

MINUTES
OPERATIONS & ENGINEERING COMMITTEE MEETING
APRIL 14, 2020 (VIRTUAL)

Attendants: Messrs. Boland, Cherico, DiSantis, Hurst, Kester, Knapp, Lehman, Lenton, Lucas, Monaghan, Mullen, Pileggi, Pisani, Willert, and Mesdames Amadio, Bonnett, Caulk, and Sage.

1. ROLL CALL: Eight members of the DELCORA Board of Directors were present at the meeting constituting a quorum.

There were no members of the public present.

2. PLEDGE OF ALLEGIANCE: All parties present at the meeting recited the Pledge of Allegiance.

3. BID OPENING: Mr. Mullen stated that there were no bid openings at this time.

4. MONTHLY REPORT – DIRECTOR OF OPERATIONS & MAINTENANCE: Mr. DiSantis highlighted certain items in the written report. Mr. DiSantis stated that there were no violations at the W RTP or at any of the remote facilities during March. Flows were consistent with February and also were very close to the year-to-date average. There were six reportable incidents during the month. Five of these were for emissions; two were operator error issues and the revised standard operating procedures have been reinforced with staff to address these emissions incidents. The other three incidents were equipment failures. He also stated that there was one dry weather sanitary sewer overflow in Chester. This was due to a blockage caused by a landscaping contractor pushing a manhole frame and cover off of its base thereby allowing debris to fall into the sewer line. The blockage was cleared and this issue was addressed with the contractor.

Continuing, Mr. DiSantis mentioned the efforts put in place due to the COVID-19 pandemic as of March 16th. All O&M staff on-site has been cut in half and, so far, all is working out well. Morale has been good among the employees and there have been no positive tests for COVID-19. Mr. DiSantis thanked Bob Willert and the Board for their support during this time. Continuing, he reported that it was a good month regarding solids handling at 75 dry tons per day resulting in an 84% uptime on the incinerators. Regarding trucked waste, he stated that there were 24.8 million gallons received and we are ahead of budget at this time. Mr. DiSantis had no additional comments to the written report. The Committee had no questions regarding the written report.

5. MONTHLY REPORT – DIRECTOR OF ENGINEERING: Mr. Hurst highlighted certain items in the written report. He reported that the 2018 project continues to draw to a conclusion. The last permanent substation (#1) went online this month, a notable milestone, and we are now on all three of our permanent substations and the new switchgears and new feeders. All of the electrical backbone is new and operational. Some MCC's are new and operational but there a few MCC's in the smaller buildings that are left to be replaced. Regarding the Long Term Control Plan (LTCP), Mr. Hurst

stated that the team is working on a response to the EPA letter. Last month, DELCORA met with the EPA to discuss the first EPA letter received. Out of that meeting, EPA requested a response to several action items and DELCORA responded with a term sheet. We are now awaiting a response from the EPA to that term sheet. Mr. DiSantis contacted EPA today about their response to the term sheet and we hope to hear from them soon. We are looking forward to EPA approval of the LCTP prior to the closing with Aqua. Addressing a comment from Mr. Willert, Mr. Hurst stated that the estimate to implement the combined sewer system is now about \$100 million dollars' worth of capital, as opposed to the previous estimate of \$87 million, and the implementation period is between now and 2032 if the LTCP is approved this year.

Under Design, Mr. Hurst stated that design work continues on the Eastern Service Area (ESA) alternatives and is on schedule. The Design Team recently met with the leadership team within DELCORA to provide an update. Mr. Hurst reported on two other design projects. One is the separation of CSO #5, the creek that comes out of Memorial Park. The project consists of redirecting that creek flow directly to the Delaware River. The redirect will increase our percent capture of our combined sewer system when it rains. The other pipeline design project involves redirecting the Crum Creek Pump Station located under the ramp at Blue Route South to I-95 North. The new pipeline will direct flow away from the Central Delaware Pump Station directly to the force main to eliminate frequent sanitary sewer overflows at that pump station. The necessary easements are being acquired. In approving the Boeing easement, they have requested DELCORA to assist them in directing the flow from their pump station directly to the WRTP. Mr. Hurst had no additional comments to the written report. The Committee had no questions regarding the written report.

6. MONTHLY REPORT – ENGINEERING ADVISOR: Mr. Lehman highlighted several on-going projects on the written report, which had been provided to all Board members in advance of today's meeting. He stated that the Annual Chapter 94 Report for the Eastern Service Area was submitted to the Philadelphia Water Department in early March. The report for the Western Service Area was submitted to DELCORA for submission after insertion of the Annual Pretreatment Report in mid-March and is awaiting information that the Southeast Regional Office has reopened before it can be submitted to PADEP. SWMM modeling is ongoing and is submitted every month. The metering program is collecting data, processing it, and submitting it to DELCORA for review. Regarding the ARV repairs, Weston submitted a change order per DELCORA's request based upon a change in the direction of the project and the timing of the project given the current COVID-19 situation. Mr. Lehman had no additional comments to the written report. The Committee had no questions regarding the written report.

7. CHANGE ORDERS: Mr. Mullen stated that there were no Contract Change Orders at this time.

8. REQUEST FOR APPROVAL OF CONTRACT CLOSE-OUT & FINAL PAYMENT: Mr. Mullen stated that there were no Contract Close Outs at this time.

