



HULL WATER POLLUTION CONTROL FACILITY

December
2020

MONTHLY OPERATING REPORT



woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

NPDES NO. MA0101231

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Cover pictures:

[top] D&C Construction – breakdown of bypass pumping system

[bottom] Ted Berry Co performing repairs of the failed RAS sludge line

1 EXECUTIVE SUMMARY

This Monthly Operating Report provides a summary of the pertinent information and activities that occurred at Hull WPCF during the month of December 2020.

- No lost-time incidents for the month of December.
- Continued/On-going covid-19 safety operations: Regular daily operations and staff scheduling. Coordination with vendors and contractors for project work. Following CDC, Town, State and Company always mandated safety protocols due to the Covid-19 Emergency along with mask use. Dealing with several issues related to covid19 & staffing.
- Influent sewage bypass continued, with completion on 12/21/20. Headworks area concrete rehab work was completed enough to allow flow back into the facility. O&M provided a lot of additional assistance in many areas to make this transition happen. A surge of rags and debris that had built up in the interceptor pipe was handled for several days once flow was let back into the headworks.
- The Dec 4-6 rain event required 24-hour coverage at the facility, along with running the back-up Godwin pump since the bypass was still in effect.
- There were **154** effluent samples taken in the month of December [details on page (12).] All effluent samples collected were compliant. The average daily flow for the month was 1.74 MGD. A total of 6.68 inches of rainfall was recorded. There were several weather events where storm planning was needed and a couple that caused influent flows to be elevated for short durations of time. The trending graphs indicate the specific periods. Process conditions continued to remain stable and compliant.
- The RAS line repair was completed by the Ted Berry Company on 12//20. Expected to return the line to service in January.
- The plant and collection system odors were low due to low sewage temperatures and higher plant flows. Most low-level odor at the plant was from the open-top screenings box. The Bioxide system was in operation except for a week, and feeds rates were very low.
- The 06M Asset Management Accounts checkbook summary and planned expenses updated for contract year #6 are attached.
- There were 5 grinder pump call outs during the month of December with pump replacements.
- W&C O&M continued to support many of the Engineering projects with a focus supporting the construction project in the headworks and O&M monitoring bypass pumps, assisting with bypass pump cleanings, cleaning of the screenings box, return to service of flow to headworks on 12/21 and multiple visits to pump stations for access and various questions.

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

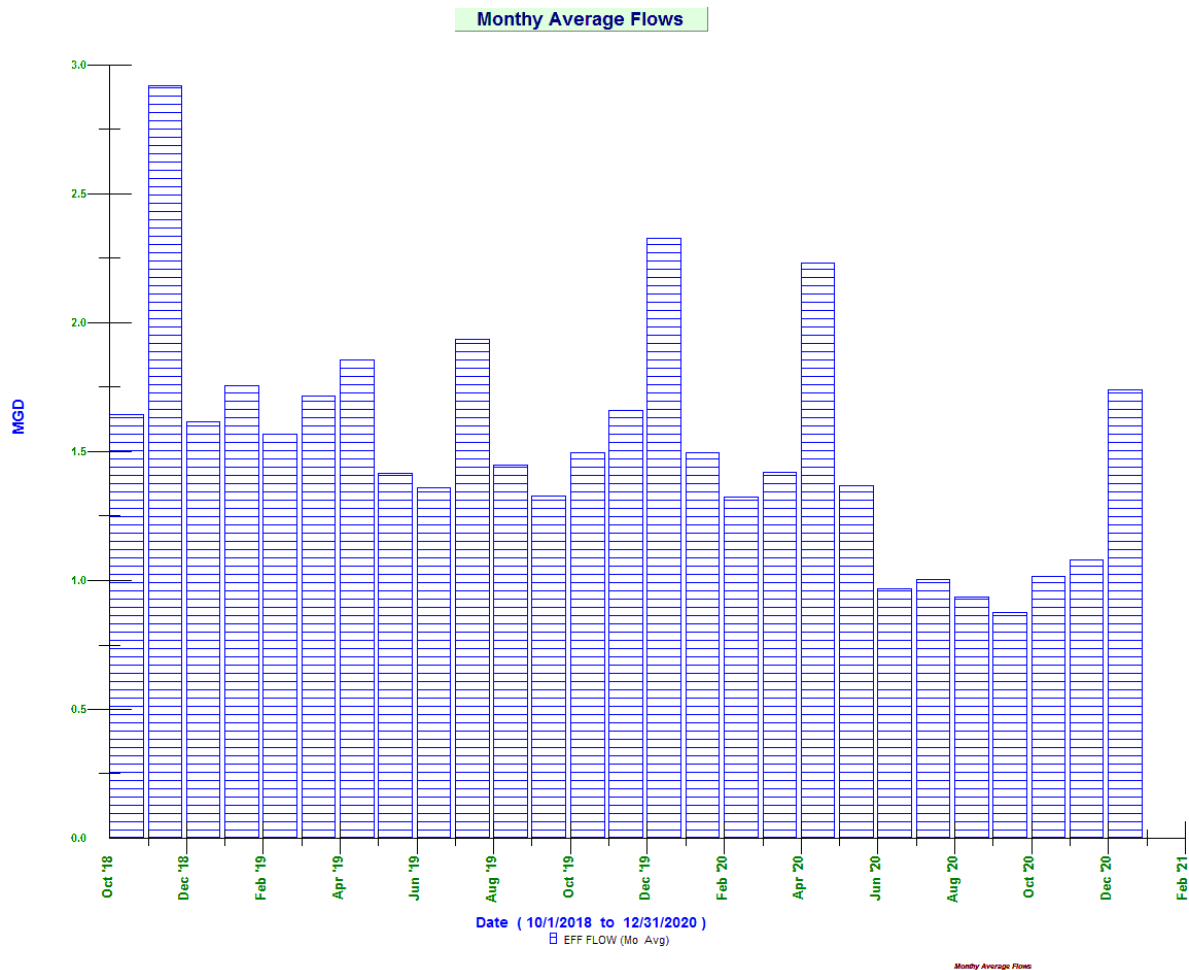


Average Daily Flows and Loadings for the Month:

	Eff Flow MGD	Inf Flow MGD	Inf BOD LBS	Inf TSS LBS	Eff BOD LBS	EFF TSS LBS
Dec 2018	1.615	1.811*	1035	1722	67	199
Dec 2019	2.329	2.485*	1919	4412	79	180
Dec 2020	1.741	1.993*	2600	4454	82	238

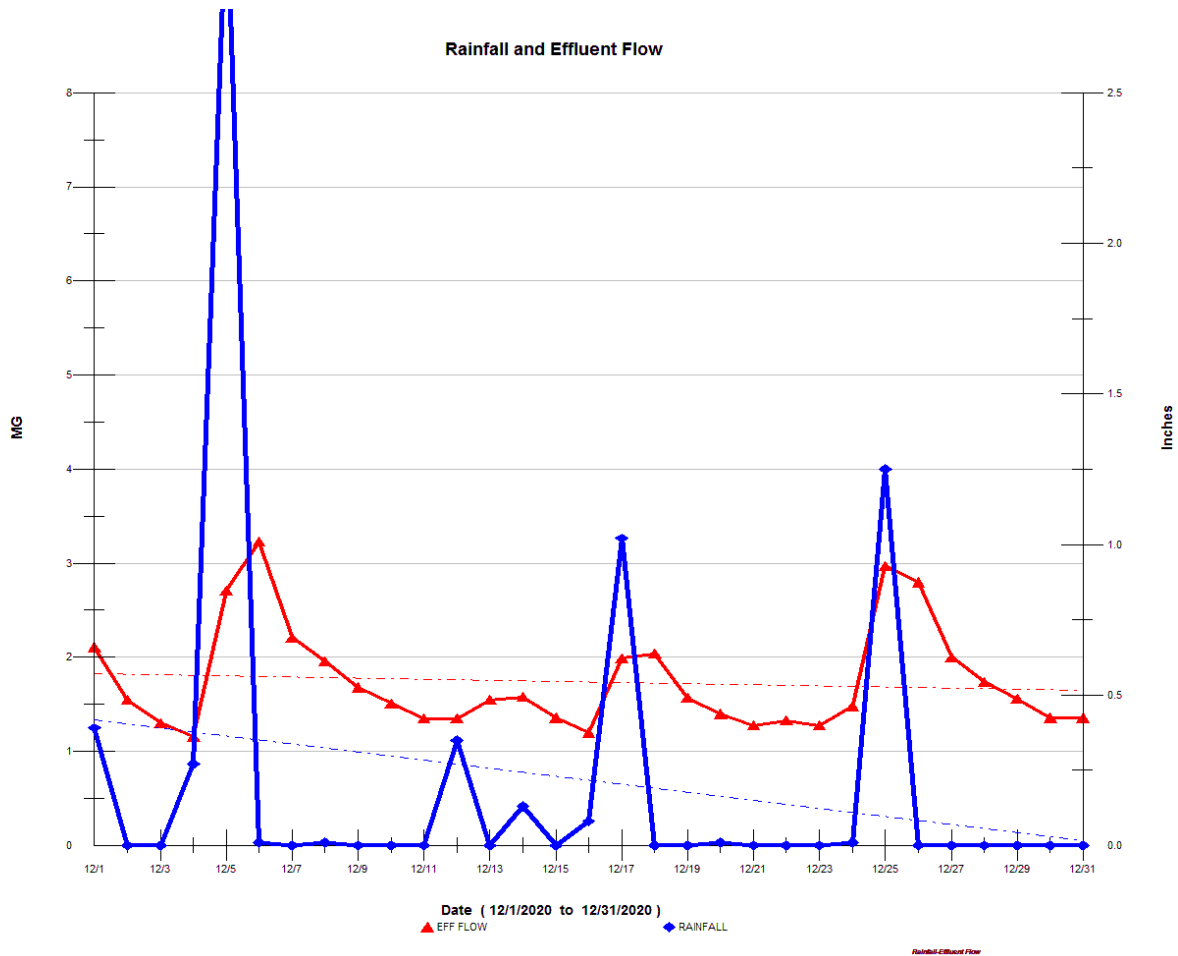
* On-Going -The influent flow meters are strap on doppler flow meters, and the internal pipe condition prevents getting a strong signal. The staff utilizes the area velocity meter in the aeration tank inlet channel as well as the headworks influent Parshall Flume meter. All reported loadings are based on the effluent flow meter. All meters are tied into the Scada system so that influent flows can be monitored. Flows in 2020 are lower due to improvements in the collection system to reduce inflow and infiltration.

2.1 AVERAGE EFFLUENT MONTHLY FLOWS – 2+ YEAR COMPARISON

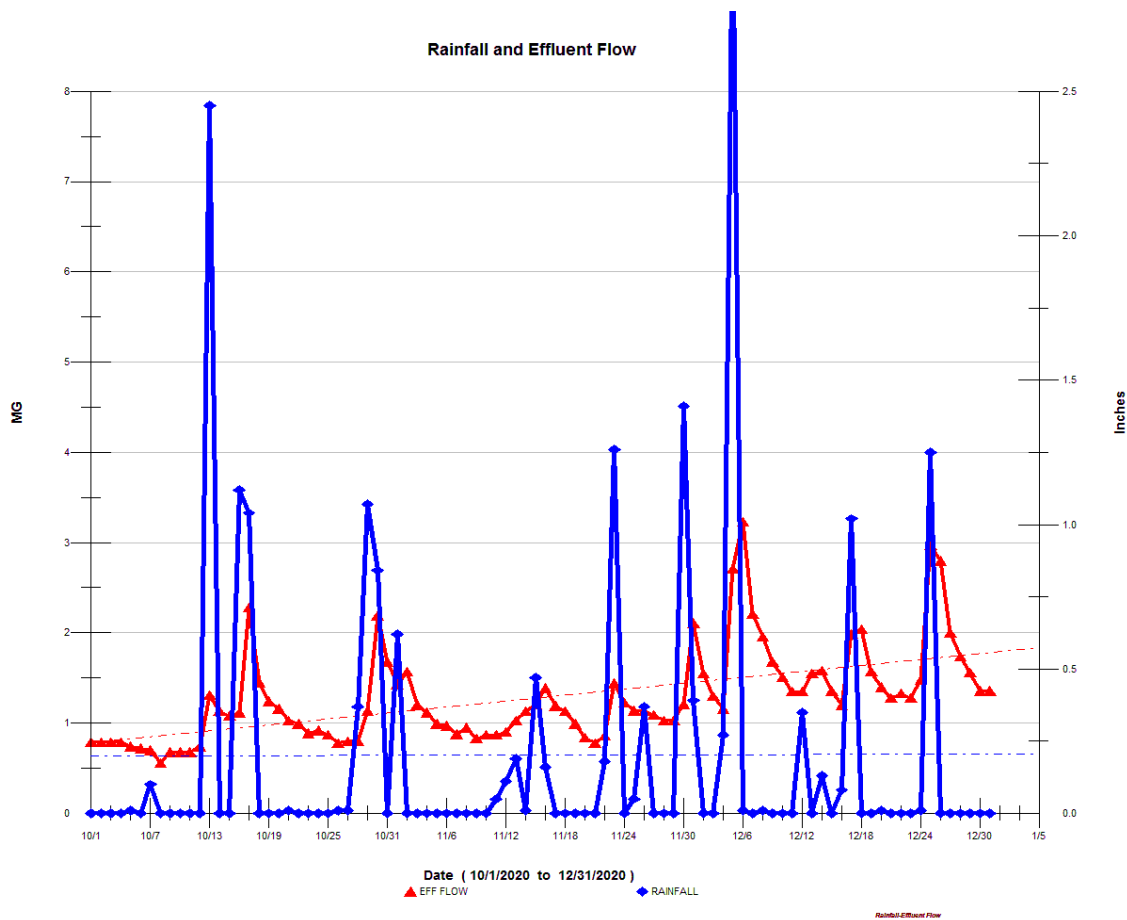


The monthly average flow for December was 1.74 MGD, slightly higher than the previous several months. The total precipitation for the month was 6.68 inches. The graph shows the 2-plus year summary of the monthly average flows that includes the most recent 4-month period.

2.2 MONTHLY SUMMARY OF RAINFALL AND THE INFLUENCE ON EFFLUENT FLOWS



This graph typically shows the days where precipitation occurred [rainfall] [Blue Peaks]. Like the previous several months, this graph indicates that there were some very wet days in December and these events that had some short-term impact on plant flows. The 12/4-6 period saw 3.43 inches of rainfall precipitation fall. This wet weather event in early December did increase plant flows while in the headworks bypass phase which required that additional tanks and pumping services be implemented.



This graph shows the last few months: October, November, and December. The recent wet weather conditions have had a greater impact on plant flows.

