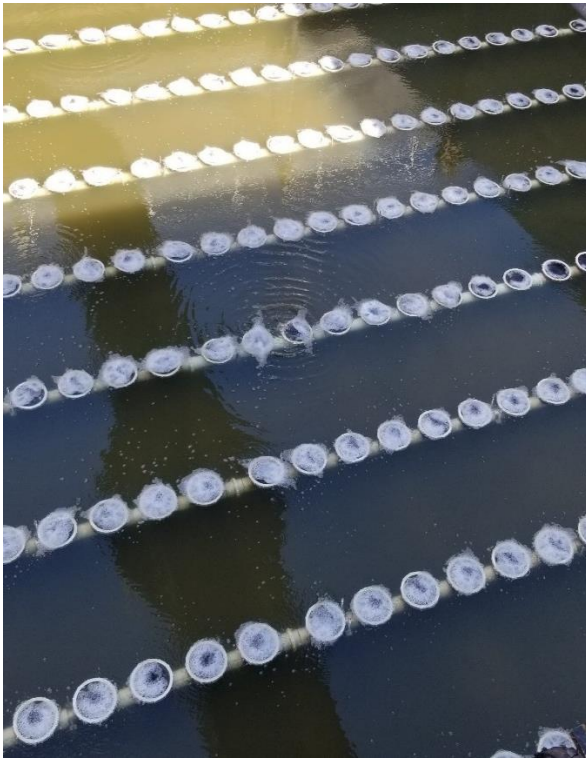


- Drylet bacterial process enhancement trial started in August on 8/15. Drylet Team onsite to review facility layout, trial objectives, process monitoring and testing needed. Continued monitoring of the biological system and additional sampling performed during August. No significant process changes to be made until after the initial 30-day period of the Drylet trial, which is mid-September. Weekly updates and coordination meetings with the Drylet team have been setup.
- Aeration basin #1 repairs have been on-going. The tank was fully cleaned out, and all of the support hardware was inspected. Much of the diffuser support hardware needed replacement, due to corrosion and broken PVC diffuser sections [two 9 ft section] replaced]. There was a delay in getting the replacement hardware from manufacturer, and an 8-inch pipe repair coupling that joined the main air piping in the tank needed replacement.



(Photo was included in the July MOR but all associated work was completed in August)

- The aeration tank was initially tested by filling the tank with a few feet of plant water to inspect air release points. A few diffuser heads were tightened after the test. After the testing was successful, the MLSS contents in AT#4 was transferred to AT#1 using the portable trash pump, and the normal aeration process configuration train was fully restored [8/8/18]. The photo below shows the plant water test.



Clean water testing – aeration basin #1



Normal air distribution pattern – repaired aeration basin #1

- Pump Station 4, Pump Station 9, and Plant Headworks are now being evaluated together for a structural repair design and bid to be done. As noted before, the mechanical work is being held up at pump station 4 due to structural safety concerns. As the bidding is not possible to do through O&M team, a larger structural project concrete repair work scope is in now in discussion / planning stages.
- The two major electrical events [5/16 & 5/19] that occurred in May still under review. There have been no new incidents with the fluctuating 120-volt power load that feeds all of the programmable logic controllers [PLC's], and SCADA computers through plant back-up power supply units [UPS]. Nearly all of the UPS's were replaced with new units.

On-going plant assistance from W&C SCADA Group, Boston Water & Sewer, Pioneer Electric, and EESCO. Power monitors were removed. The 120-volt power loop is still being fed from the HSD trailer after the second event on May. Listed below are items under consideration:

1. IR inspection of existing equipment.
2. Install a 100A active harmonic system at the main switchboard (equipment cost is approx. \$30k).
3. Connect the dry contacts from the main switchboard surge protection device (24Vdc/ac rated) to monitor surges at SCADA.
4. Enable some alarming from the main power monitor to provide low and high voltage levels to let SCADA know when we have over & under-voltage scenarios.