9. AUTHORIZATION FOR PROFESSIONAL SERVICES:

- A. Raftelis Financial Consultants, Inc. – Proposal Dated February 26, 2020 – For Professional Services For A Trucked Waste Disposal Cost Of Service Study – Total Amount Not To Exceed \$55,000.00 (Capital Funds)

Mr. Hurst provided an overview of the above proposal. He noted that Raftelis is a specialty rate consulting firm that has done work for many municipal entities around this area. DELCORA wanted to formalize an analysis of the hauled waste program to determine what portions of the program are the most profitable. Other firms were solicited but no other proposals were received.

It was the consensus of the Committee to recommend Board approval of the above proposal. This item will be placed on the agenda for the April 21st Board meeting.

10. AUTHORIZATION TO ADVERTISE FOR BIDS:

- Contract No. PFR-2004-C – Springhill Farm Sanitary Force Main Extension

Mr. Hurst noted that this a small project requiring 500 feet of pipe to connect the force main from the pump station to the sewer system.

It was the consensus of the Committee to recommend Board approval of the above contract advertisement. This item will be placed on the agenda for the April 21st Board meeting.

ADJOURNMENT: It was moved by Mr. Kester, seconded by Mr. Monaghan, and unanimously carried to adjourn the regular meeting at 3:50 p.m.



INTER-OFFICE MEMORANDUM

TO: Robert J. Willert, Executive Director
FROM: Michael J. DiSantis, Director of Operations and Maintenance *mjd/bab*
SUBJECT: Board Report for the April 14, 2020, O & E Committee Meeting
DATE: April 9, 2020

- I. **PROCESS INFORMATION** – There were no violations at WRTP during the month. March data points of interest are:

A.	<u>Liquid Process Averages:</u>	<u>Month:</u>	<u>YTD:</u>
1.	Flow	35.89 MGD	35.70 MGD
2.	TSS	15 mg/L	16 mg/L
3.	cBOD ₅	11 mg/L	12 mg/L
4.	cBOD ₂₀ % Removal	96.38%	96.3%
5.	cBOD ₂₀ Loading	4,939 lbs.	5,218 lbs.
B.	<u>Solids Processing:</u>	<u>Month:</u>	<u>YTD:</u>
1.	Dry Tons Treated -	2332.90	2,128.37
2.	Dry Tons/Day -	75.25	70.17
3.	Total Gallons Pumped -	13,353,611	12,622,148
4.	Average Feed Solids -	4.20%	4.07%
5.	Average Cake Solids -	23.02%	23.18%
6.	Pounds of Polymer/DT -	187.04	186.67
7.	MCF/DT -	4.06	4.01
8.	Monthly Cost/DT -	\$34.24	\$33.99

C. Station Meter Readings: (Total flow values are in mg and daily flow is in mgd.)

March 2020	Total Flow	Daily Avg	High Daily	Low Daily
Darby Creek	595.92	19.22	28.69	16.78
Muckinipates	138.18	4.46	7.74	3.63
Central Delaware	306.55	9.89	15.20	8.34
Chester	239.86	7.74	14.73	6.16
Marcus Hook	24.45	0.79	1.40	0.62
Eddystone	11.45	0.37	0.55	0.31
Naamans Creek	65.60	2.12	3.07	1.72
Chi Pit	16.37	0.53	0.93	0.40
Chester-Ridley	139.33	4.49	5.65	4.09
Edgmont	3.52	0.11	0.13	0.09

II. MONTHLY FACILITY ACTIVITIES

A. Operations Highlights/Key Events

1. W RTP received 98% of the flow from the Central Delaware Pump Station.
2. There were six reportable incidents during the month. Five incidents were for emissions. Two incidents were caused by operator error. We have reinforced the standard operating procedures with staff to avoid future issues. The remaining three emissions incidents were caused by equipment issues. One failure was related to corrosion issues, while the other two were equipment failures – an incinerator thermocouple and an RTO poppet valve. Lastly, there was a dry weather sanitary sewer overflow in Chester. The cause was found to be a blockage caused by excessive landscaping debris which had been accidentally put into the system by a landscaping contractor. SM staff cleared the blockage and addressed this issue with the contractor.
3. Response to the Covid-19 Pandemic became the focus of everyone at DELCORA. Effective 3/16, all O&M staff were essentially cut in half then put on a one week on, one week off, schedule. Additionally, all CDC recommendations for the workplace were implemented and remain in place. I am very happy to report that as of this writing, we have not had anyone test positive for Covid-19. I want to thank the Executive Director and the Board of Directors for their leadership and support during this time. More importantly, I want to recognize and thank all of the men and women at DELCORA who continue to work every day to provide essential services to all of our customers.
4. The average daily flows in March were very similar to year-to-date averages. Due to on-going construction, there continues to be multiple tank outages, process interruptions, and operation of interim equipment. Plant performance continued to meet permit parameters and operational targets. Primary clarifier performance remained very good at 72% TSS removal. GBT performance continued to meet

the cake solids operational target but the filtrate TSS was slightly over the target at 103 mg/L. Phosphoric acid addition continued as needed. In solids handling, the average daily tonnage processed was 11% higher than the year-to-date average at over 75 dry tons per day. Incinerator up time was 84% which allowed for completion of maintenance tasks. There were 41 loads hauled to compost during the month. Operational and budgetary targets for polymer and natural gas usage were met, resulting in low processing costs. Chemical addition of H₂S reduction continued as needed while progress was made on the engineering solution. In remote operations, there were no violations at any of the facilities.