3 COMPLIANCE



➤ Plant Effluent

There were no permit exceedances in the month of December

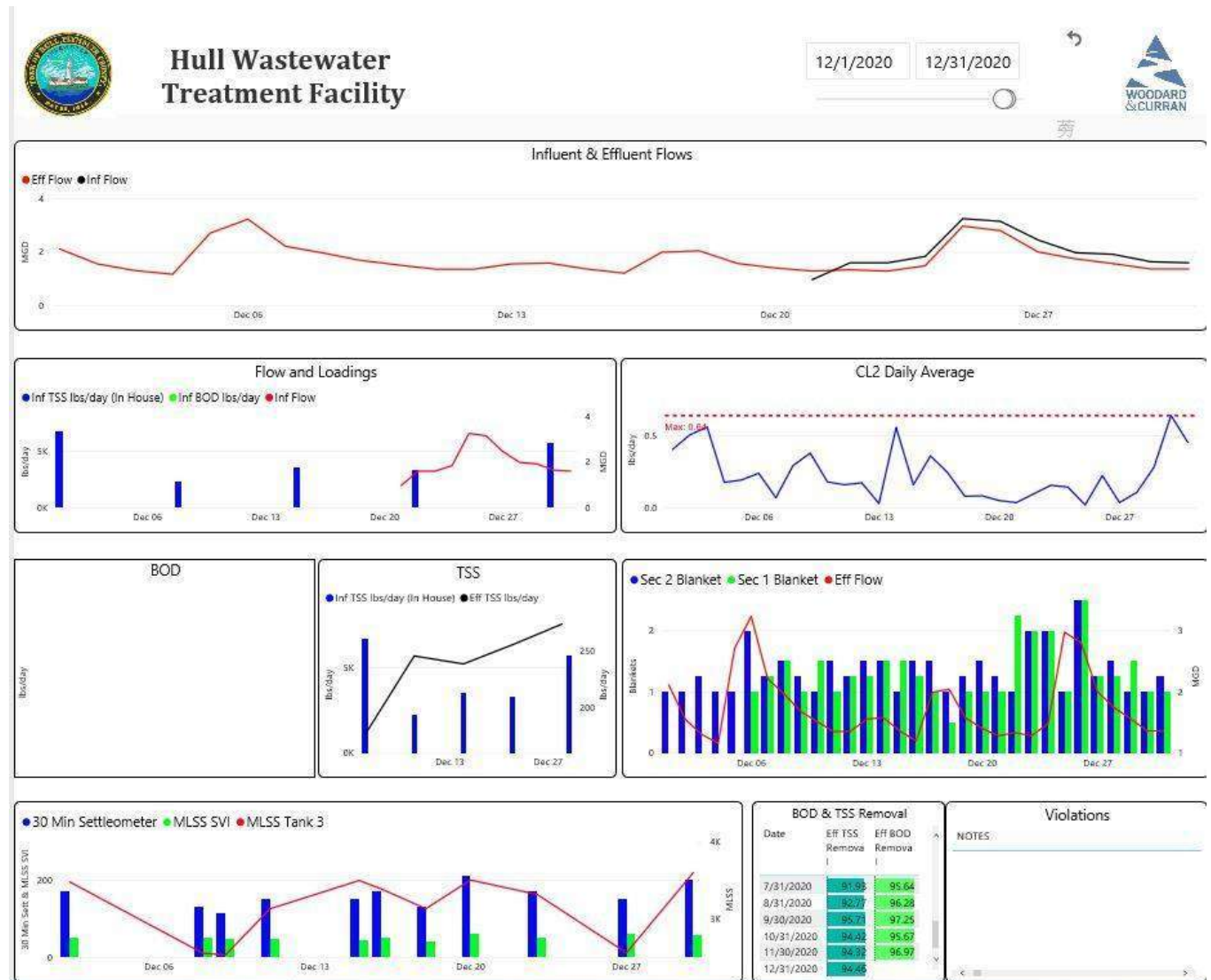
- Plant process conditions were stable during the month. The winter seasonal transition to the gravity thickener and primary clarifier occurred mid-month as the headworks bypass work was completed. The heavy rainfall seen early in the month required that a second primary clarifier be put online. The off-line aeration tanks were also used as equalization tanks during the peak flow periods of the event. Once the facility came off the bypass, and the influent screenings was back in service, the frequency of RAS pump cleaning became less. Also, the influent and effluent pumping returned to more stable and even flows and this resulted in more efficient chemical dosing for disinfection and dichlorination. The Drylet addition was lowered to 1 pound per day, as the organic loading to the secondary system was lowered, with the primary tank being back in service. The effluent quality remained good. The plant water system was returned to regular service.



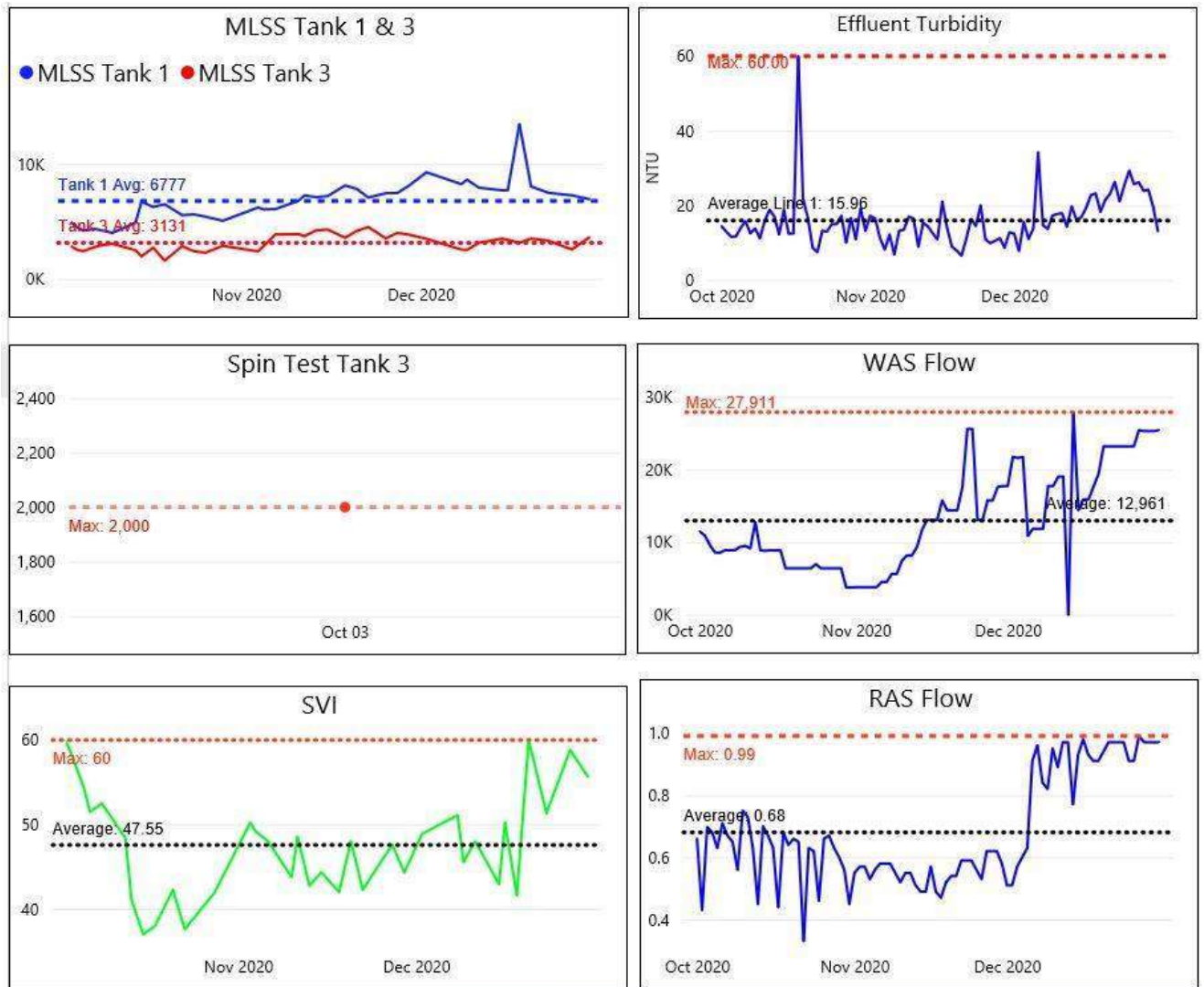
- The facility operated under high flow management plan for the 12/4-7 period. Heavy rain pushed flows up over 7 MG and staffing was required around the clock, especially since the headworks area was shut down and bypass pumps were in operation. The operation of the Town's 12-inch bypass pump was also necessary, since the contractor bypass capacity was only to 4.0 MG. Additional de-ragging of pumps was necessary, [see photos of rags/debris caught in pump], along with more frequent cleaning of the screenings box bar racks. Several the pump stations had high wet well alarms for several hours. W&C was in regular contact with the contractor for bypass pump for additional pump cleaning needed to maintain flows during the high flow period. The 8-inch Vortex pump was also set up in case it was needed. The 12-inch bypass line to the primary clarifier was purged out, following the use with compressed air, so that no sewage remained in the line when the line was shut down.



- A Copy of the monthly NPDES reports for December 2020 was submitted to the EPA & DEP and then forwarded to the Hull Sewer Dept.
- Work on universal waste storage area and prepare the boxes of “old” fluorescent light tubes to be shipped out for proper disposal/recycling.



Monthly Process Summary graphs from power BI – December 2020. Influent flow tracking resumed on 12/21/20, when the influent gate was re-opened introducing flow to the headworks part of the facility.



Graphs shows trending of secondary processes using Power BI for the 3-month period ending on 12/31/20. The tank solids levels under aeration showed relatively stable levels of solids. RAS flow increased once the second secondary clarifier was put into service. Sludge settling and effluent turbidity were stable with a slight increase.

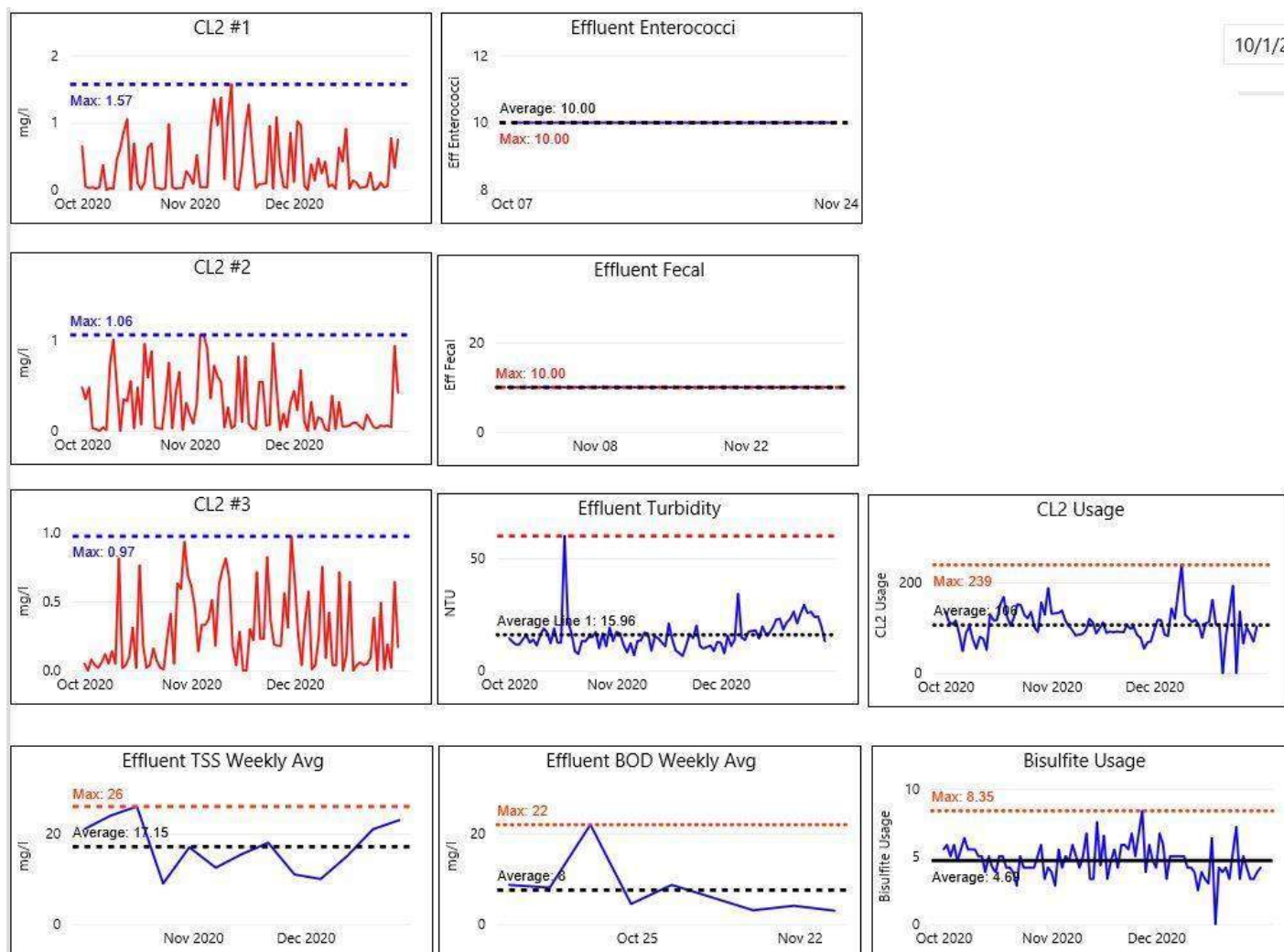
4 KEY PERFORMANCE INDICATORS



4.1 WATER QUALITY – DECEMBER 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	18.0	10.5	23.0	5	0
Eff TSS	LBS			1152	768	1 X Week	237.7	184.8	273.2		0
% TSS Rem	%		85			1 X Month	94.5				0
Eff BOD	MG/L	50		45	30	1 X Week	6.0	4.7	8.0	5	0
Eff BOD	LBS			1152	768	1 X Week	82.0	54.4	104.1		0
% BOD Rem	%		85			1 X Month	96.8				0
Eff Chlorine	MG/L	1.0			0.7	3 X Day	0.23	0.02	0.64	93	0
Eff Fecal	#/100 ML	260			88	1 X Week	10	10	10	5	0
Eff pH	SU	8.5	6.5			1X Daily	6.9	6.5	7.2	31	0
Enterococci	CFU/100 ML	276			35	1 X Week	10	10	10	5	0

There were **154** effluent samples taken in the month of December.

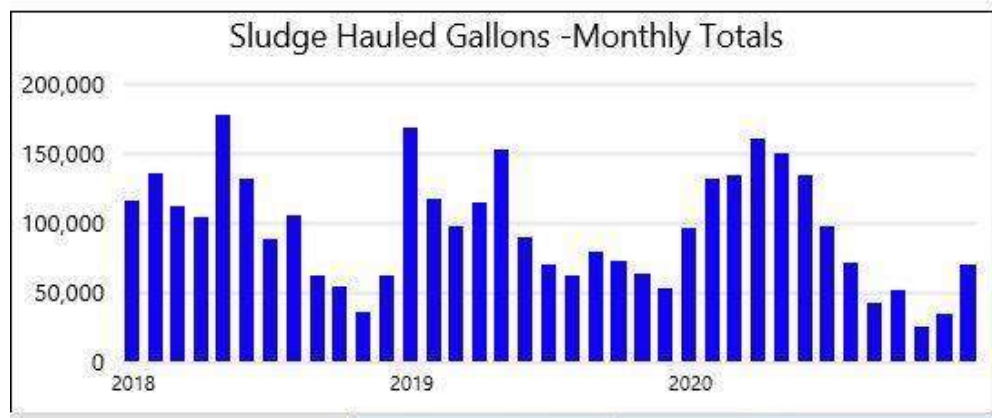


Power BI graphs showing effluent compliance for the last 3 months, October through December - chlorine residuals, effluent compliance, & chemical use. Bleach [sodium hypochlorite] & sodium bisulfite use were slightly lower.

