



September 16, 2020

Via Electronic Mail Delivery

Mr. Darrin Gordon
General Manager
Lewes Board of Public Works
107 Franklin Avenue
Lewes, DE 19958

Subject: August 2020 Monthly Report to BPW

Dear Mr. Gordon:

White Marsh Environmental Systems, Inc. (WMES) is pleased to submit the August 2020 monthly report. The report contains a summary of the operations and maintenance activities at the BPW lift stations and wastewater treatment plant by WMES for the month of August, 2020. In addition, the report contains the following documents:

1. Corrective Action Items Summary – This will be submitted each month until all items have been completed.

If you have any questions, please feel free to contact me at pperis@middlesexwater.com.

Sincerely,

Paul S. Peris

Paul S. Peris
Director of Production and Maintenance
White Marsh Environmental Systems, Inc.

August 2020

I. Effluent Quality and Compliance

The data below confirms that the effluent meets all permit requirements.

Sample Data	Total Nitrogen	Total Phosphorus	BOD	TSS	Enterococcus
Average:	5.26 mg/L	1.18 mg/L	<1.08 mg/L	<1.25 mg/L	<1.0 Col.
Maximum:	5.26 mg/L	1.18 mg/L	<16.09 mg/L	<2.0 mg/L	<1.0 Col.
Permit Limit:	8 mg/L average	2 mg/L average	15 mg/L average	15 mg/L average	10 Col. average
Maximum Permit Limit	N/A	N/A	23 mg/L MAX	23 mg/L MAX	104 Col. MAX

- Maximum daily flow - .8663 MGD
- Monthly average flow – .7711 MGD

II. Activities – August 2020

Lift Stations Activities

- All Lift Stations monitored daily with Point Watch system.
- WMES personnel conducted bi-monthly lift station inspections. No deficiencies noted.
- 8/2/20 - Station #83 had a high level alarm. The station was pumped down and WMES replaced a bad float.
- 8/3/20 - Station #8 pump #1 lost prime. WMES staff took apart the pump and removed a piece of rebar from pump suction line. Pump #1 was returned to service.
- 8/5/20 - Josh Gritton and Hills Electric met with WMES staff to discuss E-One pump replacements.
- 8/7/20 - Stations 29 and 30 lost the high leg of utility power. BPW pumped down the stations and restored the utility power and the stations were returned to service.

- 8/12/20 - WMES Staff replaced insert on pump #1 at station #8. Returned to service.
- 8/14/20 - Station #8 pump #1 lost prime. BPW pumped the wet well and WMES staff returned the pump to service.
 - Freemire Associates replaced P/C Board for pump #1 at Station #22.
- 8/17/20 – Lift Station #22 was pumped out by CDI. Freemire replaced pump #2 and the lift station was returned to service.
 - Josh Gritton and GMB visited Lift Stations #1 and #2
 - WMES staff unclogged Lift Station #4 pump #2 and returned to service.
- 8/18/20 – WMES staff unclogged Lift Station #4 pump #2 and returned to service.
- 8/23/20 – Lift Station #9 called out an alarm for high level. Ran the pump in hand and pumped down the station
- 8/24/20 - BPW staff pumped out Station #9
- 8/25/20 - WMES staff replaced a float at Station #6. BPW notified to put on the list to clean.
- 8/28/20 - Call out for an alarm at Lift Station #9. No issues were found.
 - Lift Station #74 called out for a high level alarm. Pump #1 was shorted out to ground. The pump was pulled for repair. WMES contacted Hills Electric to pick up the pump for a rush repair. CDI was called to pump down the lift station.
- 8/29/20 – Lift Station #74 called out for a high level alarm. Pump #2 was unable to keep up with the incoming flow. CDI pumped down the lift station.
- 8/30/20 – WMES staff installed a spare pump for Lift Station #74 and returned to service.
- 8/31/20 – WMES staff removed pump #2 at Lift Station #74 and removed debris. Pump was reinstalled and returned to service. Hills Electric returned the repaired pump.

Plant Activities

- 8/3/20 – Train #1 shut down during weekly programmed maintenance clean. Performed a manual maintenance clean and put train back online with no further issues.
 - Reviewed flow settings in preparation for impending hurricane.
 - A manual maintenance clean was performed on all 4 trains anticipating higher flows.
- 8/4/20 – Membrane Digester VFD was inoperable. WMES will install a replacement.