B. Maintenance Highlights/Key Events

1. There were no system failures during the month. In addition to routine planned facility and collection system O&M; work on in-house projects and support of capital projects remains a significant focus of the maintenance departments. During the month, Central Maintenance also worked on belt filter press repairs, incinerator and related systems repairs, inventory control, various pump repairs, and providing labor to support plant operations. In addition to routine tasks and support of plant and remote operations, Sewer Maintenance's focus remained on area line cleaning and televising, air relief inspections and maintenance, response to One-Calls and sewer complaints, metering support, various line repairs and replacement, and the continued support of capital projects

C. Trucked Waste Business

1. During the month, 24.8MM gallons were received. The projected revenue for the month is expected to meet our monthly target.

MJD:bab

attachments (NPDES DMR/Strategic Plan Reports)

cc: M. Warholic
C. Lenton
W. Smith
C. Mariani
S. Gober
File

Bonnett, Barbara

From: depgreenporthelpdesk@state.pa.us
Sent: Tuesday, March 24, 2020 3:34 PM
To: DiSantis, Michael; DiSantis, Michael; Raymond Rios; Piro, Ian; Mariani, Chris; Petrova, Mihaela; Cartafalsa, James
Subject: Your eDMR Report Has Been Received For Permit No. PA0027103

This email is to confirm that the following report was received by DEP through the eDMR system:

Facility Name: DELCORA STP
Permit Number: PA0027103
Report Frequency: Monthly
Report Type: DMR
Reporting Period: 02/01/2020-02/29/2020
Report Due Date: 03/28/2020

Submitted By: Michael DiSantis
Submission Id: 199003
Submission Status: Received
Submission Type: Original

To view the details of this report, access the eDMR system through DEP's [GreenPort](#) and select the link for View/Revise Submitted.



DELAWARE COUNTY REGIONAL WATER QUALITY CONTROL AUTHORITY
P.O. Box 999 • Chester, PA 19016-0999

March 24, 2020

SUBMITTED ONLINE VIA PADEP eDMR SYSTEM

William Collins
Water Quality Specialist – Water Management
PA Department of Environmental Protection
2 East Main Street
Norristown, PA 19401

Dear Mr. Collins:

Enclosed are DELCORA's Discharge Monitoring Report, Laboratory Data Reports, and CSO Report for February 2020.

All parameters were in compliance during the month. Parameter averages for February 2020 were: Flow – 36.15 MGD; cBOD₅ – 14 mg/L; TSS – 19 mg/L; cBOD₂₀ % removal – 93.96%; and cBOD₂₀ – 6,442 lbs/day.

Should any further information be required concerning this report, please contact me at 610-876-5523, ext. 264.

Respectfully submitted,

Electronically signed & submitted

Michael J. DiSantis
Director of Operations and Maintenance

MJD:bab
enclosures

cc: w/enclosures
US EPA - NPDES DMR (3WP42) – can access through DEP website
Delaware River Basin Commission – can access through DEP website
C. Mariani via email with server link
File

ADMINISTRATION

☐ 610-876-5523

☐ FAX: 610-876-2728

CUSTOMER SERVICE/BILLING

☐ 610-876-5526

☐ FAX: 610-876-1460

PURCHASING & STORES

☐ 610-876-5523

☐ FAX: 610-497-7959

PLANT & MAINTENANCE

☐ 610-876-5523

☐ FAX: 610-497-7950

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3800-FM-BCW0462 12/2016



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
DISCHARGE MONITORING REPORT (DMR)

NAME: DELCORA
ADDRESS: 100 EAST FIFTH STREET P.O. BOX 999, CHESTER PA, 19316-9999
FACILITY: DELCORA STP
LOCATION: 3251 W FRONT ST, CHESTER PA, 19013-1829
STAGE: Final Effluent

PA0027103
PERMIT NUMBER

001
OUTFALL NUMBER

Reporting Frequency: Monthly
DMR Effective From: 02/01/2020
DMR Effective To: 02/29/2020
Permit Expires: 04/30/2018
Permit Application Due: 11/01/2017
No Discharge: ☐