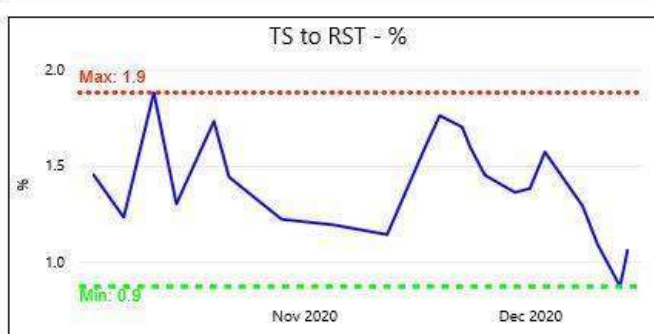
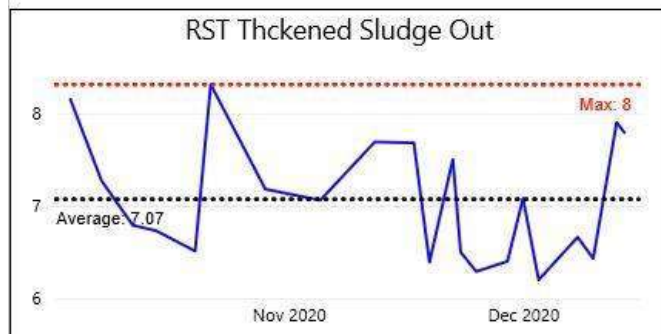
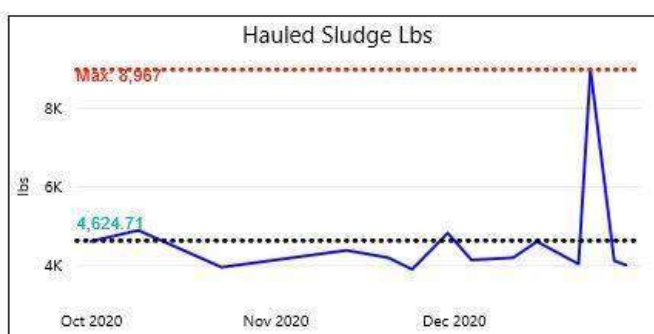
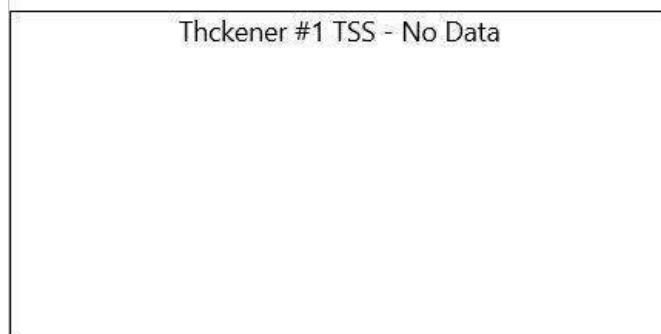
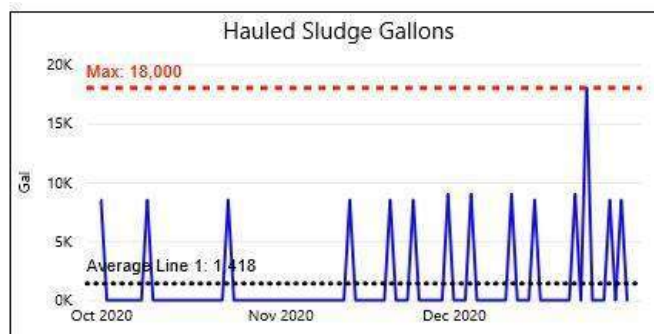
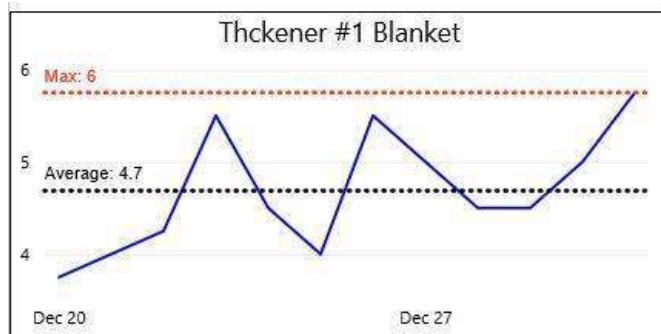
Gallons Treated vs Sludge Disposed

Month	Effluent Treated, MG	Sludge Disposed, Gals
Dec 2018	50.06	168,000
Dec 2019	72.20	95,500
Dec 2020	53.97	70,500

Power BI graphs for sludge gallons hauled for past three years ending 12/31/20



Additional Power BI graphs for sludge solids for October, November & December. [sludge thickener #1 was off- line until later in December]



5 ODOR CONTROL

There were no odor complaint calls received during the month of December for the wastewater facility. There were no issues with floating sludge on the surface of the secondary clarifier and no surface spray water was needed. The gravity thickener and primary clarifier were returned to service in late December [12/21] as the headworks project bypass stopped on December 21st., with the re-opening of the influent gate to allow flow into the headworks area. The Bioxide system feed rates were lowered, and the feed system was stopped for about 7 days due to high system flows and no H₂S present in the system.

The Evoqua system controls were in place and on-line for remote monitoring of the odor logger at XYZ/Nantasket Ave & Nantasket Ave/Water Street and for the chemical feed system adjustments. System feed rates were low the entire month. The monthly graphs are attached below.

- “In-Pipe” bacteria addition continued with all 24 Microbe Dosing Stations [MDU] operational. The monthly bottle changes were completed on 12/10/20. 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] were done in December.
- Mixing systems/aerators were all functional at the pump stations, except for pump station #3. [Bioxide addition is at PS 3]. The aerators are currently in timed operation.
- Hydrogen sulfide monitoring units [H₂S] were recording and being trended on the odor scrubber for monitoring inlet and outlet H₂S levels. Weekly neighborhood monitoring around the plant done with portable Jerome meter as needed.

pictured below: trending graphs for H₂S levels recorded from the vapor link system cellular at manhole at XYZ Street/Nantasket Ave and Nantasket Ave/Water Street. Trends shows lower hydrogen sulfide H₂S levels as the month progressed.

XYZ – Nantasket Ave [closest to plant]



The odor logging unit at XYZ is being used to monitor overall H2S levels as close to the plant as possible, except for PS #9 and Spinnaker Island discharged flows. The regular monitoring of data is used to adjust the Bioxide feed. Nearly all H2S level were below 2 ppm, with a couple of spikes to 3ppm.

Nantasket Ave/Water Street [at end of PS 3 force main and PS 4 discharge]



With pump station #3 as the only location where Bioxide is stored, the chemical is added there, and the monitored at the end of the force main at Nantasket & Water Street. The excess nitrate concentration in the sewage is available to treat the additional H2S contributed from other parts of the system – PS4, contributions from lines feeding the interceptor, etc. all the way to the plant. There was a datalogger issue early in December and this was corrected by Evoqua. As seen by the rise in H2S levels from 12/9-12/16, Once the chemical feed was resumed, the H2S levels dropped down to below 5ppm.

6 MAINTENANCE SUMMARY

6.1 TASKS COMPLETED THIS MONTH

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

Key items of note are listed below.

- Our Generator service provider, M&S ElectricPower completed annual preventive maintenance service on all plant generators in early December. No issues found.
- The WAS flow meter [transmitter] that had failed was sent back for warrantee repairs, since the meter electronics did not work properly when re-installed. W&C is working with Radwell International for the component repair. If the unit is unrepairable, a new flow meter of some type will be needed.
- W&C handled the re-opening of the influent gate and the transition back to the headworks operation when the contractor work was completed. There was an extremely large amount of debris [rags & grease] that had built up in the interceptor pipe that came in for 1-2 days post the gate opening, and the volume of debris overwhelmed the flex rake screen. Constant attention and manually cleaning of the rake mechanism was needed to keep the flow coming in. Pictured: Dave Wilson cleaning influent gate stem threads of dirt/debris from sandblasting and the influent bar screen overloaded from re-opening of the influent flow to the building.



- Influent Pump #2 – the pump casing was prepped and repaired/coated with steel and ceramic coatings. The repaired impeller was returned in late December and the pump was reassembled, only to later to find that the mechanical seal developed a leak. Seacoast Supply, the company that sells the mechanical seal currently used in this pump was consulted with, and we expect to evaluate in place in

early January. The mechanical seal will most likely need to be replaced. reassembled. The pump is currently out of service, but available for emergency use. The pump's impeller was repaired with new wear ring, ceramically coated and balanced. Picture L to R: mechanical seal, repaired impeller.



- Clean both check valves at PS3 for each pump and clean volute for pump #2 on 12/8. Pictured: debris removal [mostly disposable wipes]



- Repair sump pump at PS 4, Flush back Pump #1 at PS 4. on 12/7; Derag & clean PS #1 Pump #1 [pictured below]



- Portable trash pump set up at the D Street Pump Station – operated early in month 12/3 and set up again on 12/23 for potential wet weather event and power loss.



- Confined Space into RAS Box to insert inflatable plug into the sludge draw offline from SC #1. [12/3] Since the RAS line was already broken, the plug was installed in case SC#1 was needed due to a high flow event. This would allow for the RAS FM work to be conducted without filling the RAS box with sludge/water.
- Staff [ES and RH at plant & AV remotely] stayed late on 12/5 while the Town conducted back-up power test for their generators. Various plant equipment and VFD's at PS #5 required reset. The plant and pump stations operated satisfactorily while the testing was going on.
- Hi Voltage Assoc called in for MCC #2 smell [12/5] [plastic smell detected on first floor area. They found burnt wire connections on the circuit breaker for RAS pump #1. Problem corrected. [pictured – 3-phase wires on circuit breaker, cut and re-inserted]



- Sump pumps replaced at PS 1 & 3 for lower pump rooms. New float installed for drywell at PS A.
- NEPV finished work on GT#2 with plow replacements and remaining steel support work.



- 12/13 - Found burning plastic smell in coming from MCC#1 - shut off all unnecessary bucket breakers for the evening until High Voltage could check out in morning, RAS #2 online. 12/14 - Lost RAS pump #2 at approximately 1:40 am, due to an electrical short in MCC room at the MCC electrical bucket. Hi Voltage Associates came in to investigate at 6:00 am with AV and a found loose electrical bucket connection for RAS pump #2, causing suspected electrical arcing. This arcing led to the circuit breaker failing. 12/24 - Mike from Hi Voltage responded and changed wiring in secondary building so we could use RAS pump #2 from RAS #3 power/controls. [Two RAS pumps were still needed due to higher flows and ragging issues.
- Ted Berry [TB] on site 12/14-15 - working on RAS line – initial preparation done for the short liner. Then TB got the repair clamp on and installed one 4-foot liner section installed for day 1. They returned the next morning for the second day of liner work on the RAS force main line and installed the 2nd length of liner. The outside temperatures were extremely cold and led to the very slow curing of the liner. The Secondary building doors and vents were shut, and heaters were kept running, as well as covering the D-Box outside to allow for warmer temperatures for the curing to occur. TB left the

bladder in overnight which was inside the RAS pipe until the curing was complete. They returned on 12/15 and pulled the bladder and inspected the liner for completion. [pictured – TB crew preparing the liner with resin for the installation]



- The daily cleaning/deragging of the RAS pumps continued while in the headworks bypass mode with the screenings box in service. As noted, the screenings box performed well, but there is still a considerable amount of debris that passes through. The removal efficiency of the bypass box is considerably less than the in-channel flex rake. The screenings box clearing of the rags/debris from the racks was performed 2 to 3 times per day by the W&C operations staff. The material was then disposed of into the screening dumpster in the grit classifier room.
- The RST was shut down for the winter season in mid-December. During the shutdown period a list of needed repairs will be scheduled so that the unit will be ready for service in the Spring of 2021.
- Some building lighting was worked on with several bulbs replaced. There are many fluorescent bulbs that have failed due to the poor condition of the existing fixtures. Many of the fixtures have weak ballasts and corrosion issues at the clip connectors which have led to premature failure of the bulbs.
- A rot hole in the PC #2 scum trough was repaired. Photos below [before & after]



- Hoadley vactor truck in on 12/ 20 to clean out screenings box, PS #5 wet well and the primary scum tank. All the debris was sent to the landfill.
- Secondary containment berm constructed for storage of the older portable generator at the plant site [per SPCC requirements]
- There were 5 grinder pump replacements performed in December. [see collection system section] There has been ongoing E-1 pump repairs and replacements. All repairs and replacements are done through FRMahony. The pump failures that have been found have been the result of equipment age and clogging of the pumps with non-flushable-type wipes and grease.



6.2 ASSET MANAGEMENT ACCOUNTS

- Please see the attached summary and planned expenditures for the Asset Management accounts for contract year (6). Most recent through **01/28/21**.
- Note: there are still some large placeholders in the planned maintenance list that are pending and may not necessarily happen under the 06M budget. These projects are being reviewed on a regular basis with the HSD.

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 December.
- Monthly PM's - Emergency eyewash and shower inspections, fire extinguisher and emergency lighting inspections completed.
- On-going Coronavirus Covid-19 awareness and updates discussed – daily & as needed. Staff separation planning & updates, facility visitors, personal hygiene & company initiatives. Daily non-contact temp checks for staff & visitors. Work with onsite contractors to ensure that Covid-19 procedures in place and being followed. Updated protocols posted on 10/27/20. Also following MA Governor's mandate for masks to be always worn while working in public buildings/facilities. Completed survey for W&C regarding building ventilation [lack of] & safety concerns as it pertains to Covid-19
- Continue to work with O&M health & safety, W&C Engineering, to ensure safety protocols in place for the current & upcoming engineering projects at the facility. Also discuss Headworks area hazards, and pump station hazards due to contractor work. Open gratings, trip hazards, obstructions.
- Continued work on completing annual safety tasks. All completed for 2020.
- November Safety Stand Down – Focus on job safety and tasks – Not to rush.
- Ongoing - Daily safety briefing meetings, review site safety policies with sub-contractors, safety tailgate topics. Pure Safety topic– December – Covid19 Basics, Walking/Working Surfaces.
- Monthly staff safety meeting conducted. Ryan Holman prepared a PowerPoint presentation and the staff participated virtually via Microsoft Teams. Major topics discussed: Review Lessons Learned for Nov2020, Cold weather safety, traveling, and Covid-19.
- Emergency Evacuation drill held on 12/8 – evaluated effectiveness for building evacuation.
- DBI-SALA winch repairs being researched.
- Fire Extinguisher signage updated/replaced.

Pictured: Fire extinguisher signage, staff operator performing “zero” voltage check as part of Lockout-Tagout Safety procedures. He is wearing Arc flash protective gear. Universal Waste [fluorescent light bulbs, and waste oil storage area.



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 November discussed.
- Regular operational updates and process control discussions, pump station operations, especially with construction projects going on at the plant and pump stations. Safety Covid-19, dig-safes, etc.
- No off-site training currently due to Covid-19 limitations & conditions. Discuss with staff their training needs and look virtual remote training and self-directed study for on-going contact hours needed for license renewal/ recertification.
- Working with Kristina Richard for some updated hazardous waste training for the staff

Staffing related items:

- One staff member, Ryan Holman submitted letter of resignation effective at the end of December. He will remain on staff as a part-time employee for the next several months. W&C initiated the job search posting within the company for possible hire[s] for the project.
- Staffing schedule – on-going awareness for staff separation, social distancing, face mask use, other safety protocols always.
- Mass Maritime [MM] internship program on hold until late 2021.
- 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 as needed. Paul Horigan and/or Jody St. George.

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	X			X				
Aug., 2020								
Sept. 2020	X							
Oct.,2020	X			X	X			
Nov, 2020								
Dec., 2020	X			X	X			
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 December.

- 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 generators loaded, and non-loaded generator runs were done for the month.
- All Pump station wet wells were inspected in December & PS #5 wet well cleaned out. The wet well accumulates and forms a lot of grease balls.



- Grinder pump summary:

- 7 Wyola – pump replaced
- 16 Orleans – pump and panel replaced
- 67 Rowley – pump replaced & also needed emergency pumping service by Rosano-Davis.
- 21 Shore Garden – pump replaced
- 47 Rockaway – pump replaced

Dig Safe mark outs:

- On-going Dig-Safe mark outs. These are completed throughout the Town of Hull to assist/facilitate scheduled and emergency gas repairs, broken water mains, roadway paving projects, and other residential and town projects.

Collection system support: Noticing significant increase in backup and blockage call outs and the amount of time and effort needed for staff weekly involvement. Below is an attempt to capture some of this effort at various call out locations.

- 3 Webster - call came in from resident about sewer-like odor in basement - check street and return with Push Camera to confirm no blockage,
- 123 Beach Ave – back-up call, checked street and found to be normal and recommended drain companies.
- 9 Glover – resident called and stated that toilet will not flush. At MH # 20154 an excessive amount of debris found in the pipe and on shelf. The debris was removed from the pipe and flow was restored.