5. In August the backup influent pump panel was upgraded to a 24-volt system with a DC-powered backup battery to allow float control to the pumps for up to 4 days without AC control power. The effluent system will be completed in early September with the same configuration.
- Plant water basket strainer – We are still investigating a replacement unit - same, or different unit. Also, where effluent water is drawn into the system, evaluating the size of the suction piping, considering other suction location for system to improve water quality – utilizing water from effluent wet well versus drawing from bottom of a manhole just after the secondary clarifiers. Hypochlorite addition to plant water system started in mid-July to improve water quality of plant water.
  - The sluice gate supports for the inlet gates to primary clarifiers at the D-box. As noted, the supports have lifted away from the concrete and there is also cracked concrete under the supports. Quotes for the repair will be solicited, once a repair plan is finalized. On-going as it relates to many aspects of process and hydraulic options to be considered for most efficient & cost-effective solution.
  - Plant lead 750 KW generator - Expected delivery of new heat exchanger units for cooling still on target for delivery and installation – mid to late September.
  - Influent Pump #1 currently out for repairs

Worn impeller wear ring [rotating element]



pump volute – wear on internal bowl component



- Pump Station #1 – Reviewed quotes for replacement pumps. Project approach finalized and will be to replace both pumps, one pump at a time, while keep the station operational, and to reuse existing motors and motor stands. New replacement check valves and pipe support stands will also be installed. The scope of work for the contractor installation is being developed.
- Reviewed RAS pump repair/replacement options for RAS pumps #2 & #3 and moving ahead with a new turnkey replacement rotating assembly from ABBA.
- On-going – deragging of pumps at PS 6. Looking at possible options for a “de-rag” control unit that would plan for scheduled reverse rotation of the pumps to spin out accumulated debris. Working with vendor and electrician to get the specific details and costs.
- Yard hydrant survey in progress and evaluating which hydrants to be replaced as needed. Four new yard hydrants purchased and will be held in stock, until arrangements for contractor support set up to replace.

## 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 for the month of August.
- Daily safety briefing meetings, review site safety policies with sub-contractors, safety tailgate topics.
- Pure Safety – August – Using Eyewashes and Emergency Showers
- Working with Andy Rowe on pump station ladder standards
- Discuss SDS for the Drylet power/microbes to be used for trial.
- Gas Meters – portable sensor replacement need evaluated & parts ordered.
- Reached out to the Hull Fire Department for confined space rescue questions & concerns, as they relate to pump station corrective maintenance repairs. Also, in discussion for future joint training exercises.
- Safety Stan Down discussion held on 8/9/18 – forehead injury discussed.
- Monthly staff safety meeting conducted on 8/30/18
  - Job Aid/tailgate discussions – PPE – personal protective equipment
  - Workplace trends
  - Stop work authority
  - July 2018 Lessons Learned, and safety observations discussed – Near misses and incidents from other company projects.

## 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.
- Operational updates and process control discussions, especially with recent electrical issues and plant shut-downs, pump station operations, odor issues, dig-safes, etc.
- W&C “near-miss” incidents at all projects for July discussed.
- On-going training for various staff – cyber security
- Mandatory Preventing Harassment Training

Staffing related items:

- Continue involvement with Mass Maritime [MM] internship program/career fair for future interns. Screening possible candidates for fall and winter 2018-2019. W&C to attend Fall Career Fair at MM in October.
- Mike Anderson’s internship/co-op concluded on 8/31/18.
- Sunday rotation schedule in place for next several months through early September with Jim Gagliard working every other Sunday, and remaining weekends being filled by Roger B., and Bill B. When Bill is not scheduled for a Sunday, he will be on a Monday-Friday schedule.
- Rob Scott & Jim Gagliard provided additional site coverage in mid-August due to planned scheduled time off by Mgr. & Assistant Mgr.

## 9 COLLECTION SYSTEM

### 9.1 WET WELL CLEANING

The actual schedule for wet well cleaning: May 2018 to April 2019:

(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, 2018		X			*1	*1		
June, 2018					X	X		
July, 2018					*2			
Aug., 2018					X			
Sept. 2018								
Oct., 2018								
Nov, 2018								
Dec., 2018								
Jan., 2019								
Feb., 2019								
March 2019								
April 2019								

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

**\*1 Inspected and needs to be cleaned in June**

**\*2 Inspected and needs to be cleaned in August**

### 9.2 COLLECTION SYSTEM MAINTENANCE

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

- Summit Ave
- Harborview Rd.
- Gunrock
- Hadassah Way

# 10 PROJECT MANAGEMENT & ADMINISTRATION



## 10.1 ON-GOING PROJECTS AND SUPPORT ITEMS

- TPO – Magazine article to be published in September edition – by Bill Boornazian & John Struzziery. Storm management planning. “The Value of a Dress Rehearsal” A mock storm drill helps the facility team in a Massachusetts town adopt a proactive emergency management plan and build resiliency.