MONITORING PERIOD			
YEAR	MO	DAY	TIME
2020	02	01	01
2020	02	29	23

PARAMETERS REPORTED VALUES

PARAMETERS REPORTED VALUES			QUANTITY OR LOADING			QUANTITY OR CONCENTRATION			SAMPLING FREQUENCY	SAMPLING TYPE
PARAMETER	VALUE	UNITS	VALUE	UNITS	VALUE	VALUE	UNITS			
pH (00400)	Sample Measurement	6.0	6.0	6.0	6.0	6.0	6.0	6.0	1day	Grab
	Permit Requirement	6.0	6.0	6.0	6.0	6.0	6.0	6.0	1day	Grab
	Sample Measurement	6.0	6.0	6.0	6.0	6.0	6.0	6.0	1day	Grab
Total Suspended Solids (00000)	Sample Measurement	11000	11000	11000	11000	11000	11000	11000	1day	24-Hr Composite
	Permit Requirement	11000	11000	11000	11000	11000	11000	11000	1day	24-Hr Composite
	Sample Measurement	11000	11000	11000	11000	11000	11000	11000	1day	24-Hr Composite
Oil and Grease (00000)	Sample Measurement	6500	6500	6500	6500	6500	6500	6500	1day	Grab
	Permit Requirement	6500	6500	6500	6500	6500	6500	6500	1day	Grab
	Sample Measurement	6500	6500	6500	6500	6500	6500	6500	1day	Grab
Ammonia-Nitrogen (00010)	Sample Measurement	11.81	11.81	11.81	11.81	11.81	11.81	11.81	1week	24-Hr Composite
	Permit Requirement	11.81	11.81	11.81	11.81	11.81	11.81	11.81	2month	24-Hr Composite
	Sample Measurement	11.81	11.81	11.81	11.81	11.81	11.81	11.81	1week	24-Hr Composite
Nitrite as N (00015)	Sample Measurement	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1week	24-Hr Composite
	Permit Requirement	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2month	24-Hr Composite
	Sample Measurement	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1week	24-Hr Composite
Nitrate as N (00000)	Sample Measurement	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1week	24-Hr Composite
	Permit Requirement	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2month	24-Hr Composite
	Sample Measurement	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1week	24-Hr Composite
Total Kjeldahl Nitrogen (00025)	Sample Measurement	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1week	24-Hr Composite
	Permit Requirement	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2month	24-Hr Composite
	Sample Measurement	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1week	24-Hr Composite
Cyanide, Total (00070)	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Permit Requirement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
Chlorobenzene/Sulfone (04000)	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Permit Requirement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
Cresolins, Total (01027)	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Permit Requirement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
Copper, Total (01042)	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Permit Requirement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
Lead, Total (01051)	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Permit Requirement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
Zinc, Total (01000)	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Permit Requirement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
Dichloromethane/Fluore (23010)	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Permit Requirement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
Fluore (00000)	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Permit Requirement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1month	24-Hr Composite
Total Residual Chlorine (TRC) (00000)	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1day	Grab
	Permit Requirement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1day	Grab
	Sample Measurement	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1day	Grab

[illegible]

3800-FM-BCW0462 12/2016



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
DISCHARGE MONITORING REPORT (DMR)

NAME: DELCORA
ADDRESS: 100 EAST FIFTH STREET P.O. BOX 999, CHESTER PA,
19018-0999
FACILITY: DELCORA STP
LOCATION: 3201 W FRONT ST, CHESTER PA, 19013-1829
STAGE: Percent Removal

PERMIT NUMBER
PA0827103

OUTFALL NUMBER
001

Reporting Frequency: Monthly
DMR Effective From: 02/01/2020
DMR Effective To: 02/29/2020
Permit Expires: 04/30/2018
Permit Application Due: 11/01/2017
No Discharge: ☐

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
2020	02	01	2020	02	29

PARAMETERS REPORTED VALUES

PARAMETER	QUANTITY OR LOADING			QUANTITY OR CONCENTRATION			SAMPLING FREQUENCY	SAMPLING TYPE
	VALUE	UNITS	VALUE	VALUE	UNITS	VALUE		
BOD, carbonaceous, 20 day, 20 C (BOD ₂₀)	---	---	---	---	---	---	1 day	24-hr Composite
Sample Measurement	---	---	---	---	---	---	1 week	24-hr Composite
Permit Requirement	---	---	---	---	---	---		
Facility Sampling Data Comments								

3800-FM-BCW0462 12/2016



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
DISCHARGE MONITORING REPORT (DMR)

NAME: DELCORA
ADDRESS: 100 EAST FIFTH STREET P.O. BOX 999, CHESTER PA,
19316-0999
FACILITY: DELCORA STP
LOCATION: 3281 W FRONT ST, CHESTER PA, 19313-1829
STAGE: Raw Sewage Influent

PERMIT NUMBER: PA0027103
CUTFALL NUMBER: 001

Reporting Frequency: Monthly
DMR Effective From: 02/01/2020
DMR Effective To: 02/28/2020
Permit Expires: 04/30/2018
Permit Application Due: 11/01/2017
No Discharge: ☐

MONITORING PERIOD			
YEAR	MO	DAY	TO
2020	02	01	29

FROM

PARAMETERS REPORTED VALUES

PARAMETER	QUANTITY OR LOADING			QUANTITY OR CONCENTRATION			SAMPLING FREQUENCY	SAMPLING TYPE
	VALUE	UNITS	VALUE	VALUE	UNITS	VALUE		
Biochemical Oxygen Demand (BOD5) (0016)	Sample Measurement	63370	mg/L	220.00	mg/L	220.00	Weekly	24-Hr Composite
Total Suspended Solids (TSS) (0020)	Sample Measurement	84701	mg/L	253.14	mg/L	253.14	Weekly	24-Hr Composite
	Permit Requirement	84701	mg/L	253.14	mg/L	253.14	Weekly	24-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) (0005)	Sample Measurement	63327	mg/L	235.06	mg/L	235.06	Weekly	24-Hr Composite
Facility Sampling Point Comments	Sample Measurement	63327	mg/L	235.06	mg/L	235.06	Weekly	24-Hr Composite
	Permit Requirement	63327	mg/L	235.06	mg/L	235.06	Weekly	24-Hr Composite

DISCHARGE MONITORING REPORT (DMR)