- 99 Hampton – back up call. Street main was inspected, and initial assessment made that there was a possible lateral issue. Multiple visits made for push camera and information. Difficult situation as the homeowner had many concerns and questions as to responsibilities, etc.
- 51M/Beach Ave – back up call – two visits made. inspect street and uncover buried manholes and drain cleaner recommended. Next day - Dye tested from house at #51M - good flow, no issues.
- 21B Porazzo – two visits - inspected main [was clear] and located with push camera the sewer lateral where it meets the main.
- 1141 Nantasket – Inspect sewer back up call. Street was clear & advise resident to call plumber.

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

10 PROJECT MANAGEMENT & ADMINISTRATION



10.1 ON-GOING PROJECTS AND SUPPORT ITEMS

December updates:

- The AI project modules are setup and complete and now running and monitoring for engineering and ops use can be done. Bill B sent out some interesting graphs on 12/8 from the AI system of the high flow/storm event over the 12/5-7 weekend, with the following comments/observations:

LS_A, PS9, PS4 were the worst impacted. PS1 also had a good increase also, but the baseline has been so low in that area and the wet well did not surcharge much there. PS5 & PS 6 were the least impacted and the only pump stations to maintain a nice diurnal curve. It should be noted that PS 1 flows have come down considerably with the diurnal curve being flatter.

- PS9 – review DBR comments and provide feedback and participate in calls as available.
- As noted in previous months, continued cycling and ragging up of the bypass pumps has created flow irregularity within the facility. The facility has continued to use potable water for critical service water needs. A return to the plant water system in late December was made. A review of the additional water used during the Operations building bypass will be presented for review.
- Continued work with the Town, W&C Engineering, and D&C Construction to support the headworks project and eventual transition off the bypass system. Continuous coordination with the Headworks/PS contractors & D&C on pump station repairs and maintaining the bypass. Little or no time was given for headworks return to service, as the bypass stop date was set for December 21st when the bypass pumps were going to be shut off and bypass system removed. W&C brought up several issues such as headworks cleaning, unknown influent gate operation, various drain piping that discharged in the channels that were still plugged, and the inability to clean the grit system, since other concrete work above the aerated grit tank remained to be done.

- No updates: For sludge holding tank #1, the installation of diffuser piping is under consideration. A recent tank inspection was done and initially, W&C O&M Tech support staff would perform the demolition work. Upon approval, an inventory of parts on site would be made, with an update on the additional parts/items needed. An update on the existing inventory of parts will be made with a recommended purchase cost and presented.
- No updates to report on the old SC gear boxes that are out for service evaluation/repairs.
- Assistance provided as needed for the Hingham Pump Station that pumps flow from Hingham and Cohasset to Hull. They were upgrading their flow meter and our SCADA group was assisting with control interface.
- Scope of work for PS 4 discussed and whether work would be done by D&C Construction or another contractor. Work needed: Suction and discharge valves, check valves, and some additional inside piping work.
- BB with HI Voltage Assoc came up with repair plan for RAS pump #2 breaker, which will be re-routed to the MDP5 3-phase panel in the basement, where a new breaker could be installed. The circuit breaker was ordered.
- Continued work on obtaining additional information related to the radio/communications proposal to present to the HSD for communications with pump stations and plant Scada system. This research was a follow up to discussion and questions that came up with the HSD. We reached out to the SCADA Team for their assistance and insight.

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	\$91,599.93	\$118,955.75	\$46,350.00	\$137,949.93	\$72,605.75
06M-102B	Capital and Major Repairs	\$140,000.00	\$57,756.05	\$82,243.95	\$119,652.00	\$177,408.05	(\$37,408.05)
06M-103A	Major Sub Contractors	\$178,370.75	\$150,559.92	\$27,810.83	\$54,800.00	\$205,359.92	(\$26,989.17)
blank					\$0.00		
	Asset Management	\$528,926.43	\$299,915.90	\$229,010.53	\$220,802.00	\$520,717.90	\$8,208.53

\$229,010.53

Budget expended	Time Status	
	NOW=	1/28/2021
	Start	5/1/2020
43.5%	74.6%	31.1%
41.3%	74.6%	33.4%
84.4%	74.6%	-9.8%
56.7%	74.6%	17.9%

06S	D Street	\$7,500.00	\$970.00	\$6,530.00	\$0.00	\$970.00	\$6,530.00
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12.9%	74.6%	61.7%
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For December 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

\$220,802.00

1/28/2021 10:07

Priority	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
1	Mechanical Work Labor	On Going		101A	\$9,000.00			Jody St. George, and WC Support Staff - estim \$3000/month; Total budget \$36,000; incl annual scrubber cleaning, remove old blowers [mech]; Adj made 9/9/20; adj 10/15; adj 11/25; Adj 1/6/21; Adj 1/28/21.
1	Pump and Motor Repairs	On Going		101A	\$7,500.00			to keep existing equipment running - utilize various outside contractor repair shops, new purchases. Duperon motor, RST eurodrives, orig budget \$20,000; adj 10/15; RAS motor rewinding, influent motor rewind. Adj remaining \$\$ 10/29; Infl Pump #2 repairs - pending impeller repair & motor rewind [11/17]; Adj 11/25; adj 1/6/21
1	Lubricants	On Going		101A	\$1,500.00			Various Suppliers for oil and grease. Budgeted \$3500; adj 11/17; adj to \$1,500 1/28
1	Generator Repairs	On Going		101A		\$2,760.80		General Repair Work - Original Placeholder \$3,000- PS4- \$2,800 & other; to date cost noted
1	Fire Alarm Inspections and Service	On Going		101A	\$850.00			Semi Annual - Hart Security [October & April , central station, & Service]Orig budget \$3000, as of 11/17 \$1,500 pd; adj 11/25;
1	Universal waste disposal	Pending		101A				Placeholder - \$500; zero the budget, will incur if needed
1		Pending		101A				
1	Service the Forklift	completed		101A				\$400 - Annual cost - outside vendor; work completed. Waiting for report and invoice. 11/17 service completed.
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			\$2900 Annual Placeholder - 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			\$1100 Placeholder for Annual Inspection - sent out includes annual service \$1100
1		Pending		101A				
1	butterfly valves for PW pumps 4 valves	completed		101A				purchase and install - expect November installation [staff & O&M] 11/17 - completed November 2020.
1	Hoisting platform ladder for the AST	Completed		101A				Completed, purchased for use with screenings box - \$600.00
1	Weather Station	completed		101A				Installed by Glenn F, June 2020, programming by SCADA group
1	Janitorial Supplies	On Going		101A	\$1,500.00			Estimated annual expenditures - Orig budget \$4,000; adj 4 months - 9/9; adj 10/15; adj 1/6/21; adj 1/28;
1	Backflow device testing	Pending		101A	\$400.00			done by, 3rd party
1	Manhole Inspections	Pending		101A				As required, and/or scheduled

For December 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

\$220,802.00

1/28/2021 10:07

Priority	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
2	General mechanical and electrical items/supplies	On Going		101A	\$4,000.00			Grainger, FWWebb, EJP,Hoadley, McMasterCarr, etc; orig budget \$18,000. Adj 9/9/20; adj 10/15; adj 10/29; adj 1/6/21; adj made 1/28;
2	Vibration Analysis Survey	Pending		101A	\$2,000.00			Annual - 2 to 3 Days - Aeration System Blowers, Pump Station Pumps, etc./td; Paul H from W&C; adj budget to \$2000 1/6/21..
2	Valves	Pending		101A	\$2,000.00			Replacements and/or Service - On-Going - As Needed; Placeholder - Cut planned budget to 2k 10/15; 4-inch valves ordered. May be some additional valves needed for PS 4.
2	Hoses	completed		101A				Replacements and/or Service - On-Going - As Needed; Purchased three 6-inch hoses for the RAS bypass. [\$1800]; orig buget \$3000; addit 6" discharge hoses purchased Dec 2020
2	Sump Pumps	completed		101A				Replacements and/or Service - On-Going - As Needed - Cut budget from 1200 to \$600 11/17; adj 1/6/21 to zero; Purchasing as needed.
2	Install 6" or 8" drop pipes in secondary clarifier #1 and #2 OR 8-inch drop pipe for infl manhole	Pending		101A	\$2,000.00			Targeted budget \$2,000 - in-house staff to fabricate, ? go to 8" pipe? If needed??On hold, since effl MH work will have a standpipe for bypass pumping. May retarget \$\$ for infl MH 8-inch drop pipe
2	Effluent pump room pump bracket testing	Completed		101A				by Lightship Group - completed Aug 2020. On purchase order cost \$950]
2		Pending		101A				
2	Misc. Materials	On Going		101A	\$600.00			Hardware Store - \$200.00 per month - reoccurring expense; orig budget \$2,400; adj to \$1,000 on 11/17; adj 1/6/21; adj 1/28;
2		Pending		101A				
2	PS 1 impellers/flow	Pending		101A				look at increasing size of impellers, after Gunrock work completed; on hold due to area low flows [\$5,000]
2	Lift Station A	Pending		101A				Pump efficiency lower than desired - new pump or impeller & mech seal
2		Pending		101A				
3	Install new aeration channel angle iron for a slide gate	Pending		101A				Jody S to install - 2 days, if we do.\$2,500 estimate, or push to Engin project
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	On Going		101A	\$1,500.00			Additional lockers ordered to replace those removed years ago; pending delivery
3	Purchase (1) spare Euro drives for the RST drum drive	Completed		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				planned cost \$2,500 for moving elec hoists around, & other equip; delete item for now - 1/6/21
	Purchase Dehumidifiers for pump stations LS A & PS 4, PS 5, PS 6	Pending		101A	\$4,400.00			for 4 pump stations - A,4,5,6

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

Maintenance Account - Year 6 - 05_01_20 to 04_30_21

\$220,802.00

1/28/2021 10:07

Priority	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
		Pending		101A				
	Lab Equip Calibration	Pending		101A	\$600.00			Annual service \$600- usually Jan/Feb.
		Pending		101A				
	Mech seal[s] for RAS pumps 1 & 2	Pending		101A	\$2,000.00			Orig budget \$2,000 - for RAS pumps 1 & 2 - pending, but will need to do.
		Pending		101A				
		Pending		101A				
	Purchase Two 6" valves for PS 4	Completed		101A				Estim cost \$1450; Invoice paid.
	Springs for check valves	Completed		101A				Original budget \$400; Purchased
1	Tecta Roof Repairs - proposed per 2020 inspection	Pending		102B	\$8,000.00			Estim: \$8,000 - TBD when work to be scheduled; will be in 2010 06M.
1	(GT) Steel rake mechanism inspection and needed repairs	completed						to be completed by NEPV under critical spares bond account. Completed at end of November.
1	(SC#1) Steel rake mechanism inspection and needed repairs	Completed						completed by Lydon under critical spares bond account.
1	(SC#2) Steel rake mechanism inspection and needed repairs	Completed						completed by Lydon under critical spares bond account.
1	Pri D-Box repairs	Pending		102B				possibly by D&C Construction as part of structural repair project. Estim \$15,000.
1	Replace scrubber recirc pump	completed		102B		\$2,410.80		spare pump ordered & received October 2020, bill pd Nov2020.
1	Sludge transfer pump #1 rebuild	Pending		102B	\$5,000.00			Estim - parts - \$5,000 and rebuild pump needed. Still on target for rebuild.
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. Shutting down in December 2020. Cost \$11,000 might be held off.
2	grit classifier spare parts	Pending		102B	\$3,500.00			based on limited spare parts currently. Yet to be ordered [11/17]
2	Pump Station Ladders	Pending		102B				We are complete except for PS #9; nothing further planned for PS 9, since new pump station planned.
2	Sanitaire hardware purchase for aer tk 1	Completed		102B		\$3,054.03		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.

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

Maintenance Account - Year 6 - 05_01_20 to 04_30_21

\$220,802.00

1/28/2021 10:07

Priority	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
2	Install (4-5) additional yard hydrants	completed		102B		\$10,563.64		original budget \$12,000 - hydrants already purchased, and materials & contractor installation [2 days], 1st day completed Aug 2020 - \$5194.88. Second day planned early October - \$5,368.76. 3 replacements planned. Completed 10/27; Need to roll up final costs. Hydrants and paving, Nov2020.
	Remaining yard paving - plant - WAS/PSL and by fuel tank	completed		102B		\$4,362.77		For plant work
2	PS 4 valves, check valves - installation	On Going		102B	\$7,500.00			Placeholder - 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]; More \$\$ will be needed here, due to scope changes.
3		Pending		102B				
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 approx cost \$900.
	D'Alessandro - WAS line replacement & gate valve	Completed		102B		\$16,018.78		Work Authorization submitted 10/14/20; paid Nov2020.
	GT sandblasting/painting	Pending		102B				Estimate \$45,000 - would need to go out for competitive bid request
		Pending		102B				
		Pending		102B				
	Electrical LS A hook up	completed		102B		\$1,182.28		estimate look at 2 options - going with option one for new hook up only; early October planned. Completed Nov2020. Bill to be paid.
1	Electrical Work	On Going		103A				Electricians: Glen Fellows, HiVoltage, other; remv old blowers, lighting, sec bldg elec outlets - \$2,000/month; orig budget \$25,000; adj YTD - funds left; adj 9/30; Adj 10/15/20; adj 11/17/20; adj 1/6/21; clear remaining budget.
1	SCADA Work	On Going		103A				Steve Rose and the SCADA Support Team; orig budget \$25,000; reduce by \$6K on 9/9/20; adj 1/28; clear this budget, and costs will post as they are incurred. [1/28]
1	E-One Repairs and Replacement	On Going		103A	\$4,500.00			Based on historical costs. E1 repairs where cost-effective & new replacement pumps; control panels, other equip; Orig budget \$25,000; adj made 1/6/21; adj made 1/28;
1	Annual Generator inspection	completed		103A		\$4,900.00		Annual - Highland Power/ME Electrical Power - Generator PM/Service work - due in November, Early Dec target completion. Completed.
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				As required, plant or pump stations; orig budget \$10,000; reduce to zero on 9/9

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

Maintenance Account - Year 6 - 05_01_20 to 04_30_21

\$220,802.00

1/28/2021 10:07

Priority	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments
1	Wetwell Inspection and Cleaning- Plant	On Going		103A				
1	Sewer Line Cleaning - Emergencies	On Going		103A				Placeholder - As required for various sub-contractors; could be Hoadley, Truax, WindRiver, BMC, or other, collection system & plant; orig budget \$10,000 ; YTD already over \$10k.
1	Collection System - emerg & unplanned calls - Jetting & CCTV work	On Going		103A	\$6,900.00			Budget - orig \$20,000; reduce it to \$10,000; adj down \$3,100 1/28;
1	Collection System - Jetting Work & CCTV Truax \$35,000	On Going		103A				up to 35K - roadway proj work related - TBD for contractor [Truax] PO was issued. 11/25 - no work completed to date. Requested by HSD.
1	Aer tank repairs [labor]	Completed		103A				2 days - millwrights - Lydon \$3800
1	Pump Station communication - changover to radio - phase 1	Pending		102B	\$73,652.00			Equipment purchase to come from 06M/07M on the Critical Spare List; based on latest quote from Doug Tirrel. Updated memo Nov 2017
1	Pump Station communication - changover to radio - phase 2	Pending		102B				Equipment purchase to come from 06M/07M on the Critical Spare List; based on latest quote from Doug Tirrel. Updated memo Nov 2017
1	Pump Station communication - changover to radio - phase 3	Pending		102B				Equipment purchase to come from 06M/07M on the Critical Spare List; based on latest quote from Doug Tirrel. Updated memo Nov 2017
1	Pump Station communication - changover to radio - phase 4	Pending		102B				Equipment purchase to come from 06M/07M on the Critical Spare List; based on latest quote from Doug Tirrel. Updated memo Nov 2017
2	Pump Station Communication - electrical contractor services	Pending		102B	\$10,000.00			Electrician costs - Install antennae, and related components to allow for SCADA tie in.
2	Regen Aeration System - Pump Station #5	Pending		103A				Orig est \$1,500 -Tie into the SCADA system - Glen Fellows; may wait until after 5/1/20; on hold.
2	Dehumidifiers at four pstat - install	Pending		103A	\$8,000.00			approx 2K per station - PS A, 4, 5 & 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 - future needs
2	Generators - Load Bank Testing	Pending		103A	\$3,000.00			Look at under 06M - PS#1, PS#3, PS#4, PS#5, PS#6, and PS#9 [\$3,000]
	Ted Berry - RAS line repairs	completed		102B		\$9,950.00		PO issued for anticipated repairs in mid-December, work completed, waiting for final bill
	Lydon Mech work - screenings box and Sec Bldg wye	completed		103A				Work completed - October 2020 - \$3,439.98 & \$2,767.28
	CPE - ABBA RAS pump rotating assembly	On Going		102B				proposed cost \$8858 - on a purchase order
		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				placeholder for contractor O&M inspections and potential repairs; Looking at Rosano-Davis or another contractor & W&C to investigate; remove placeholder budget of \$7,500 on 1/28
1	Aeration Tank #3 - installation of new diffusers and piping grid	Pending		102B				\$50,000 Placeholder cost in the event needed