Pictures that appeared in the article

Link to the article:

<https://www.tpomag.com/editorial/2018/09/heres-how-a-massachusetts-town-prepared-its-wastewater-staff-to-respond-to-a-natural-disaster>

- Asset management checkbook for tracking of expenses. Review of account status between W&C and Hull Sewer Dept. is on-going. [04M]
- Working to catch up on monthly operating reports and improve upon report completion and deliverable time. The June and July MOR's were completed and provided to the HSD.



- On-going UST/AST work:
  - a) Location planning with staff and engineering support included investigation of Scrubber air lines and blower piping,
  - b) Additional coordination with Flood and Wave analysis Woodshole team,
  - c) Geotech borings completed in August by North East Geo-Technical
  - d) Structural W&C team evaluating earth pressures on adjacent building walls for loading conditions,
- Deragger – still evaluating software program that would allow for automatic reversal of pump rotation to spin out accumulated rags and debris to minimize the need to shut down a pump so that cleaning can be performed. Possible use at PS 3 and PS 6.
- Influent Pump #1 motor and pump are out for service. The motor is being rewound, due to short-circuit failure, and the pump rotating assembly is being overhauled. September completion is expected.
- Still to be done: had co-ordination meeting with WINDRIVER in August, and still to set up meetings with National Water Main, and other collection system vendors - to review our Contract Collection System Quota work, upcoming projects. In August a meeting with WINDRIVER did occur and additional planning with other contractors to further evaluate which company can best serve Hull's needs in the future.
- Operations building control room – HVAC. Smaller units [2] in offices in need of replacement. Manager's office and breakroom [both on 2<sup>nd</sup> floor. Expected completion in early September.
- On-going work with Horizon Energy Solutions on the energy GAP grant proposals in various areas: Block heater for the #1 generator, air blower piping for grit chamber and sludge holding tank [tie into larger supply piping and blowers], HVAC options for Ops building. FC coordinating scope, details, and prioritization.

Gap Grant scope of work was approved by the MA DEP, and grant contract documents to be sent out to the town for signature. The Town will implement the energy efficiency upgrades to its aeration and odor control systems and install a heat pump block heater to its existing 750 kW Kohler diesel emergency generator. The aeration upgrades will include installing an actuator on the sludge tank line, along with a flow meter, to adjust the flow rate to the sludge tank as the water levels vary, via SCADA. A Variable Frequency Drive (VFD), with bypass, will be installed to the odor control fan. In total, the Town is projected to save \$26,161 annually through a reduction of approximately 174,404 kWh/year.

- Utility Cloud planning and implementation moving along. New tablets [I Pads] in use. Andy Crawford, Bill Boornazian & Alan Fabiano leading the effort and areas being considered for initial use
  - a. Utility Cloud now successfully being used for multiple different work order types in the collection system
  - b. Bill Boornazian working with support team to implement all tie cards on file to be uploaded to the Utility Cloud data base and associated with each map / lot parcel
- Peter Lyons working on MADEP mapping grant and application and ARC-GIS. Gunrock area camera work as well as utility identifications for proposed collection system rehab contract.

- Assist HSD with great American Insurance walk-through of the facility on 8/20. Key issue of note is the temporary extension cords powering up all of the 120-volt powered control panels. Insurance company report wants an update on the conditions within 30 days.
- On-going discussions and met with Monroe Phone RM Systems to discuss and correct some of the phone system issues and message receiving during non-business hours. Eventual goal is to have a more simplified notification system and eliminate to on-call pager and on-call phone. A 3-6-month trial period will be evaluated, to see if resident non-emergency on-call notifications will be effectively handled and forwarded, before any other changes made to the current practices. Updated on-call list for HSD.
- On-going facility planning meeting on 8/8/18 – Jason Kriel, Mike Burns, Rosemary Blacquier, Frank C – regionalization & planning.