ATTACHMENT DETAILS			File Name	Attachment Type	Uploaded Time	Attachment Comments
			Hauled to Municipal Waste Form_February2020.xls	Hauled-to Municipal Waste Form	2020-02-24T02:12:44-04:00	
			Hauled To Landfill FORM3 - Trashed White.xls	Other	2020-02-24T02:14:23-04:00	Hauler Totals
			Hauled to Landfill FORM3 - Trashed White.xls	Hauled-to Residential Waste Form	2020-02-24T02:15:27-04:00	
			Hauled to Present Client_February2020.xlsx	Inherent and Present Client Form	2020-02-24T02:17:16-04:00	
			Inherent & Present Client_February2020.pdf	Other	2020-02-24T02:17:16-04:00	
			Process_Covered_February2020.pdf	Process Covered	2020-02-24T02:23:15-04:00	Process Covered February 2020
			DWR Laboratory Accreditation-WRTT_February2020.doc	Laboratory Accreditation Form	2020-02-24T02:23:16-04:00	
			DWR Laboratory Accreditation-WRTT_February2020.doc	Laboratory Accreditation Form	2020-02-24T02:23:16-04:00	
			DWR Laboratory Accreditation-WRTT_February2020.doc	Laboratory Accreditation Form	2020-02-24T02:23:16-04:00	
			DWR Laboratory Accreditation-WRTT_February2020.doc	Laboratory Accreditation Form	2020-02-24T02:23:16-04:00	
			Swagge Sample 1: Unleaded Fuel_February2020.xls	Swagge Sample 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100/101/102/103/104/105/106/107/108/109/110/111/112/113/114/115/116/117/118/119/120/121/122/123/124/125/126/127/128/129/130/131/132/133/134/135/136/137/138/139/140/141/142/143/144/145/146/147/148/149/150/151/152/153/154/155/156/157/158/159/160/161/162/163/164/165/166/167/168/169/170/171/172/173/174/175/176/177/178/179/180/181/182/183/184/185/186/187/188/189/190/191/192/193/194/195/196/197/198/199/200/201/202/203/204/205/206/207/208/209/210/211/212/213/214/215/216/217/218/219/220/221/222/223/224/225/226/227/228/229/230/231/232/233/234/235/236/237/238/239/240/241/242/243/244/245/246/247/248/249/250/251/252/253/254/255/256/257/258/259/260/261/262/263/264/265/266/267/268/269/270/271/272/273/274/275/276/277/278/279/280/281/282/283/284/285/286/287/288/289/290/291/292/293/294/295/296/297/298/299/300/301/302/303/304/305/306/307/308/309/310/311/312/313/314/315/316/317/318/319/320/321/322/323/324/325/326/327/328/329/330/331/332/333/334/335/336/337/338/339/340/341/342/343/344/345/346/347/348/349/350/351/352/353/354/355/356/357/358/359/360/361/362/363/364/365/366/367/368/369/370/371/372/373/374/375/376/377/378/379/380/381/382/383/384/385/386/387/388/389/390/391/392/393/394/395/396/397/398/399/400/401/402/403/404/405/406/407/408/409/410/411/412/413/414/415/416/417/418/419/420/421/422/423/424/425/426/427/428/429/430/431/432/433/434/435/436/437/438/439/440/441/442/443/444/445/446/447/448/449/450/451/452/453/454/455/456/457/458/459/460/461/462/463/464/465/466/467/468/469/470/471/472/473/474/475/476/477/478/479/480/481/482/483/484/485/486/487/488/489/490/491/492/493/494/495/496/497/498/499/500/501/502/503/504/505/506/507/508/509/510/511/512/513/514/515/516/517/518/519/520/521/522/523/524/525/526/527/528/529/530/531/532/533/534/535/536/537/538/539/540/541/542/543/544/545/546/547/548/549/550/551/552/553/554/555/556/557/558/559/560/561/562/563/564/565/566/567/568/569/570/571/572/573/574/575/576/577/578/579/580/581/582/583/584/585/586/587/588/589/590/591/592/593/594/595/596/597/598/599/600/601/602/603/604/605/606/607/608/609/610/611/612/613/614/615/616/617/618/619/620/621/622/623/624/625/626/627/628/629/630/631/632/633/634/635/636/637/638/639/640/641/642/643/644/645/646/647/648/649/650/651/652/653/654/655/656/657/658/659/660/661/662/663/664/665/666/667/668/669/670/671/672/673/674/675/676/677/678/679/680/681/682/683/684/685/686/687/688/689/690/691/692/693/694/695/696/697/698/699/700/701/702/703/704/705/706/707/708/709/710/711/712/713/714/715/716/717/718/719/720/721/722/723/724/725/726/727/728/729/730/731/732/733/734/735/736/737/738/739/740/741/742/743/744/745/746/747/748/749/750/751/752/753/754/755/756/757/758/759/760/761/762/763/764/765/766/767/768/769/770/771/772/773/774/775/776/777/778/779/780/781/782/783/784/785/786/787/788/789/790/791/792/793/794/795/796/797/798/799/800/		

PERMIT VIOLATIONS												
Non-Compliance ID	Event Start Date	Event End Date	Transfer	Limit Type	Repeatable Value	Permit Limit	Unit	Sampling Point	Cause Of Non-Compliance	Corrective Action	Comments	
UNAUTHORIZED DISCHARGES												
Non-Compliance ID	Event Start Date	Event End Date	Date and Time Discovered	Business	Event Location	Volume (gal)	Duration (hrs)	Reaching Values	Impact On Values	Cause Of Discharge	Date and Time CSP Notified Orally	Comments

[illegible]

COMMENT DETAILS			
Comments	Operator Name	Operator Certificate Number	Operator Contact Number
	Michael J. Williams	10403	(810) 974-6523

