

**WHITE MARSH**  
ENVIRONMENTAL SYSTEMS, INC.

A Middlesex Water Company Affiliate

January 12, 2017

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

**Subject: Monthly Report, December 2017**

Mr. Gordon,

Attached is a summary of the Operations and Maintenance activities at the Board's lift stations and wastewater treatment plant, for the month of December 2017. Please direct any questions to my attention. Thank you.

Sincerely,



Mike Evans  
District Manager  
Tidewater Utilities, Inc.

## I. Effluent Quality and Compliance

- Discharge Monitoring Report submitted to DNREC with 100% compliance for the month.

December 2017 Effluent Testing

Sample Data	Total Nitrogen	Total Phosphorus	BOD	TSS	Enterococcus
Average:	7.75 mg/L	0.65 mg/L	<2.40 mg/L	<0.63 mg/L	<1.0 Col.
Maximum:	N/A	N/A	<2.40 mg/L	<1.00 mg/L	1.0 Col.
Permit Limit:	8 mg /L average	2 mg /L average	15 mg/L average 23 mg/L MAX	15 mg/L average 23 mg/l MAX	10 Col. average

Maximum daily flow 0.6936 MGD  
Monthly average flow 0.5678 MGD

2017 Annual Effluent Testing

Sample Data	Total Nitrogen	Total Phosphorus	BOD	TSS	Enterococcus
Average:	3.35 mg/L	0.91 mg/L	<2.40 mg/L	<0.51mg/L	<1.09 Col.
Maximum:	7.7 5mg/l	1.59 mg/l	<2.40 mg/L	0.70mg/L	10 Col.
Permit Limit:	8 mg /L average	2 mg /L average	15 mg/L average 23 mg/L MAX	15 mg/L average 23 mg/l MAX	10 Col. average

Annual Maximum flow 1.2233 MGD  
Annual average flow 0.65283 MGD

## II. Activities

### STATION MAINTENANCE PERFORMED

- Pump Station #4 (Gills Neck Rd and Savannah) construction initiated to revamp sewer collection system.
- GMB connected a new influent pipe into station #4's wet well. A Lewes WWTP Operator monitored and controlled levels while GMB contractor was drilling into the station.
- Station #4 pumps cavitated when the level in the wet well fell below one foot. The pumps had to be primed. New incoming influent pipe is set at a lower elevation, requiring level settings to be changed.

### MAINTENANCE PERFORMED

- Recurring Digester shut downs throughout the month reduced sludge dewatering time. The digester will shut down when the air diffuser valve opens or closes during an air scouring. Air scouring is programmed to occur at 1 am and 1 pm. The program cannot be changed in the Allen Bradly PLC externally by an Operator. The valve is not opening or closing

completely, causing a fail to close or open alarm Operators repeatedly reset digester during the day and inspected the valve, the actuator. Tieder was called in to inspect the PLC and programming. It has been determined that the air diffuser valve needs to be replaced. It was also determined that an analysis of the Allen Bradley PLC programing is necessary to find potential process errors.

- TUI operations and maintenance staff worked on electric at manholes 5 and 9. Electric work completed to remove and replaced failed sump pumps.
- Communication: Communication Fail alarms throughout the month of December. Informed BPW's IT. IT reset all com fails two times in December. BPW IT determined a new PLC is necessary.

### **SAFETY INFORMATION**

No work place injuries.

PPE inspected.

Eyewash and fire extinguisher inspections conducted.

### **ADDITIONAL INFORMATION**

- A meeting with BPW manager, Tidewater district manager, engineers, diver, plant operators, and pipe specialists was held to discuss details pertaining to the effluent outfall pipe video scoping. Weather permitting, it will happen in January.
- A presentation on ceramic membrane technology was held at TUI's Oak Orchard that was attended by TUI and BPW staff.



NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different):

NAME: City of Lewes - Board of Public Works LBPW  
ADDRESS: 116 American Legion Road, Lewes, DE 19958 US  
FACILITY: Howard Seymour Water Pollution Treatment Plant

DE0021512 PERMIT NUMBER  
001 DISCHARGE NUMBER

REPORT DESIGNATOR: A  
DATA ENTRY COMPLETE: 1/11/2018  
REPORT SUBMITTED BY: gloria.lechick@sbservic.es.com  
STATUS OF SUBMISSION: Submitted for Signature

LOCATION: 116 American Legion Road, Lewes, DE 19958 US  
FROM: 2017 12 01 TO: 2017 12 31

#	PARAMETER	QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AV. RANGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM			
1/1	Flow	0 - 578	0.6936	Mill Gal/Day				0	99/99	Recorder
	Gross Effluent (50050)	No Limit   Monitoring Req'd	No Limit   Monitoring Req'd	Mill Gal/Day	No Limit   Monitoring Req'd	No Monitoring Required		-	99/99	Recorder
1/2	Dissolved oxygen (DO)				7.1	8.7		0	99/99	Measured
	Gross Effluent (00300)	No Monitoring Required	No Monitoring Required		No Limit   Monitoring Req'd	No Limit   Monitoring Req'd		-	99/99	Measured
1/3	pH				7.4	7.7		0	01/01	Grab
	Gross Effluent (00400)	No Monitoring Required	No Monitoring Required		6	9		-	01/01	Grab
1/4	Enterococcus							0	01/07	Grab
	Gross Effluent (37639)	No Monitoring Required	No Monitoring Required		<1			-	01/07	Grab
1/5	BOD5	<11.25	<13.16	lbs/Day	No Monitoring Required	No Monitoring Required		0	01/07	Comp 8
	Gross Effluent (00370)	188	288	lbs/Day	No Monitoring Required	No Monitoring Required		-	01/07	Comp 8
1/6	TSS	<3.03	<5.48	lbs/Day	No Monitoring Required	No Monitoring Required		0	01/07	Comp 8
	Gross Effluent (00530)	188	288	lbs/Day	No Monitoring Required	No Monitoring Required		-	01/07	Comp 8
1/7	Total Nitrogen	36.7	36.86	lbs/Day	No Monitoring Required	No Monitoring Required		0	01/30	Comp 8
	Gross Effluent (00600)	100	No Limit   Monitoring Req'd	lbs/Day	No Monitoring Required	No Limit   Monitoring Req'd		-	01/30	Comp 8