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

Maintenance Account - Year 6 - 05_01_20 to 04_30_21

					\$220,802.00				1/28/2021 10:07
Priority	Description	Status	completed	Task	Estimates & funds remaining	Final Completed Cost	Lead	Comments	
1	Garage back side overhead door replacement	Pending		102B				Need to solicit estimate for replacement.	
TOTAL					\$220,802.00				

Date	Asset ID	Asset Description	Asset Class	Name	Workflow Class	View
12/18/2020 8:00	16 Orleans St	16 Orleans St Grinder Pump	Hull Grinder Pumps	Boornazian, Bill	Hull - Grinder Pump Maintenance	View
12/27/2020 14:04	21 Shore Gardens Rd	21 Shore Gardens Rd Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Hull - Grinder Pump Maintenance	View
12/13/2020 14:22	26 Rockview Rd	26 Rockview Rd Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Hull - Grinder Pump Maintenance	View
12/22/2020 8:32	67 Rowley St	67 Rowley St Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Hull - Grinder Pump Maintenance	View
12/4/2020 12:08	7 Wyola Rd	7 Wyola Rd Grinder Pump	Hull Grinder Pumps	Sutton, Eric	Hull - Grinder Pump Maintenance	View
12/10/2020 14:21	Bacteria UNIT #21	UNIT #21	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/10/2020 14:28	Bacteria UNIT #22	UNIT #22	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:50	Bateria UNIT # 8	UNIT # 8	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:51	Bateria UNIT #10	UNIT #10	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/10/2020 14:18	Bateria UNIT #11	UNIT #11	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/10/2020 14:26	Bateria UNIT #12	UNIT #12	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/10/2020 14:25	Bateria UNIT #13	UNIT #13	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/10/2020 14:23	Bateria UNIT #14	UNIT #14	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/10/2020 14:22	Bateria UNIT #15	UNIT #15	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/10/2020 14:20	Bateria UNIT #16	UNIT #16	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:51	Bateria UNIT #17	UNIT #17	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:53	Bateria UNIT #18	UNIT #18	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:52	Bateria UNIT #19	UNIT #19	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:47	Bateria UNIT #2	UNIT #2	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:54	Bateria UNIT #20	UNIT #20	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/10/2020 14:27	Bateria UNIT #23	UNIT #23	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:46	Bateria UNIT #24	UNIT #24	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:52	Bateria UNIT #3	UNIT #3	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:44	Bateria UNIT #4	UNIT #4	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:49	Bateria UNIT #5	UNIT #5	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:48	Bateria UNIT #6	UNIT #6	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/9/2020 10:50	Bateria UNIT #7	UNIT #7	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/10/2020 14:29	Bateria UNIT #9	UNIT #9	Hull In Pipe Bacteria Unit	Sutton, Eric	Hull - In Pipe Bacteria Units	View
12/2/2020 14:12	12-034	4 BEACON RD	Hull Parcels	Sutton, Eric	Hull - Markout	View
12/29/2020 19:39	20-145	13 HALVORSEN AVE	Hull Parcels	Sutton, Eric	Hull - Markout	View
12/22/2020 14:01	21-057	114 MANOMET AVE	Hull Parcels	Sutton, Eric	Hull - Markout	View
12/10/2020 10:50	22-175	78 LYNN AVE	Hull Parcels	Sutton, Eric	Hull - Markout	View
12/2/2020 13:52	38-029	12 PARK AVE	Hull Parcels	Sutton, Eric	Hull - Markout	View
12/10/2020 9:46	38-029	12 PARK AVE	Hull Parcels	Sutton, Eric	Hull - Markout	View
12/22/2020 14:28	38-041	30 ROCKLAND CIRCLE	Hull Parcels	Sutton, Eric	Hull - Markout	View
12/10/2020 9:37	48-011	19 STATE PARK RD	Hull Parcels	Sutton, Eric	Hull - Markout	View
12/10/2020 9:41	49-063	31 ATLANTIC HSE RD	Hull Parcels	Sutton, Eric	Hull - Markout	View

12/10/2020 9:39	49-064	35 ATLANTIC HSE RD	Hull Parcels	Sutton, Eric	Hull - Markout	View
12/9/2020 13:35	07-022	1141 NANTASKET AVE	Hull Parcels	Boornazian, Bill	Hull - Sewer Backup	View
12/19/2020 14:19	09-084	9 GLOVER AVE	Hull Parcels	Sutton, Eric	Hull - Sewer Backup	View
12/31/2020 14:32	15-132	57 M STREET	Hull Parcels	Sutton, Eric	Hull - Sewer Backup	View
12/3/2020 15:07	21-053	123 BEACH AVE	Hull Parcels	Holman, Ryan	Hull - Sewer Backup	View
12/28/2020 2:30	35-005	99 HAMPTON CIRCLE	Hull Parcels	Boornazian, Bill	Hull - Sewer Backup	View
12/29/2020 8:49	MH-20154	MH-20154	Sanitary Manhole	Boornazian, Bill	Hull - Sewer Backup	View
12/9/2020 15:05	MH-20819	MH-20819	Sanitary Manhole	Sutton, Eric	Hull - Sewer Backup	View
12/3/2020 14:51	23-076	3 WEBSTER ST	Hull Parcels	Sutton, Eric	Hull - Sewer Customer Complaint	View
12/19/2020 14:23	MH-20154	MH-20154	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
12/2/2020 14:16	MH-20299-1	MH-20299-1	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
12/3/2020 14:53	MH-20390	MH-20390	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View
12/9/2020 11:15	MH-20819	MH-20819	Sanitary Manhole	Sutton, Eric	MH Frame & Cover Inspection	View



Maintenance History Report

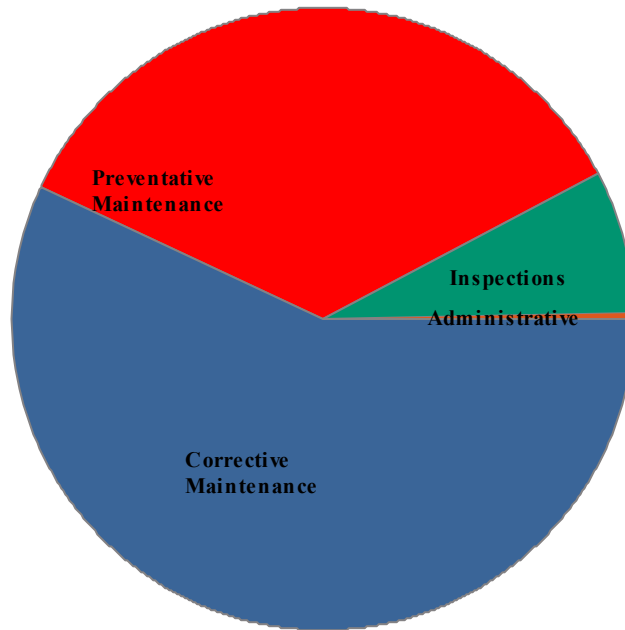
Hull Wastewater

Start Date: 12/1/2020

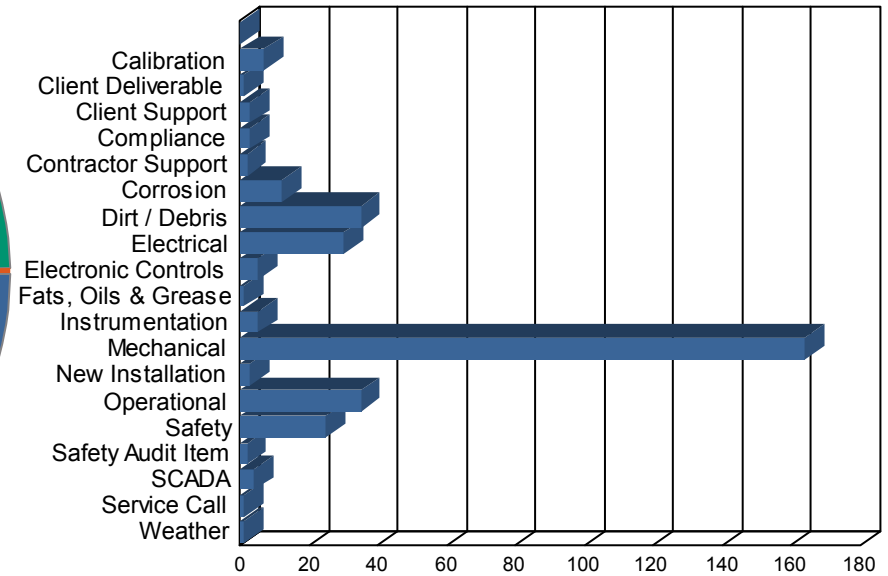
End Date: 12/31/2020

Work Order History By Type

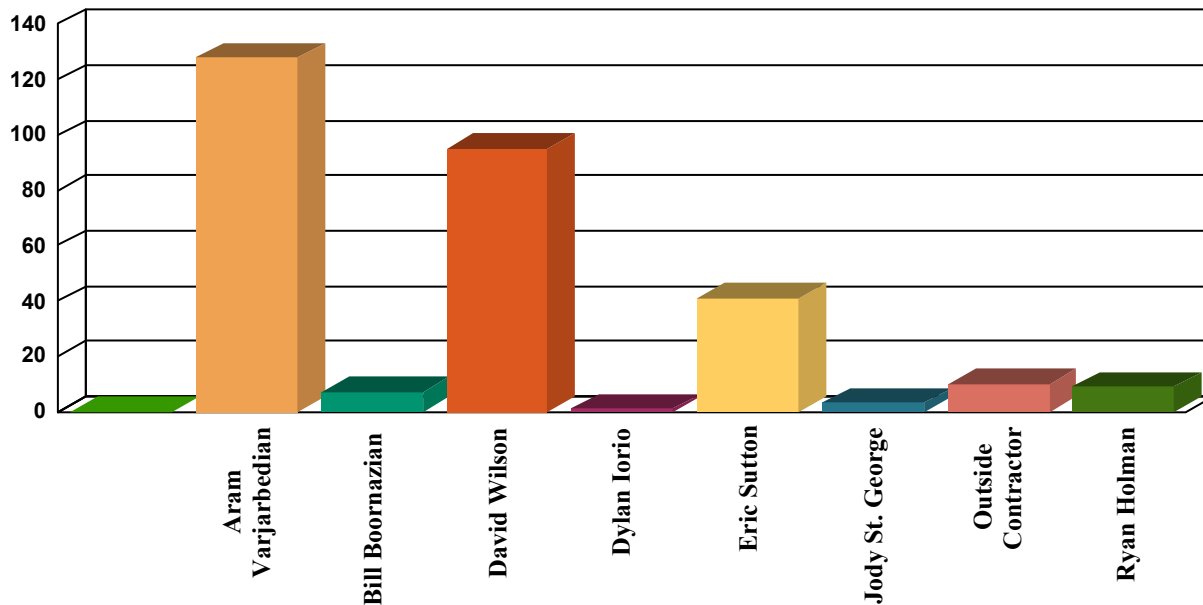
Administrative	1
Corrective Maintenance	194
Inspections	25
Preventative Maintenance	120
Total Work Orders	340



Work Order History by Reason



Work Order History By Employee



Employee	WO Count	Labor Hours
Aram Varjarbedian	128	20
Bill Boornazian	7	5
David Wilson	95	60
Dylan Iorio	1	1
Eric Sutton	41	4
Jody St. George	3	5
Outside Contractor	10	4
Ryan Holman	9	9
Unassigned	46	0
Totals	340	107

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/1/20	13164	RAS Pump 2	Derag pump	JS / DW /BB loto and derag pump 2 from switch over last night	Bill Boornazian	12/1/20	Completed
12/1/20	13165	RAS Pump 2	2nd derag for this pump today	Js/dw drag and loto of pump 2nd time today due to increased rags in system from headworks screen off for 10 weeks	Bill Boornazian	12/1/20	Completed
12/1/20	13166	RAS Pump 3	Derag pump	Derag and loto of pump from overnight. Left pump stand by ready. Pump 2 now on. DW and RH and BB.	Bill Boornazian	12/1/20	Completed
12/1/20	13167	PS D - DPW Stormwater Pump Station	Rotate suction QD flange	JS rotate the flange and elbow so suction hose didn't need to be bent for hook up of backup trash pump	Bill Boornazian	12/1/20	Completed
12/2/20	13169	31 - WW Headworks	Remove drain pipe for coating work	Completed	Jody St. George	12/2/20	Completed
12/2/20	13168	PS Trailer Mounted Generator	Construct containment when stored.	Completed	Jody St. George	12/2/20	Completed
12/3/20	13174	PS D - DPW Stormwater Pump Station	Set up 6" Thompson pump.	Checked all fluid levels. Filled pump with water and greased bearings. Set up pump on street to run on floats. Two lenglths of hose on suction and discharge.	David Wilson	12/3/20	Completed
12/3/20	13175	RAS Pump 2	low output flow	A V and RH - loto and derag pump, test and return to service	Aram Varjarbedian	12/3/20	Completed
12/4/20	13176	RAS Pump 2	Loto and derag pump	BB and RH loto and derag pump. 2 gallons rags removed	Bill Boornazian	12/4/20	Completed
12/5/20	13178	RAS System	low output flow from pumps due to high flows	multiple cleanings of all 3 RAS pumps all day long, due to ragging/debris due to high flows, and bypass pumping. BB, JB,RH,AV,ES. Loto of equip prior to working on pumps.	Aram Varjarbedian	12/5/20	Completed
12/6/20	13179	RAS System	low output flow RAS pump 2 and 3	at 3AM - AV and ES perform loto and zero voltage checks, and isolate and derag pump 1 and 2. test and return to service.	Aram Varjarbedian	12/6/20	Completed
12/6/20	13180	MCC 2	unknown burning smell in mcc room	AV, Upon noticing the smell, Hi Voltage Assoc was contacted and came to inspect and found smell coming from RAS pump #1 elec bucket. loose connections causing heat and burning. cut and make new ends and reattach wires to breaker. test and chk amps ok.	Outside Contractor	12/6/20	Completed
12/6/20	13177	RAS Pump 2	Diagnose low output	LOTO of equipment. Seperated pump from volute and cleared the debris from the impeller. Reassembled and returned to service. From .8 to .99mgd at 46hZ.	David Wilson	12/6/20	Completed
12/6/20	13181	Blend Box	duplex recept broken/tripped	broken duplex receptacle, cannot run regen blower. Breaker 22 at LC5 tripped. HlVoltage replaced the recept and installed the correct 20 amp unit.	Outside Contractor	12/6/20	Completed
12/7/20	13184	PS 1 Sump Pump	Sump pump inoperable	Inspected sump pump. Motor does not run. Isolated and checked impeller. Turns freely. Replaced sump pump and tested. Working properly.	David Wilson	12/8/20	Completed
12/7/20	13182	31 - WW Headworks	drainage pipe repair	repair temp drainage connection and install 4 band strongback clamp. secure all to prevent shifting	Aram Varjarbedian	12/7/20	Completed