SUBMISSION INFORMATION		TELEPHONE		DATE		
SUBMITTED BY GREENPORT USER	<p>*Pursuant to the Pennsylvania Electronic Transactions Act - Act 69, effective January 15, 2002, you are about to engage in an electronic transaction with the Commonwealth of Pennsylvania. You are submitting official information. You certify under penalty of law that this document and all attachments were prepared under your direction or supervision in accordance with a system designed to ensure that qualified personnel gather and evaluate the information submitted. Based on your inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of your knowledge and belief, true, accurate and complete. You are aware that any false information submitted is, to the best of your knowledge and belief, true, accurate and complete. You are aware that any false statement may be subject to substantial civil and criminal penalties, including 18 P.S. section 4904 (relating to unknown</p>	Michael Dsanilis	(610)	2020	03	
disanilis		SUBMITTED BY FULL NAME	AREA CODE	NUMBER	YEAR	MO
						24

OPERATIONS STRATEGIC PLAN REPORT

MARCH 2020

Missed Samples Per Month	#	YTD
Goal is zero	0	0
Deviations from Required Sampling Or Analytical Protocol	#	
Goal is 100% compliance	0	0
Samples with Analytical Results Outside of QA/QC Standards	#	
Goal is 100% compliance	6	27
Hours in Training for Month	#	
Total	18.5	37.0
DEP Approved	0.0	0.0
DEP Certified Operators	#	
Regulations Require One	12	

CENTRAL MAINTENANCE MATRIX

MARCH 2020

		CURRENT MONTH	YTD
Work Order Aging		#	
31-60 days		49	
61-90 days		4	
Over 90 days		43	
Work order hours/Available hours		%	%
**Mechanical Maintenance		93%	96%
Electrical Maintenance		92%	93%
Instrument Maintenance		90%	97%
**Includes all Preventive Maintenance			
Work Ratio Hours		# / %	# / %
Corrective		1033 / 31%	3278 / 29%
Preventive		2217 / 66%	7908 / 69%
Predictive		99 / 3%	307 / 3%
System Failures		#	#
Hours in Training		#	#
Mechanics/Helpers		NA	NA
Electricians		NA	NA
Instrument Techs		NA	NA
Call-Ins		#	#
WRTP		25	63
Pump Stations		11	31



Work Order Summary Report for Date
Range: 3/1/2020 to 3/31/2020

Asset Type	Work Order Type	Labor Hours	Labor Cost
SCHAMBER		149	4,635.34
	CLEAN GRATES	105	\$3,257.37
	CROSBY SQUARE	44	\$1,377.97
SCSOREGULATOR		161	4,999.22
	CSO INSPECTION	161	\$4,999.22
SGRAVITYMAIN		330	10,586.61
	EMERGENCY CALL IN	34	\$1,390.65
	GNET TV INSPECTION	68	\$2,163.22
	PA ONE CALL LINE LOCATING	218	\$6,685.75
	SURVEYING	11	\$346.99
SLATERALPOINT		133	5,743.95
	CLEAR LATERALS	6	\$188.64
	EMERGENCY CALL IN	104	\$4,835.64
	SEWER COMPLAINT INVESTIGATION	23	\$719.67
SMANHOLE		117	3,610.76
	MANHOLE FRAME & COVER REPLACEM	95	\$2,923.34
	MANHOLE INSPECTION	16	\$501.08
	REPLACE COVER /REPAIR RING	6	\$186.34
SMETER		38	1,187.63
	TRAFFIC CONTROL	38	\$1,187.63
SPUMPSTATION		60	1,875.34

Asset Type	Work Order Type	Labor Hours	Labor Cost
	FELTONVILLE PUMP STATION	28	\$876.65
	SEAPORT DRIVE	24	\$747.17
	WOODLAND AVE. CHADDS FORD PS	8	\$251.52
STREATMENTPLANT		252	9,435.02
	CLEAN GRIT PIT/LOAD CONTAINER	63	\$1,956.06
	EB-2	27	\$811.89
	LAKESIDE UNIT	3	\$95.47
	MISCELLANEOUS VAC WORK	12	\$374.83
	PRIMARY SCUM PIT	24	\$751.62
	SLUDGE RECEIVING	4	\$125.76
	SLUDGE TRAILER SWITCH OUT	94	\$4,292.23
	THE BEAST	26	\$1,027.17
SVARIOUS		228	7,007.02
	ENGINEERING SUPPORT	88	\$2,665.52
	EQUIPMENT MALFUNCTIONS AND REPAIRS	7	\$214.33
	MISCELANEOUS	13	\$401.75
	PARTS /TOOLS/ EQUIPMENT PROCUREMENT	26	\$811.81
	TRAFFIC CONTROL	20	\$623.05
	VEHICLE INSPECTON	74	\$2,290.57
Grand Total:		1,467	\$49,080.87



INTER-OFFICE MEMORANDUM

TO: Robert J. Willert, Executive Director
FROM: Charles N. Hurst, Director of Engineering
SUBJECT: Board Report for the April 14, 2020 O&E Committee Meeting
DATE: April 13, 2020

CONSTRUCTION PROJECTS

1. INCINERATOR MAINTENANCE AND EMERGENCY REPAIRS (#TC-1801-C)

Funding:	Capital
Design:	In-House
Inspection:	In-House
Contractor:	Industrial Furnace Company, Inc.
Contract Amount:	\$686,750.00
Percentage Paid:	56.75% - through previous month
Notice of Award:	03/20/2018
Notice to Proceed:	04/04/2018
Substantial Completion:	03/31/2020
Final Completion:	05/30/2020

2. PS-6 CONSTRUCTION, PHASE I (#TC-1707-C)

Funding:	Capital
Design:	Gannett Fleming
Inspection:	In-house
Electrical (Part D):	Philips Brothers Electrical
Contract Amount:	\$4,140,900.00
Notice of Award:	01/23/2017
Notice to Proceed:	05/30/2017
Substantial Completion:	09/21/2018
Final Completion:	11/21/2018 (Part D Final Completion 1/29/2021)

Construction is complete. General, Plumbing and HVAC contracts are closed out. Fiber Communication work remains prior to initiating the close-out process for Contract Part D Electrical. Change Order #1 was approved by the BOD for an extension in contract time to accommodate the remaining Fiber Communication work.