- 8/5/20 – During the VFD replacement, WMES staff detected no communications between digester VFD and PLC. WMES requested Josh Gritton at the BPW troubleshoot the communications.
- 8/6/20 – Digester communications were established and are operating normally.
 - George and Sons hauled two trailer loads of dried sludge.
 - Sludge area cleaned and deodorizer was sprayed onto anoxic tank of digester.
- 8/10/20 – GMB and Josh Gritton worked on MTU communications.
 - Kuhn Construction worked on new drying bed test pits.
- 8/12/20 – BPW General Manager Darrin Gordon and DNREC representative onsite inspecting the marsh area as a follow-up to the December 2019 incident.
 - Digester Basement cleaned by WMES staff.
 - Josh Gritton and BPW electrician worked on the main plant gate and replaced the batteries in the AED machine.
- 8/13/20 – CDI hauled 31,200 gallons of sludge from the digester.
- 8/14/20 – Darrin Gordon onsite with new Board members for tour.
- 8/17/20 – WMES Staff installed the repaired motor for membrane blower. Blower was returned to service.
- 8/19/20 – After arrival onsite for morning operations, WMES staff found the plant offline. WMES activated the Lewes WWTP Emergency Action Plan. Notification was made to BPW, WMES Management, and DNREC. BPW and WMES worked together to troubleshoot the shutdown and return the plant to service. Troubleshooting identified an issue with the Ethernet switch that provides communication between the main PLC, redundant PLC and the alarm system. After communication was restored, BPW staff identified a 24 volt power supply also failed and needed to be replaced. BPW and WMES staff worked with Suez Technical Support to restart the PLC program and return the plant to service. During the shutdown, the plant received 1.25" of rain which lead to approximately 2,000 gallons to overflow from the plant. WMES staff worked to limit the overflow and used Vac Truck services from CDI for site cleanup.
 - BPW asked for WMES operations staff to provide overnight monitoring. No issues during the overnight shift.

- DNREC requested several samples in the overflow area. WMES submitted the samples to Envirocorp Lab for testing and results will be sent to DNREC.
- Jena Saxton from DNREC visited the plant to view the overflow area. DNREC was pleased with the cleanup performed by WMES staff.
- 8/20/20 – Darrin Gordon and Austin Calaman from BPW were onsite.
 - 27,000 gallons removed from Digester by CDI
 - Took samples per DNREC request.
- 8/21/20 – Keystone Engineering and Josh Gritton from BPW worked on RTU and communication issues.
 - Notified Josh Gritton at BPW of influent flow data issues on SCADA.
 - Suez Technical Support, Josh Gritton and Keystone Engineering worked on program issues and troubleshooting the backup PLC.
 - Keystone and Josh Gritton repaired RTU I/O failures and communications.
- 8/22/20 - Plant was checked two times each day over the weekend per BPW request
- 8/23/20 – Plant was checked two times each day over the weekend per BPW request.
- 8/24/20 – Breakwater Construction repaired air leaks on the stainless steel air lines for the membrane chemical feed system.
 - Sam Schlegel from WMES was onsite at the request of BPW to evaluate adding Point Watch to the plant for additional alarms.
 - 5 day letter for the August 19, 2020 overflow was submitted electronically to Nicole Smith at DNREC.
- 8/25/20 – WMES staff removed and replaced membrane blower with a spare unit. Blower will be sent to Hills Electric for repairs.
 - Breakwater Construction pulled and sprayed down one cassette from train #3&4.
 - WMES staff inspected and documented each cassette. No issues noted.
- 8/26/20 – Breakwater Construction pulled and sprayed down one cassette from train #1&2.
 - Breakwater Construction repaired Micro C and Alum chemical lines.
 - Josh Gritton and Suez Technical Support worked on backup PLC program.
 - WMES staff inspected and documented each cassette. No issues noted.
- 8/27/20 – Macerator contactor was found inoperable. Replacement part was ordered.
 - Breakwater Construction continued work on the Chemical lines.

- 8/28/20 – 14,000 gallons sludge removed from digester by CDI
 - Repaired leak on the chlorine line for the membrane maintenance clean system.
- 8/31/20 – Breakwater Construction pulled a second cassette from train #1 for inspection. No deficiencies noted. WMES staff inspected and documented the cassette.

SAFETY INFORMATION

- No work place injuries reported. Days without workplace injury: 253
- Performed monthly PPE inspection. No deficiencies noted.
- Performed monthly eyewash station and fire extinguisher inspections. No deficiencies noted.
- Annual Fire Extinguisher inspection completed by Hoopes Fire Prevention, Inc.

Additional Information

- Bruce Patrick and Paul Peris from WMES attended the August 2020 Lewes BPW monthly meeting remotely via Zoom.
- WMES staff, Paul Peris, James Taylor and John Marion attended the Zoom training for the Suez Insight Monitoring System on August 13, 2020.
- As requested by BPW, WMES is using an odor control product in the digester, drying beds and headworks daily.

Open Items

No open items at this time.

Attachments

- August 2020 Influent and Effluent Report
- August 2020 TMP chart for Kubota Digester Membranes
- August 2020 Influent Flow vs. Rainfall Chart
- August 2020 Suez Bi-Monthly Reports
- August 2020 MLSS Chart
- August 2020 Sussex County pumpage numbers to Lift Station #4
- August 2020 E-DMR
- August 2020 Nutrient Offset Report
- 2020 Compliance Data Charts (New)
- Corrective Action Items Summary