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/7/20	13185	PS 3 Pump 2	Diagnose low output	LOTO of pump 2. Removed lower cleanout. Found impeller face clogged with rags. Removed rag ball and returned to service. Tested pump output. Still down about 75gpm.	David Wilson	12/8/20	Completed
12/7/20	13186	PS 3 Piping and Valves	Diagnose low pump output	LOTO of pump 2. Relieved pressure and removed check valve cover. Cycled valve and removed large rag ball. Reassembled and returned to service. Tested pump output- 750gpm	David Wilson	12/8/20	Completed
12/7/20	13187	PS 3 Piping and Valves	Clean and inspect pump 1 check valve.	LOTO of equipment for pump 1. Relieved pressure and removed check valve cover. Cycled valve and removed rag ball. Reassembled and returned to service.	David Wilson	12/8/20	Completed
12/7/20	13188	PS A Building	Drywell high level alarm not buoyant	Isolated alarm circuit and verified zero voltage. Disassembled seal and connections. Wired in new float switch as normally closed. Tested function-good	David Wilson	12/8/20	Completed
12/8/20	13183	PS 4 Sump Pump	Sump pump inoperable	Inspected sump pump. Found coupling seperated from check valve. Reassembled and tightened all hardware. Seperated discharge line. Discharge line compacted with concrete debris. Reassembled and tested sump pump. Working properly.	David Wilson	12/8/20	Completed
12/9/20	13189	RAS Pump 3	lower output flow	perform LOTO. The pump had ran for 1.5 + days, partially clogged. output down to 0.7MGD, and drawing from both clarifiers. cleaned, and return to standby.	Aram Varjarbedian	12/9/20	Completed
12/10/20	13190	PS D Building	Mount fire extinguisher	Installed anchor according to manufacturers recommendation. Mounted hanger and secured in anchor. Hung fire extinguisher.	David Wilson	12/10/20	Completed
12/14/20	20	Gravity Thickeners	GT blend mixer shaft corroded	completed as requested, repaired and tested.		4/22/15	Completed
12/14/20	22	Gravity Thickener 1	Sludge thickener #1 Full of rags	completed as requested, repaired and tested.		4/24/15	Completed
12/14/20	24	Portable Equipment	Extension for the sampler	completed as requested, repaired and tested.		4/27/15	Completed
12/14/20	31	RST unit	Wheels need to be replaced on drum	completed as requested, repaired and tested.		5/4/15	Completed
12/14/20	33	Influent Wet Well 1	No level transducer	completed as requested, repaired and tested.		5/4/15	Completed
12/14/20	36	RST unit	Level indicator not working	completed as requested, repaired and tested.		5/4/15	Completed
12/14/20	39	Gravity Thickener 1	Thickener #1 Needs new power wires	completed as requested, repaired and tested.		5/4/15	Completed
12/14/20	50	SCADA	Alarm set points for h2s on computer screen at scada needs repair this is a jim law project	completed as requested, repaired and tested.		5/4/15	Completed
12/14/20	55	Gravity Thickener 2	Gravity thickener #2 condemned	completed as requested, repaired and tested.		5/4/15	Completed
12/14/20	57	Operations Building	Lube overhead door chain	completed as requested, repaired and tested.		5/5/15	Completed
12/14/20	133	RST unit	Level probe malfunction and needs to be replaced	completed as requested, repaired and tested.		5/11/15	Completed
12/14/20	155	PS 3 Pump 2	PS 3 Pump 2 Vibration issue	completed as requested, repaired and tested.		5/14/15	Completed

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/14/20	158	PS 3	PS 3 Discharge valve hard to close	completed as requested, repaired and tested.		5/14/15	Completed
12/14/20	187	Operations Building	Rat droppings found in Operations building. Need to call exterminator	completed as requested, repaired and tested.		5/20/15	Completed
12/14/20	189	Aeration Tank 2 Motor	Aeration Tank 2 - Motor Pot Test	completed as requested, repaired and tested.		5/14/15	Completed
12/14/20	190	Aeration Tank 4 Motor	Aeration Tank 4 - Motor Pot Test	completed as requested, repaired and tested.		5/14/15	Completed
12/14/20	240	Effluent Pumps	Testing of effluent VFDs	completed as requested, repaired and tested.		5/15/15	Completed
12/14/20	330	PS 3 Piping and Valves	Metal inside discharge piping at PS3 - need to remove	completed as requested, repaired and tested.		6/22/15	Completed
12/14/20	370	Grit Pump 1	Suction pipe blow out	completed as requested, repaired and tested.		7/10/15	Completed
12/14/20	404	Operations Building	Two tears in the rubber roof	completed as requested, repaired and tested.		7/22/15	Completed
12/14/20	406	Aeration Blowers	Aerator blower room- ex fan #1	completed as requested, repaired and tested.		7/22/15	Completed
12/14/20	415	Operations Building	Aerator blower room- ex fan #2	completed as requested, repaired and tested.		7/22/15	Completed
12/14/20	417	Operations Building	Aerator blower room- ex fan #1	completed as requested, repaired and tested.		7/22/15	Completed
12/14/20	421	Secondary Clarifier Cathodic Protection	H+S item #196 - disconnect wiring from rusted panel	completed as requested, repaired and tested.		7/23/15	Completed
12/14/20	430	Effluent Pump 4	Noticeable vibration from pump 4 in effluent pump room	completed as requested, repaired and tested.		7/24/15	Completed
12/14/20	439	Plant Water System	Leaks at strainer	completed as requested, repaired and tested.		7/26/15	Completed
12/14/20	457	Effluent Pumps	Testing effluent Pump VFDs	completed as requested, repaired and tested.		7/27/15	Completed
12/14/20	486	Influent Pump 4	Valve won't close	completed as requested, repaired and tested.		8/6/15	Completed
12/14/20	488	UST - Underground Storage Tank for diesel fuel	PVC riser damaged during snow removal this year	completed as requested, repaired and tested.		8/7/15	Completed
12/14/20	495	Influent Pump 2	Influent Pump 2 Overload	completed as requested, repaired and tested.		8/11/15	Completed
12/14/20	511	Odor Control Wet Scrubber Vessel	Water leakage from vessel	completed as requested, repaired and tested.		8/16/15	Completed
12/14/20	558	Influent Pump 3	Inability to hydraulically isolate the pump	completed as requested, repaired and tested.		8/25/15	Completed
12/14/20	601	PS 9 Building	Deficient condition - lighting and drywall float	completed as requested, repaired and tested.		9/2/15	Completed
12/14/20	611	Influent Pump 3 Check Valve	Structural support missing - needs to be installed	completed as requested, repaired and tested.		9/8/15	Completed
12/14/20	612	Influent Pump 4 Check Valve	Structural support missing - needs to be installed	completed as requested, repaired and tested.		9/8/15	Completed
12/14/20	637	Plant Water System	Emergency Stop Not Functioning	completed as requested, repaired and tested.		9/14/15	Completed
12/14/20	645	Generator #2 - Backup Detroit 500	Cooling water solenoid stuck open	completed as requested, repaired and tested.		9/16/15	Completed
12/14/20	653	Aeration Tank 4 Motor	Aerator Motor Broken	completed as requested, repaired and tested.		9/17/15	Completed
12/14/20	665	Truck 2 - 2009 Chevy 2500 HD	Bearing noise in front end of Chevy 2500 pickup	completed as requested, repaired and tested.		9/25/15	Completed
12/14/20	675	PS D Discharge Pipe	D Street hole in discharge pipe	completed as requested, repaired and tested.		9/30/15	Completed

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/14/20	696	PS A Pump 1	Found that check valve on pump 1 is stuck open half way missing return spring!	completed as requested, repaired and tested.		10/2/15	Completed
12/14/20	708	Samsung Television	Samsung flatscreen has no picture or audio	completed as requested, repaired and tested.		9/2/15	Completed
12/14/20	731	RST Feed Pump 2	VFD current overload	completed as requested, repaired and tested.		10/8/15	Completed
12/14/20	897	Electrical System	Preliminary inspection of electrical manholes	completed as requested, repaired and tested.		10/12/15	Completed
12/14/20	1245	Buildings	Siding at roof doorway needs to be replaced	completed as requested, repaired and tested.		11/17/15	Completed
12/14/20	180	Aeration Tank 1	Mud valve needs to be evaluated and inspected	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	5/19/15	Completed
12/14/20	188	Plant Water System	Excessive noise from the plant water pumps. Need to investigate source	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	5/20/15	Completed
12/14/20	209	RST unit	Output of booster unknown	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	5/25/15	Completed
12/14/20	282	Plant Water System	Hellan Strainer needs scraper blade	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	6/16/15	Completed
12/14/20	284	PS 3 Pump 1	PS3 Pump 1 has vibration at low speeds	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	6/16/15	Completed
12/14/20	285	PS 3 Pump 1	PS3 Pump 1 impeller reportedly needs replacement (per Chuck)	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	6/16/15	Completed
12/14/20	286	PS 3 Pump 2	PS3 Pump 2 Vibrates at 40+ Hz. Bad shaft bearing	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	6/16/15	Completed
12/14/20	287	PS 3 Flow Meter	PS3 Flow Meter Reading is erratic or maxed out.	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	6/16/15	Completed
12/14/20	333	Buildings	Main Building Roof leak H&S # 248	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	6/23/15	Completed
12/14/20	403	Generator #1- Emergency Kohler 750	Generator cooling system issues	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	7/21/15	Completed
12/14/20	413	Operations Building	Work on RST flow meter system	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	7/22/15	Completed
12/14/20	561	Influent Wet Well 1	Need a level transducer	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	8/25/15	Completed
12/14/20	699	PS 3 Pump 1	Water leak at seal of pump 1	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	10/2/15	Completed
12/14/20	703	Generator #1- Emergency Kohler 750	ATS 2	all work has been completed, either replaced or rebuilt.	Aram Varjarbedian	10/2/15	Completed
12/14/20	3393	Aeration Tank 3	Tank Clean out for Inspections and Repair	completed as requested		11/15/16	Completed
12/14/20	3823	PS 6 Generator	Cooling system leak in the emergency generator.	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	1/13/17	Completed
12/14/20	3900	Secondary Building	Install a new valve and Tee to the existing piping in the secondary gallery for the 6"pipe coming from the WAS PUMP 3	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	1/30/17	Completed
12/14/20	4013	Portable Equipment	Stat A portable gen. Will not run	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	2/11/17	Completed
12/14/20	4187	Generator #1- Emergency Kohler 750	Generator found to be leaking oil out of one of the turbo chargers	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	2/28/17	Completed
12/14/20	4201	Secondary Clarifier 2	No draft tube flow. Inspect tank and seal	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	3/3/17	Completed

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/14/20	4203	Secondary Building	Plant water line for clarifier spray. Need isolation and drain valve in pump room	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	3/5/17	Completed
12/14/20	4204	Plant water yard hydrants	By SC1 - cannot shut off hydrant	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	3/5/17	Completed
12/14/20	4253	Secondary Clarifier 1	Skimmer arm was corroded and is now bent from frozen sludge on scum beach	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	3/14/17	Completed
12/14/20	4289	20 - WW - collections - general	27 Allerton Ave	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	3/24/17	Completed
12/14/20	4421	Primary Building	Primary room sump pump not moving flow	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	4/3/17	Completed
12/14/20	4449	Push Camera Control Cabinet	No Power	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	4/13/17	Completed
12/14/20	4458	PS 6	Interceptor level transducer level is erratic. Loss of echo and cable message on display.	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	4/15/17	Completed
12/14/20	4492	23 - WW Pump Stations	Ps #3 pump 2 base	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	4/21/17	Completed
12/14/20	4514	39 - WW Sludge Treatment	Inspect & clean SHT #2	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	4/25/17	Completed
12/14/20	4521	Influent Pump 4 VFD	VFD FB 06 motor overload shut off pump while it was in lead. No alarm!	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	4/26/17	Completed
12/14/20	4535	PS 3 Generator	Generator Shut off automatically during No Load test.	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	4/30/17	Completed
12/14/20	4712	PS 5 Aeration Blower	Loud bearing noise noticed today. Needs PM inspection	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	5/20/17	Completed
12/14/20	4714	32 - WW Influent Process	Influent pump 2 seal failure,	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	5/22/17	Completed
12/14/20	4964	Primary Sludge Pump 2	Sludge pump not taking down tank, some not normal sounds coming from volute. Changed valves to use sludge pump 1 to take tank 2 down.	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	6/4/17	Completed
12/14/20	4977	RAS Pump 2	motor on ras pump 2 is going bad, current overload VFD .	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	6/9/17	Completed
12/14/20	4999	Roof - Operations Building	Roof leaks H&S Audit #248	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	4/1/17	Completed
12/14/20	5012	Influent Pump 3 Motor	Motor suspect that the windings or armature has failed, stopped operating LOTO motor and VFD controls	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	6/19/17	Completed
12/14/20	5015	Flood Gate #3	Lower dog broken, door will not secure closed	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	6/20/17	Completed
12/14/20	5041	23 - WW Pump Stations	D street: remove & replace duck bill check valve	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	6/29/17	Completed
12/14/20	5168	Health & Safety	Loose stair tread	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	7/13/17	Completed
12/14/20	5181	31 - WW Headworks	Plant water system leaks at the duperon wash compactor,	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	3/20/17	Completed
12/14/20	5188	22 - WW - sewers/pipes/force mains	Saporitos grease trap investigated for new construction development	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	7/27/17	Completed
12/14/20	5366	Influent Flow meter - 16 Inch	Not recording. Ray F to evaluate	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	8/9/17	Completed

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/14/20	5391	SCADA	SCADA PC Locked up	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	8/18/17	Completed
12/14/20	5575	PS 3 Building	Need eye wash station due to new chemical	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	9/11/17	Completed
12/14/20	5577	PS 9 Building	Pigeons won't leave PS.	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	9/11/17	Completed
12/14/20	5591	Secondary Clarifier 1	Centerwell seal Replacement	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	9/12/17	Completed
12/14/20	5595	Recirculation Pump #2	Recirculation pump #2 tripped out	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	8/22/17	Completed
12/14/20	5608	Influent Pump 5	Pump 5 coupler chewed up and stopped pumping	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	9/24/17	Completed
12/14/20	5610	Grit Screw Classifier	Increased leakage around grit screw from aerated grit tank into grit pump room	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	9/24/17	Completed
12/14/20	5803	GODWIN Portable Pump	Install portable doppler flow meter	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	10/24/17	Completed
12/14/20	5804	PS 5 Pump 2	Pump discharge valve would not close completly	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	10/17/17	Completed
12/14/20	5812	Secondary Clarifier 1	Broken secondary Clarifier RAS box valves	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	10/25/17	Completed
12/14/20	5813	Roof - Operations Building	Leaking over SCADA 1, KEYBOARD, MOUSE & MONITOR GOT WET	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	10/23/17	Completed
12/14/20	5815	Influent Pump Room	Electric heat switch is off	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	10/26/17	Completed
12/14/20	5816	Caustic Soda Metering Pump	Suction hose leaking	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	10/26/17	Completed
12/14/20	5833	Hypochlorite Tank 2	Feed line elbow broken	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	10/31/17	Completed
12/14/20	5967	32 - WW Influent Process	Replaced transducer and high float.	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	11/3/17	Completed
12/14/20	6006	Generator #1- Emergency Kohler 750	Functional test of generator exhaust fan, louvers and actuators.	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	11/10/17	Completed
12/14/20	6012	RAS System	6-inch valve at wall - gear/chain inoperable	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	11/11/17	Completed
12/14/20	6035	SCADA	Cell modem for back up callout not working	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	11/17/17	Completed
12/14/20	6043	Effluent Pump 4	Pump Fault	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	8/7/17	Completed
12/14/20	6062	31 - WW Headworks	Headwork grating un even causing trip hazard	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	11/29/17	Completed
12/14/20	6169	PS 9 Generator	Block heater nor working	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	12/1/17	Completed
12/14/20	6903	Effluent Pump Back up Control Panel	Need effluent pump back up control panel	all work has been completed. parts were either repaired or replaced,	Aram Varjarbedian	8/10/17	Completed
12/16/20	13191	PS A Pump 1	pump tripping out, high current	AV, JS,ES. check run amps on 12/14 and motor amps at 40, and FLA = 31 for motor. P2 amps are 22 amps running. Pull pump for insp and clogged. Stat visits, 12/14 & 12/16. After cleaning, run amps=19.	Aram Varjarbedian	12/16/20	Completed