3. SOLIDS HANDLING UPGRADE 2016 (#TC-1608-C)

Funding:	Capital
Design:	GHD & Weston
Inspection:	In-house
General (Part A):	Allan Myers.
Contract Amount:	\$6,495,555.00
Percentage Paid:	98.31% - through previous month
Electrical (Part B):	Philips Brothers Electric
Contract Amount:	\$1,833,200.00
Percentage Paid:	90.41% - through previous month
Notice of Award:	10/17/2017
Notice to Proceed:	12/04/2017
Substantial Completion:	01/03/2019
Final Completion:	02/01/2019

The contractors have completed preparing their as-built drawings and they have been turned over to the Design Engineer for integration into the project drawings. The close out process has been initiated for Contract A. Programming work dependent on the schedule of other ongoing WRTP projects remains prior to close out for Contract B.

4. WRTP Plant Upgrades (#TC-1717-C)

Funding:	Capital
Design:	D'Huy Engineering, Inc. & Gannett Fleming
Inspection:	D'Huy Engineering, Inc.
General (Part A):	Allan Myers.
Contract Amount:	\$14,905,555.00
Percentage Paid:	84.15% - through previous month
Electrical (Part B):	Philips Brothers Electric
Contract Amount:	\$6,220,777.00
Percentage Paid:	73.78% - through previous month

Notice of Award:	05/17/2018
Notice to Proceed:	06/04/2018
Substantial Completion:	12/25/2020
Final Completion:	02/23/2021

Allan Myers has completed start-up of T-16 and made the modifications to T-15. They have resolved the issue with T-18's influent valve. They completed the concrete repair and gate work as well as the installation of the return activated sludge metering platform in T-13. They installed the return activated sludge metering piping in T-11 and T-12, and are currently installing this piping in T-14. They installed the new effluent flow meter and installed and started-up the new utility water pump P-29. Philips Brothers continues to work on wiring around the aeration tanks. They wired both the new effluent meter and P-29. They have completed the set-up of temporary power for B-1 and are removing the existing motor control center. They have pulled all their fiberoptic cable with testing still remaining.

5. MARCUS HOOK PUMP STATION & CHESTER RIDLEY CREEK PUMP STATION ELECTRICAL UPGRADES (#PR-1804-C)

Funding:	Capital
Design:	In-House
Inspection:	In-House
Contractor:	Philips Brothers Electrical Contractors, Inc.
Contract Amount:	\$789,127.00
Percentage Paid:	67.10% - through previous month
Notice of Award:	09/19/2018
Notice to Proceed:	10/15/2018
Substantial Completion:	03/14/2019
Final Completion:	05/03/2019 - Maintenance Alternate: 10/31/2020

Philips Brothers continues to complete maintenance projects at various locations. Philips Brothers completed the replacement of two electrical poles and the 15kV feeder from the pole to the high voltage switch at Muck Pump Station. They removed pump motors at Chester pump station and performed some wire/conduit modifications. Most recently, they removed a vibrating motor from Darby Creek Pump Station so it could have bearing work performed on it.

6. HVAC ENERGY SAVINGS UPGRADE (#TC-1716-C)

Funding:	Capital
Design:	In-House
Inspection:	In-House

Contractor:	CM3 Building Solutions
Contract Amount:	\$6,134,716.00
Percentage Paid:	82.17% - through previous month

Notice of Award:	9/13/2017
Notice to Proceed:	9/13/2017

Phase 2 work continues. Four air conditioners have been installed in the electric rooms at Chester PS, Central PS, Muck PS, and Darby PS. The new fan for the top of B-3 at WRTP is being manufactured and will be shipped after the virus shut-down is over.

7. SEWER MAINTENANCE (#SEW-1905-CO)

Funding:	Capital
Design:	In-House
Inspection:	In-House
Contractor:	A. J. Jurich, Inc.
Contract Amount:	\$1,141,981.00
Percentage Paid:	29.38% - through previous month

Notice of Award:	06/19/2019
Notice to Proceed:	07/16/2019
Final Completion:	08/31/2020

March maintenance work included:

- Excavation for Water Leak at PS4 in WRTP
- Removal of abandoned section of 48" FM for new Pipe installation at 3rd and Townsend Street

8. PAVING RESTORATION SERVICES – ANNUAL (#SEW-1902-CO)

Funding:	Capital
Design:	In-House
Inspection:	In-House
Contractor:	A. F. Damon, Inc.
Contract Amount:	\$959,742.50 – 2 Year Contract
Percentage Paid:	43.61% - through previous month

Notice of Award:	11/20/2018
Notice to Proceed:	02/01/2019
Substantial Completion:	01/31/2021
Final Completion:	02/28/2021

March paving work included:

- Repair of two major locations along the truck access roadway
- Small patches within WRTP
- Restore a large at WRTP between Sub 1 and B-4

9. WRTP SUBSTATION NO. 2 REPLACEMENT (#TC-1904-C)

Funding:	Capital
Design:	In-House
Inspection:	In-House
Contractor:	Philips Brothers Electrical
Contract Amount:	\$1,442,777.00
Percentage Paid:	70.30% - through previous month
Notice of Award:	04/16/2019
Notice to Proceed:	05/10/2019
Substantial Completion:	11/29/2019
Final Completion:	01/17/2020

Substation in service and on line. SCADA Fiber pulled throughout plant; ends need to be applied and tested. Phillips working with Automation Dept.