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT: \_\_\_\_\_ TELEPHONE: \_\_\_\_\_  
 ATTACH DIGITAL SIGNATURE RECEIPT FROM CROMERRI



PERMITTEE NAME/ADDRESS (include Facility Name/Location if different):

NAME: City of Lewes - Board of Public Works LPW  
 ADDRESS: 116 American Legion Road, Lewes, DE 19858 US  
 FACILITY: Howard Seymour W/ at Reclamation Plant

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

DE0021512 PERMIT NUMBER  
 001 DISCHARGE NUMBER  
 DE0021512 MONITORING PERIOD FROM 2017 12 01 TO 2017 12 31  
 STATUS OF SUBMISSION  
 REPORT DESIGNATOR: A  
 DATA ENTRY COMPLETE: 1/11/2018  
 REPORT SUBMITTED BY: gloria.leafchick@siscs.wv.gov  
 Submitted for Signature

PARAMETER	QUANTITY OR LOADING	QUANTITY OR LOADING			QUALITY OR CONCENTRATION			UNITS	NO. OF ANALYSIS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	MINIMUM	AVERAGE	MAXIMUM	MINIMUM				
2/1 Phosphorus, Total	3.08	3.09	No Limit	No Monitoring Required	0.85	0.85	mg/l	0	01/30	Comp 8	
Gross Effluent (00865)	PERMIT REQUIREMENT	2E	Monitoring Req'd	No Monitoring Required	2	No Limit	mg/l	-	01/30	Comp 8	

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all relevant comments here)

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

ATTACH DIGITAL SIGNATURE RECEIPT FROM (CROMERY)

TELEPHONE

DATE

YEAR MONTH DAY

DATE

DATE

CONTRACT UNDER RESULT OF ANY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER THE DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PERSONNEL WHO HAVE THE SKILLS, TRAINING AND EXPERIENCE TO ACCURATELY MEASURE, MONITOR, AND REPORT POLLUTANT CONCENTRATIONS, THE INFORMATION REPORTED IS TO THE BEST OF KNOWLEDGE AND BELIEF TRUE, ACCURATE, AND UPON THE BASIS OF THE BEST AVAILABLE INFORMATION FOR REPORTING VIOLATIONS.

# Submission Receipt

Copy of Record: 34176 Confirmation ID: r201811234176

Site: Howard Seymour Water Reclamation Plant  
Site ID: DE0021512

Submission: Discharge Monitoring Report for DE0021512 Howard Seymour Water Reclamation Plant Outfall: 001, December, 2017

File Name: 201712-1172-60660265 File Type: pdf

Report: DMR Status: Signed

Hash of Data Document:  
5c3b544d7d0951fd05d2423c12089dd127a962645b702fb3b1f36813282a8

Data Entry Completed: 1/11/2018 3:10 PM  
By: Gloria Letchick (gloria.letchick@stservices.com)  
From: 107.22.180.198

Email of Submitter: Gloria.Letchick@STServices.com

Signed: 1/12/2018 3:27 PM

By: Ronald Griffith (rgriffith@tuiwater.com)  
Email of Signator: rgriffith@tuiwater.com  
From: 107.234.202

Token Used When Signed: DgERDVfF+hvTjUG1zHZOO12X-H6JLQJgsFTb7hgsw=

PRELIMINARY BOARD DOCUMENT

**LEWES WWTF**  
**NUTRIENT OFFSET REPORT**  
**2017**

MONTH	Days	Average Monthly Flow	Monthly Average TN mg/L	Total Monthly TN Discharged Lbs.	TN Based 11.8 lbs Manure Offset Required Lbs.	Poultry Manure Relocated		Poultry Manure Offset Balance Lbs.	Monthly Average TP mg/L	Total Monthly TP Discharged Lbs.	TP Based 11.8 lbs Manure Offset Required Lbs.
						Tons	Lbs.				
Carry Over								207,623.58			
January	31	0.6166	1.93	317.57	3630.53			203,983.05	0.51	81.30	959.36
February	28	0.5773	2.86	345.53	4549.60			199,443.44	0.86	115.94	1368.06
March	31	0.5771	4.57	681.86	8045.94			191,387.50	0.49	73.11	862.69
April	30	0.6471	1.91	309.24	3649.00			187,748.49	0.59	95.52	1127.18
May	31	0.7316	3.46	654.45	7722.53			180,025.97	1.17	221.30	2611.38
June	30	0.6829	5.37	917.53	10766.81			169,199.15	1.55	264.84	3125.06
July	31	0.7325	2.29	433.68	5117.44			164,081.71	0.88	166.65	1966.53
August	31	0.7728	2.18	435.56	5139.56			158,942.06	1.44	287.71	3395.00
September	30	0.6974	2.19	382.13	4509.16			154,432.90	1.29	225.09	2656.08
October	31	0.6112	2.15	339.74	4008.96			150,423.95	0.74	116.93	1379.83
November	30	0.6155	3.58	551.31	6505.50			143,918.45	0.84	129.36	1526.43
December	31	0.5678	7.75	1137.69	13424.77			130,493.68	0.65	95.42	1125.95
Year Balance								130,493.68			

Comments:

Authorized Signatory: Donald Lee Griffith DATE: 1/12/18