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/16/20	6667	Backflow Preventer - HVAC Room Back Wall	Leaking	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	2/10/18	Completed
12/16/20	6701	PS A	Need to replace electric meter socket	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	2/22/18	Completed
12/16/20	6827	32 - WW Influent Process	Thermal imaging influent pumps	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	3/2/18	Completed
12/16/20	6831	Electrical System	Panel LS fed from LDP in secondary gallery short circuit melting and smoke	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	3/4/18	Completed
12/16/20	6849	PS Trailer Mounted Generator	Engine temperature sensor needs replacing	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	3/7/18	Completed
12/16/20	6852	PS A	Glenn replaced meter socket and ran new wires to roof / split bolts. Hull light onsite for transfer.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	3/6/18	Completed
12/16/20	6854	PS A Building	Pump station A cracks in walls and around door.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	3/8/18	Completed
12/16/20	6855	23 - WW Pump Stations	Lift station A greyline flowmeter 4 - 20ma signal off.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	3/8/18	Completed
12/16/20	6871	Generator #1- Emergency Kohler 750	Regulators and solenoids for Kohler heat exchanger allowing cooling water to pass through while generator is off.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	3/13/18	Completed
12/16/20	6873	Secondary Clarifier 2 Drive System	SC 2 drive tripping out repeatedly after power transfer. Phase amperage issue found	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	3/13/18	Completed
12/16/20	6882	Hypochlorite Pump 1	Pump found in "low voltage alarm" stops pumping	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	3/19/18	Completed
12/16/20	7057	Roof - Operations Building	damaged flashing	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	4/9/18	Completed

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/16/20	7063	Garage	Leaking hose	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	4/11/18	Completed
12/16/20	7083	Effluent Pump Room	Dead bird seen in effluent wet well. Could not retrieve recommend possible cleaning of wet well floatables	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	4/23/18	Completed
12/16/20	7084	Effluent Pump Room	Old heater piping not supported and hanging. Needs to be removed	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	4/23/18	Completed
12/16/20	7237	PS 1 Pump 2	Not pumping	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	5/12/18	Completed
12/16/20	7252	PS 1 Pump 1	Bound up impeller	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	5/21/18	Completed
12/16/20	7254	PS 4	Wetwell needs cleaning 20% grease balls.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	5/21/18	Completed
12/16/20	7255	PS 5	Wetwell needs cleaning	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	5/21/18	Completed
12/16/20	7256	PS 4 Sump Pump	Sump pump inoperable	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	5/21/18	Completed
12/16/20	7257	PS 9 Sump Pump	Sump pump stuck in on position.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	5/21/18	Completed
12/16/20	7420	PS 5 Wet Well	Needs cleaning 80% covered	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	6/11/18	Completed
12/16/20	7422	PS A By-Pass system	Drain back valve leaking to surface	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	6/12/18	Completed
12/16/20	7425	PS 4 By-Pass Piping system	Install 90 elbo flange QD with cap.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	6/12/18	Completed

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/16/20	7441	Secondary Building	4-INCH scum line leaking / broken at wall sleeve.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	6/18/18	Completed
12/16/20	7461	Secondary Building	Electrical short in sump pump connector caused plugs to melt. Sump pump isolated and not operational. Seal water flowing into sump.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	6/27/18	Completed
12/16/20	7623	RST unit	Broken wheel bearing assembly.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	7/18/18	Completed
12/16/20	7633	PS 1 Pump 2	Pump 2 stopped running in auto	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	7/30/18	Completed
12/16/20	7761	Influent Pump 1	VFD fault and issues after reset.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	8/4/18	Completed
12/16/20	7934	20 - WW - collections - general	Diesel oil discovered in storm collection system and pump station	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	8/17/18	Completed
12/16/20	8315	PS 3 Building	Piping on bioxide cracked	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	11/14/18	Completed
12/16/20	8977	PS 1 Building	Missing lower ladder mounts.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	1/15/19	Completed
12/16/20	8980	PS 4 Wet Well	Wet well cleaning required.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	1/3/19	Completed
12/16/20	8981	PS 5 Wet Well	Wet well cleaning required.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	1/3/19	Completed
12/16/20	8982	PS 9 Wet Well	Wet well cleaning required.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	1/3/19	Completed
12/16/20	9239	Hypochlorite Tank 1	T fitting weeping.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	2/5/19	Completed

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/16/20	9475	Influent Pump 2 Motor	Coupling replacement required	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	3/6/19	Completed
12/16/20	9517	Secondary Scum Pump 2	Air dampers filled with dried sludge.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	3/25/19	Completed
12/16/20	9518	Secondary Scum Pump 1	Suction side air damper clogged with dried sludge.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	3/25/19	Completed
12/16/20	9627	PS 9 Sump Pump	Sump pump discharge clogged	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	4/4/19	Completed
12/16/20	9655	Meter #3 - 4 Gas	Shuts down on its own	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	4/21/19	Completed
12/16/20	10377	SCADA	Power monitor range setpoints	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	7/4/19	Completed
12/16/20	10396	RAS Pump 1	Suspected corrosion in RAS #1 leaking RAS onto floor	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	7/24/19	Completed
12/16/20	10432	Secondary Scum Pump 2	Suction side expansion tank leaking.	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	8/7/19	Completed
12/16/20	10433	RST Feed Pump 1	Shows running, but it is OFF	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	8/11/19	Completed
12/16/20	10585	Plant Water System	Leak ban clamps put on	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	8/24/19	Completed
12/16/20	10586	Plant Water System	Mechanical room leak	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	8/26/19	Completed
12/16/20	10782	Secondary Scum Pump 1	Clogged pressure switch and air damper	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	9/12/19	Completed

Corrective Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/16/20	10783	Sludge Transfer Pump 2	Oil fill canister	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	9/18/19	Completed
12/16/20	10938	PS A GridBee Aerator	Broken mixer	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	10/24/19	Completed
12/16/20	13192	Influent Pump Room	unit heater by infl P1 and P2 not working	AV/JS insp fuses, repl 2 blown 30 amp fuses and free up stuck fan. unit running now and responds to TStat.	Aram Varjarbedian	12/16/20	Completed
12/16/20	13193	RAS Pump 1	lower output flow	AV/JS loto, and derag pump	Aram Varjarbedian	12/16/20	Completed
12/20/20	13194	RAS Pump 1	Diagnose low output	LOTO of equipment. Seperated pump from volute and cleared the debris from the impeller. Reassembled and returned to service. 0.99mgd @ 45hZ	Dylan Iorio	12/20/20	Completed
12/22/20	13195	Health & Safety	Updating fire extinguisher signage	Removed the old signs and attached the new plastic signs. Cleaned the walls and attached with gasket maker.	Ryan Holman	12/22/20	Completed
12/24/20	13197	Influent Pump 2	Restore pumping capability	Diagnose unusual noise from pump assembly. LOTO of equipment. Seperated motor, frame and pump from volute. Found impeller bolt sheared allowing impeller to rest on volute while running. (2hrs DW/JS) Impeller sent out to be reshaped and coated. Volute coating stripped due to damage. Built up bottom of volute with steel putty. Resurfaced inside of volute to a white finish. (12hrs) Applied coating and allowed full cure time. (1.5hrs) Installed impeller with new bolt and loctite. Torqued to manufacturers spec. Set impeller clearance and seal height. No shim pack available. Made spacers from stainless washers to work as shim pack. Installed motor frame and motor. Electrician wired motor and verified rotation. Primed pump assembly and returned to service. (5hrs DW/JS/GF)	David Wilson	12/24/20	Completed
12/26/20	13198	RAS Pump 2	Removal of rags.	Locked out the pump and pulled the pump to remove rags and debris from the impeller and volute.	Ryan Holman	12/26/20	Completed
12/28/20	13199	RAS Pump 3	Remove motor and rotating assy for volute repair	Waiting for volute repair	Jody St. George	12/28/20	In Process
12/30/20	13201	30 - WW Treatment Plant - General	screenings box clean out	Hoadley vac truck with Dave, Jody, Bill, Aram - hose out/clean screenings box of grit, tags, grease. Box is now off line.	Outside Contractor	12/30/20	Completed
12/30/20	13200	33 - WW Primary Treatment	scum tank cleaninh	Hoadley Vac truck with Jody, Bill, clean out tank	Outside Contractor	12/30/20	Completed
12/30/20	13202	PS 5 Wet Well	Clean solids from wet well.	DW/JS turned off station pumps and aerator. Took aerator and transducer out of wet well for cleaning and inspection. Vacuumed out fat balls floating on the surface. Returned to service.	David Wilson	12/30/20	Completed

Inspections

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/2/20	12543	Eyewash Stations	WWTF Eyewash Inspection - Weekly	Tested and inspected all emergency eye wash and shower stations throughout the plant.	Ryan Holman	11/29/20	Completed
12/5/20	12789	Fire Extinguishers	WWTF Fire Extinguisher Inspections - Monthly		Ryan Holman	12/7/20	Completed
12/5/20	12700	Eyewash Stations	WWTF Eyewash Inspection - Weekly		Ryan Holman	12/6/20	Completed
12/6/20	12805	Universal waste area	Universal Waste Storage Area Inspection	Insp and pkg up boxes for ship out. AV and ES	Aram Varjarbedian	12/8/20	Completed
12/6/20	12804	Waste Oil Storage	Waste Oil Area Inspection	Insp ok	Aram Varjarbedian	12/8/20	Completed
12/6/20	12544	Emergency Lighting & exit signs	Emergency Lighting Inspection - Monthly		Ryan Holman	11/11/20	Completed
12/6/20	12632	Truck 1 - 2010 Dodge Ram 1500	Monthly vehicle inspection on do-Forms		David Wilson	11/2/20	Completed
12/6/20	12645	Truck 2 - 2009 Chevy 2500 HD	Monthly vehicle inspection on do-Forms		David Wilson	11/2/20	Completed
12/6/20	12655	Truck 3 - 2015 Chevy 3500 HD	Monthly vehicle inspection on do-Forms		David Wilson	11/2/20	Completed
12/7/20	12744	PS 1	PS #1 Inspection - Monthly	Inspected wet well and fire extinguisher. Fire extinguisher replaced. Tested high level alarm and sump pump. Sump pump replaced.	David Wilson	12/3/20	Completed
12/7/20	12750	PS A	PS #A Inspection - Monthly	Inspected wet well and fire extinguisher. Wet well requires cleaning. Tested high level alarm and sump pump. Sump pump dead heading. Discharge clogged. High level alarm failed due to wire insulation tear making float neutrally buoyant. Dry well pumped out with puddle pump and garden hose. New dry well high level alarm installed. Sump pump discharge cleaning requires CSE into wet well.	David Wilson	12/3/20	Completed
12/10/20	12819	AST- Above Ground Storage tank for diesel fuel	Monthly Inspections of Tanks	Completed, ast level 2301 gal. Port gen back on site and in a sec cont berm	Aram Varjarbedian	12/1/20	Completed
12/10/20	12745	PS 3	PS #3 Inspection - Monthly	Inspected wet well and fire extinguisher. Tested high level alarm and sump pump. Installed new back up sump pump.	David Wilson	12/3/20	Completed
12/10/20	12811	Truck 4 - 2015 Nissan Frontier	Monthly vehicle inspection on do-Forms	All ok, need new wiper blades. Replaced 12/10 by DW	Aram Varjarbedian	12/7/20	Completed
12/10/20	12747	PS 5	PS #5 Inspection - Monthly	Inspected wet well and fire extinguisher. Wet well has about 40% surface solids. Tested high level alarm and sump pump.	David Wilson	12/3/20	Completed
12/10/20	12746	PS 4	PS #4 Inspection - Monthly	Inspected wet well and fire extinguisher. Tested high level alarm and sump pump. Sump pump discharge line cleaned.	David Wilson	12/3/20	Completed
12/10/20	12749	PS 9	PS #9 Inspection - Monthly	Inspected wet well and fire extinguisher. Tested high level alarm and sump pump. Motor bearings are sounding loud.	David Wilson	12/3/20	Completed
12/10/20	12748	PS 6	PS #6 Inspection - Monthly	Inspected wet well and fire extinguisher. Wet well needs to be cleaned. Tested high level alarm and sump pump.	David Wilson	12/3/20	Completed
12/21/20	12810	Truck 3 - 2015 Chevy 3500 HD	Monthly vehicle inspection on do-Forms		Eric Sutton	12/7/20	Completed