# 11 WORK ORDER SUMMARY



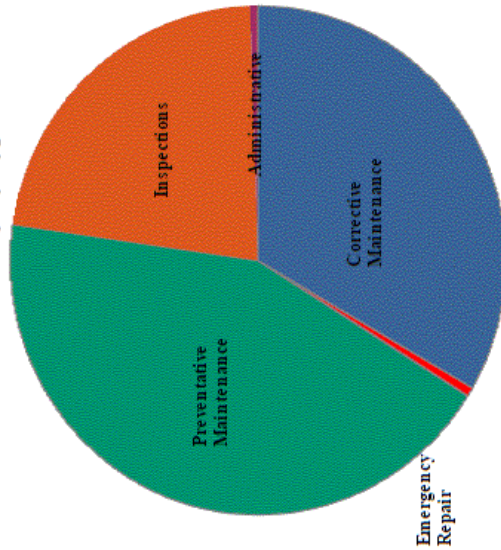
## Maintenance History Report

### Hull Wastewater

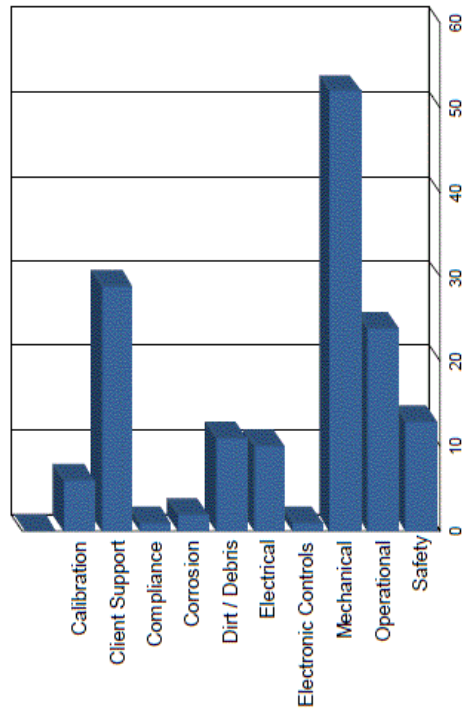
Start Date: 8/1/2018  
End Date: 8/31/2018

#### Work Order History By Type

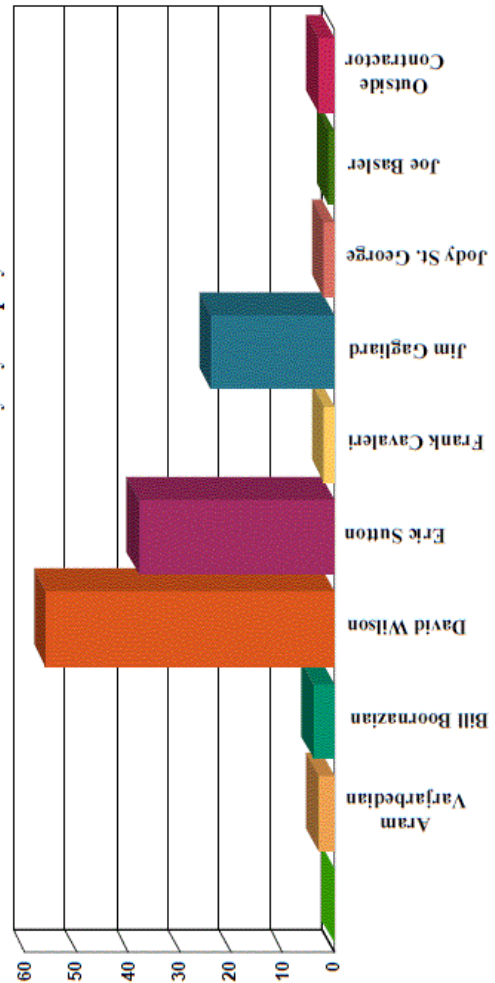
Administrative	1
Corrective Maintenance	50
Emergency Repair	1
Inspections	33
Preventative Maintenance	65
<b>Total Work Orders</b>	<b>150</b>



#### Work Order History by Reason



#### Work Order History By Employee



Employee	WO Count	Labor Hours
Aram Varjarbedian	3	10
Bill Boornazian	4	6
David Wilson	56	95
Eric Sutton	38	57
Frank Cavaleri	2	0
Jim Gagliard	24	23
Jody St. George	2	2
Joe Basler	1	1
Outside Contractor	3	16
Unassigned	17	14