Inspections

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/21/20	12802	Truck 2 - 2009 Chevy 2500 HD	Monthly vehicle inspection on do-Forms		Eric Sutton	12/7/20	Completed
12/21/20	12656	Truck 4 - 2015 Nissan Frontier	Monthly vehicle inspection on do-Forms		Aram Varjarbedian	11/2/20	Completed
12/21/20	12792	Truck 1 - 2010 Dodge Ram 1500	Monthly vehicle inspection on do-Forms		Bill Boornazian	12/7/20	Completed
12/21/20	12704	Emergency Lighting & exit signs	Emergency Lighting Inspection - Monthly		Ryan Holman	12/9/20	Completed
12/21/20	12701	Eyewash Stations	WWTF Eyewash Inspection - Weekly		Eric Sutton	12/13/20	Completed
12/21/20	12702	Eyewash Stations	WWTF Eyewash Inspection - Weekly		Eric Sutton	12/20/20	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/1/20	12551	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load	Inspected all fluid levels and brought up to operating temp. Recorded all run data. No issues found.	David Wilson	11/30/20	Completed
12/1/20	12547	Generator #2 - Backup Detroit 500	Generator Weekly - Test Run no load	Inspected all fluid levels and brought up to operating temp. Recorded all run data. No issues found.	David Wilson	11/30/20	Completed
12/1/20	12280	Secondary Scum Pump 1	Pen Valley Double Disc pumps - Quarterly	LOTO of equipment. Removed belt and main cover. Blew out air dampers and tested pressure switch. Adjusted belts and greased all bearings. Returned to service.	David Wilson	9/10/20	Completed
12/1/20	12563	Aeration Blower 1	Aeration Blower #1 Air Filter Inspection - monthly	Inspected air filter element. Filter replaced.	David Wilson	11/24/20	Completed
12/1/20	12564	Aeration Blower 2	Aeration Blower #2 Air Filter Inspection - Monthly	Inspected air filter element. Blower offline. Filter is clean.	David Wilson	11/26/20	Completed
12/2/20	12281	Secondary Scum Pump 2	Pen Valley Double Disc pumps - Quarterly	LOTO of equipment. Removed belt and main guard. Blew out air dampers and tested switch. Adjusted belts and greased all bearings. Returned to service.	David Wilson	9/10/20	Completed
12/2/20	12668	Generators "All Pump Station"	Generator Weekly - Test Run no load		David Wilson	11/30/20	Completed
12/2/20	12635	PS Trailer Mounted Generator	Generator Weekly - Test Run no load		David Wilson	11/30/20	Completed
12/3/20	12639	Meter #2 - 4 Gas	4 Gas Meter #2 Calibration - Monthly	Zeroed and calibrated mx4 gas meter, no issues found	David Wilson	12/3/20	Completed
12/3/20	12642	Meter #5 - 4 Gas	4 Gas Meter #5 Calibration - Monthly	Zeroed and calibrated mx4 gas meter, no issues found	David Wilson	11/26/20	Completed
12/3/20	12640	Meter #3 - 4 Gas	4 Gas Meter #3 Calibration - Monthly	Zeroed and calibrated mx4 gas meter, no issues found	David Wilson	11/26/20	Completed
12/3/20	12641	Meter #4 - 4 Gas	4 Gas Meter #4 Calibration - Monthly	Zeroed and calibrated mx4 gas meter, no issues found	David Wilson	11/26/20	Completed
12/3/20	12643	Meter #6 - 4 Gas	4 Gas Meter #6 Calibration - Monthly	Zeroed and calibrated mx4 gas meter, no issues found	David Wilson	11/26/20	Completed
12/3/20	12816	Meters - 4 Gas Confined Space #2	4 gas meter calibration - monthly	Zeroed and calibrated gas meter, no issues found	David Wilson	12/1/20	Completed
12/3/20	12790	Meters - 4 Gas Confined Space #1	4 gas meter calibration - monthly	Zeroed and calibrated gas meter, no issues found	David Wilson	12/1/20	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/3/20	12751	PS 1 Generator	PS #1 Generator Inspection and Load Test - Monthly		Eric Sutton	12/2/20	Completed
12/3/20	12752	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		Eric Sutton	12/2/20	Completed
12/3/20	12762	PS 3 Generator	PS #3 Generator Inspection and Load Test - Monthly		Eric Sutton	12/2/20	Completed
12/3/20	12757	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		Eric Sutton	12/2/20	Completed
12/3/20	12763	PS 4 Generator	PS #4 Generator Inspection and Load Test - Monthly		Eric Sutton	12/2/20	Completed
12/3/20	12764	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		Eric Sutton	12/2/20	Completed
12/3/20	12774	PS 5 Generator	PS #5 Generator Inspection and Load Test - Monthly		Eric Sutton	12/2/20	Completed
12/3/20	12769	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		Eric Sutton	12/2/20	Completed
12/3/20	12786	PS 6 Generator	PS #5 Generator Inspection and Load Test - Monthly		Eric Sutton	12/2/20	Completed
12/3/20	12781	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		Eric Sutton	12/2/20	Completed
12/3/20	12775	PS 9 Generator	PS #9 Generator Inspection and Load Test - Monthly		David Wilson	12/2/20	Completed
12/3/20	12776	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		Eric Sutton	12/2/20	Completed
12/3/20	12791	GODWIN Portable Pump	Test Run Godwin Pump-Monthly	Checked all fluid levels and brought up to operating temp. Verified flow to primary clarifier launder.	David Wilson	12/2/20	Completed
12/3/20	12650	Confined Space 4 Gas Meter	monthly calibration		David Wilson	11/26/20	Completed
12/3/20	12817	Recirculation pump #1	Monthly Check Pump Couplings	Direct drive. No hubs or coupling.	David Wilson	12/2/20	Completed
12/3/20	12818	Recirculation Pump #2	Monthly Check Pump Couplings	Direct drive. No hubs or coupling.	David Wilson	12/2/20	Completed
12/3/20	12787	Plant Water Pump 1	Monthly Check Pump Couplings	Direct drive. No hubs or coupling.	David Wilson	12/2/20	Completed
12/3/20	12788	Plant Water Pump 2	Monthly Check Pump Couplings	Direct drive. No hubs or coupling.	David Wilson	12/2/20	Completed
12/4/20	12661	High level floats	Weekly High Float Alarm test	Tested all high level floats and alarms throughout the plant.	Ryan Holman	11/29/20	Completed
12/5/20	12812	High level floats	Weekly High Float Alarm test		Ryan Holman	12/6/20	Completed
12/6/20	12824	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY	Drained off condensation and tested both switches on SC 1&2.	David Wilson	12/6/20	Completed
12/6/20	12743	Sludge Transfer Pump 2	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found.	David Wilson	12/2/20	Completed
12/6/20	12742	Sludge Transfer Pump 1	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found.	David Wilson	12/2/20	Completed
12/6/20	12736	RST Feed Pump 2	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found.	David Wilson	12/2/20	Completed
12/6/20	12735	RST Feed Pump 1	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found.	David Wilson	12/2/20	Completed
12/6/20	12699	Portable Generator - Honda	Portable Generator Inspection - Monthly	Inspected fluid levels and brought up to operating temp. No issues found.	David Wilson	12/2/20	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/6/20	12715	Influent Sluice Isolation Gate	Weekly operate through full range	Influent gate is locked out closed for headworks bypass.	David Wilson	12/2/20	Completed
12/6/20	12659	High level floats	Weekly High Float Alarm test		David Wilson	11/15/20	Completed
12/6/20	12660	High level floats	Weekly High Float Alarm test		David Wilson	11/22/20	Completed
12/6/20	11631	Effluent Pumps	Effluent Pump - Monthly		David Wilson	5/15/20	Completed
12/6/20	12732	RAS Pump 1	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found.	David Wilson	12/2/20	Completed
12/6/20	12734	RAS Pump 3	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found.	David Wilson	12/2/20	Completed
12/6/20	12272	Effluent Pumps	Effluent Pump - Monthly		David Wilson	9/15/20	Completed
12/6/20	12733	RAS Pump 2	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling. No issues found.	David Wilson	12/2/20	Completed
12/7/20	12092	Generator #1- Emergency Kohler 750	Generator #1 PM -Annual	Highland Power on-site for annual service.	David Wilson	8/15/20	Completed
12/7/20	12081	Generator #2 - Backup Detroit 500	Generator #2 (Backup) PM -Annual	Highland Power on-site for annual service.	David Wilson	8/15/20	Completed
12/8/20	12823	Generators "All Pump Station"	Generator - Monthly Load Test	Highland Power performing annual service at all stations. Generators all ran.	David Wilson	12/6/20	Completed
12/8/20	12738	Secondary Scum Pump 1	Pen Valley Double Disc pumps - Quarterly	Inspected all bearings and exercised all valves. Checked drive belt tension. Drained air dampers.	David Wilson	12/10/20	Completed
12/8/20	12739	Secondary Scum Pump 2	Pen Valley Double Disc pumps - Quarterly	Inspected all bearings and exercised all valves. Checked drive belt tension. Drained air dampers.	David Wilson	12/10/20	Completed
12/9/20	12722	Influent Pump 2	Monthly Check Pump Couplings	Influent pump off line and apart.	David Wilson	12/2/20	Completed
12/9/20	12724	Influent Pump 4	Monthly Check Pump Couplings	Influent pump off line. No changes since last inspection.	David Wilson	12/2/20	Completed
12/9/20	12723	Influent Pump 3	Monthly Check Pump Couplings	Influent pump off line. No changes since last inspection.	David Wilson	12/2/20	Completed
12/9/20	12725	Influent Pump 5	Monthly Check Pump Couplings	Influent pump off line. No changes since last inspection.	David Wilson	12/2/20	Completed
12/10/20	12796	PS Trailer Mounted Generator	Generator - Monthly Load Test		Eric Sutton	12/6/20	Completed
12/10/20	12753	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly	Highland Power performing annual service at all stations. Generators all ran.	Outside Contractor	12/9/20	Completed
12/10/20	12758	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly	Highland Power performing annual service at all stations. Generators all ran.	Outside Contractor	12/9/20	Completed
12/10/20	12765	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly	Highland Power performing annual service at all stations. Generators all ran.	Outside Contractor	12/9/20	Completed
12/10/20	12770	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly	Highland Power performing annual service at all stations. Generators all ran.	Outside Contractor	12/9/20	Completed
12/10/20	12782	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly	Highland Power performing annual service at all stations. Generators all ran.	Outside Contractor	12/9/20	Completed
12/10/20	12777	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly	Highland Power performing annual service at all stations. Generators all ran.	Outside Contractor	12/9/20	Completed
12/10/20	12716	Influent Sluice Isolation Gate	Weekly operate through full range	Influent gate is locked out closed for headworks bypass.	David Wilson	12/9/20	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/10/20	12569	Effluent Pumps	Effluent Pump - Monthly	Reviewed trend data. 3 pump ran during the month without loss of flow. No unusual noises or vibration.	David Wilson	11/15/20	Completed
12/10/20	12737	Primary Scum Pump	Pen Valley Double Disc pumps - Quarterly	Exercised all valves. Greased all bearings and purged air dampers. Belts are with in adjustment.	David Wilson	12/10/20	Completed
12/10/20	12740	Primary Sludge Pump 1	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling.	David Wilson	12/2/20	Completed
12/10/20	12741	Primary Sludge Pump 2	Monthly Check Pump Couplings	LOTO of equipment. Inspected hubs and coupling.	David Wilson	12/2/20	Completed
12/15/20	12706	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.	David Wilson	12/14/20	Completed
12/16/20	12717	Influent Sluice Isolation Gate	Weekly operate through full range	Influent gate is locked out closed for headworks bypass.	David Wilson	12/16/20	Completed
12/20/20	12731	Wet Scrubber Fan	Scrubber Exhaust Fan PM - Monthly	Lubed all bearings and inspected drive belts. No issues found.	David Wilson	12/9/20	Completed
12/20/20	12814	High level floats	Weekly High Float Alarm test	Tested all high level alarms. No issues found.	David Wilson	12/20/20	Completed
12/20/20	12826	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY	Inspected all fluid levels and tested alarm switches. No issues found.	David Wilson	12/20/20	Completed
12/20/20	12825	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY	Drained off condensation. Inspected and set all fluid levels. Tested alarm circuits. No issues found.	David Wilson	12/13/20	Completed
12/21/20	12760	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		Eric Sutton	12/23/20	Completed
12/21/20	12767	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		Eric Sutton	12/23/20	Completed
12/21/20	12772	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		Eric Sutton	12/23/20	Completed
12/21/20	12784	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		Eric Sutton	12/23/20	Completed
12/21/20	12779	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		Eric Sutton	12/23/20	Completed
12/21/20	12721	Influent Pump 1	Monthly Check Pump Couplings	Inspected hubs and coupling. No issues found.	David Wilson	12/2/20	Completed
12/21/20	12257	Influent Pumps	Semi Annual "Clean influent pumps 1, 2, 3, 4 and 5 Air relieve valves"	Cleaned air relief valves prior to bringing influent pumps back online.	David Wilson	9/7/20	Completed
12/21/20	12820	Generators "All Pump Station"	Generator Weekly - Test Run no load		Eric Sutton	12/21/20	Completed
12/21/20	12793	PS Trailer Mounted Generator	Generator Weekly - Test Run no load		Eric Sutton	12/14/20	Completed
12/21/20	12754	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		Eric Sutton	12/16/20	Completed
12/21/20	12759	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		Eric Sutton	12/16/20	Completed
12/21/20	12766	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		Eric Sutton	12/16/20	Completed
12/21/20	12771	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		Eric Sutton	12/16/20	Completed
12/21/20	12783	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		Eric Sutton	12/16/20	Completed
12/21/20	12778	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		Eric Sutton	12/16/20	Completed
12/21/20	12821	Generators "All Pump Station"	Generator Weekly - Test Run no load		Eric Sutton	12/21/20	Completed
12/21/20	12794	PS Trailer Mounted Generator	Generator Weekly - Test Run no load		Eric Sutton	12/21/20	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/21/20	12813	High level floats	Weekly High Float Alarm test		Eric Sutton	12/13/20	Completed
12/21/20	12548	Generator #1- Emergency Kohler 750	Generator - Monthly Load Test		David Wilson	11/1/20	Completed
12/21/20	12709	Generator #1- Emergency Kohler 750	Generator - Monthly Load Test		David Wilson	12/6/20	Completed
12/21/20	12705	Generator #2 - Backup Detroit 500	Generator - Monthly Load Test		David Wilson	12/6/20	Completed
12/22/20	12718	Influent Sluice Isolation Gate	Weekly operate through full range	Exercised influent gate multiple times once headworks bypass was finished.	David Wilson	12/23/20	Completed
12/22/20	12711	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.	David Wilson	12/21/20	Completed
12/22/20	12707	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 issues found. Switched back to plant water.	David Wilson	12/21/20	Completed
12/23/20	13196	PS D - DPW Stormwater Pump Station	Set up alternate pumping capability	DW/ES Pulled and loaded 4 6" hoses. Primed pump and added 1gallon of antifreeze. Checked oil level, fuel level and greased pump bearings. Towed pump to station and set up to run on float control.	David Wilson	12/23/20	Completed
12/24/20	12726	Aeration Blower 1	Aeration Blower #1 Air Filter Inspection - monthly	Inspected air filter element. Blower is offline and filter is clean.	David Wilson	12/22/20	Completed
12/24/20	12727	Aeration Blower 2	Aeration Blower #2 Air Filter Inspection - Monthly	Inspected air filter element. Swapped out with a clean one.	David Wilson	12/24/20	Completed
12/24/20	12755	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		Eric Sutton	12/23/20	Completed
12/24/20	12558	Influent Pump 1	Monthly Check Pump Couplings		David Wilson	11/4/20	Completed
12/24/20	12560	Influent Pump 3	Monthly Check Pump Couplings		David Wilson	11/4/20	Completed
12/24/20	12570	Wet Scrubber Fan	Scrubber Exhaust Fan PM - Monthly		David Wilson	11/11/20	Completed
12/24/20	12246	Generator #1- Emergency Kohler 750	Generator - Monthly Load Test		David Wilson	9/6/20	Completed
12/24/20	12710	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load	Ran automatically. Run data not recorded.	David Wilson	12/14/20	Completed
12/24/20	12720	Mechanical Screen & Washpress System	Monthly Maintenance	Cleaned and inspected all components prior to bring back online.	David Wilson	12/7/20	Completed
12/31/20	12822	Generators "All Pump Station"	Generator Weekly - Test Run no load		Eric Sutton	12/28/20	Completed
12/31/20	12756	PS 1 Generator	PS #1 Generator Inspection and Test - Weekly		Eric Sutton	12/30/20	Completed
12/31/20	12795	PS Trailer Mounted Generator	Generator Weekly - Test Run no load		Eric Sutton	12/28/20	Completed
12/31/20	12761	PS 3 Generator	PS #3 Generator Inspection and Test - Weekly		Eric Sutton	12/30/20	Completed
12/31/20	12768	PS 4 Generator	PS #4 Generator Inspection and Test - Weekly		Eric Sutton	12/30/20	Completed
12/31/20	12773	PS 5 Generator	PS #5 Generator Inspection and Test - Weekly		Eric Sutton	12/30/20	Completed
12/31/20	12785	PS 6 Generator	PS #6 Generator Inspection and Test - Weekly		Eric Sutton	12/30/20	Completed
12/31/20	12780	PS 9 Generator	PS #9 Generator Inspection and Test - Weekly		Eric Sutton	12/30/20	Completed

Preventative Maintenance

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/31/20	12712	Generator #1- Emergency Kohler 750	Generator Weekly - Test Run no load		Bill Boornazian	12/28/20	Completed
12/31/20	12827	All Plant Gear box reducers	GEAR BOX MAINT - WEEKLY		David Wilson	12/27/20	Completed

Administrative

Status Date	WO #	Asset Name	Work Description	Work History Note	Employee	Schedule Date	Status
12/16/20	11247	30 - WW Treatment Plant - General	Weekly - Eric close out WO's	all work orders have been completed, units have been rebuilt, replaced, or repaired. some required just a cleaning. closing all work orders now.	Aram Varjarbedian	1/1/20	Completed