10. SPRINGHILL FARM WWTF PUMP STATION AND SANITARY FORCE MAIN PROJECT (#PFR-1903-C – RE-BID) - CONTRACT 1: GENERAL CONSTRUCTION

Funding:	Capital
Design:	Entech Engineering, Inc.
Inspection:	In-House
Contractor:	A. J. Jurich, Inc.
Contract Amount:	\$480,304.00
Percentage Paid:	0% - through previous month
Notice of Award:	12/17/2019
Notice to Proceed:	02/12/2020
Substantial Completion:	10/09/2020
Final Completion:	11/09/2020

PADEP WQM Permit was received. Contractor in submittal / approval / procurement phase. No field work can commence due to COVID-19 ordered work stoppages.

11. SPRINGHILL FARM WWTF PUMP STATION AND SANITARY FORCE MAIN PROJECT (#PFR-1903-C– RE-BID) - CONTRACT 2: ELECTRICAL/SCADA CONSTRUCTION

Funding:	Capital
Design:	Entech Engineering, Inc.
Inspection:	In-House
Contractor:	AJM Electric, Inc.
Contract Amount:	\$198,543.00
Percentage Paid:	0% - through previous month
Notice of Award:	12/17/2019
Notice to Proceed:	02/12/2020
Substantial Completion:	10/09/2020
Final Completion:	11/09/2020

PADEP WQM Permit was received. Contractor in submittal / approval / procurement phase. No field work can commence due to COVID-19 ordered work stoppages.

DESIGN

1. CSO LONG TERM CONTROL PLAN UPDATE

The LTCP Semi-Annual Report No. 9 was submitted on December 30, 2019. On January 30, 2020, the USEPA issued a letter to respond to the LTCP Update that was submitted to USEPA on February 12, 2019. The letter identified 11 deficiencies and requested additional information in 11 other areas. The letter included an offer to meet to discuss items. DELCORA has requested this meeting and anticipates it will occur within a couple weeks.

2. ESA ALTERNATIVES

In response to escalated costs for the treatment of the Eastern Service Area (ESA) flow at Philadelphia's Southwest Water Pollution Control Plant, DELCORA determined that it will redirect its flow away from Philadelphia and instead send it to WRTP. A team of consultants to complete the design has been hired. The initial stages of design are underway. Last month, Condition Assessments were conducted at WRTP and remote pump stations this month to inform design. AECOM and Mott MacDonald completed aerial surveys to provide information for alignment studies which are ongoing. Detailed Condition Assessments including lidar scanning and hazardous material testing were conducted by HDR and DEI (subconsultant to Kleinfelder) at remote pump stations and WRTP, respectively, to inform design and be incorporated into their upcoming Reports and Technical

memos. Initial geotechnical investigations are commencing. DELCORA and Aqua leadership met by virtual meeting to discuss the status of the project and review alternatives that were identified during the value engineering phase of the project.

3. CSO #5 PARTIAL SEPARATION – TOWNSEND STREET 48" COMBINED SEWER SEPARATION PROJECT

Engineer: Remington & Vernick Engineers
Design Project Kick-off Meeting: March 28, 2019

This project is a component of the LTCP Update. The engineer has submitted a Design Schedule projecting that the design will be prepared for construction bidding in April 2020. Project will not be finalized by April 2020.

Final acceptance of the H&H Study is contingent upon the Stormwater Authority of The City of Chester. Plans are now about 80% complete. Utility companies are being contacted regarding conflict resolutions and relocations. RVE is preparing to submit to PennDot for plan approval. Plans and H&H study were submitted to SAC's design consultants, HDR, Inc. and AKRF, Inc.

4. CRUM CREEK PUMP STATION BYPASS FORCE MAIN – FINAL DESIGN

Engineer: Gannett Fleming, Inc.

Gannett Fleming and ERM are engaged in acquiring permission to access properties to continue design work. At this time, three of the five property owners have granted permission to enter their properties to survey. ERM has applied to PECO to the install force main through their easement. Offsite design work has begun. Engineer has surveyed conducted SUE Level A and Geotechnical Investigation along north end of project (Crum Creek Pump Station to Amtrak. ERM has begun negotiations with Boeing for access. DELCORA has continued conversations with Boeing to acquire easement. Gannett Fleming is on schedule to submit to PADEP for WQM Part II permit on or about April 20. Permit plans will include LIDAR survey in lieu of onsite survey due to COVID-19 and Boeing access licensing.

5. BOROUGH OF UPLAND SEWER UPGRADE – CHURCH AND TENTH STREETS

Engineer: Catania Engineering Associates, Inc. (CEA)

This project is a component of the LTCP Update. A proposal has been accepted for preparation of final design and preparation of construction documents in accordance with the March 13, 2019 Technical Memorandum issued by Greeley and Hansen. The kick-off meeting was held on January 13, 2020. Sewers have been televised and conditions reported to CEA. Exploration of the existing box culvert has shown that it crosses the sanitary sewer on a long skew. Plans will

have to include a 50' storm sewer re-route and partial demolition, abandonment of the box culvert.

6. WRTP – LOWER DELAWARE RIVER IMPROVEMENTS

Engineer: Gannett Fleming, Inc. (GF)

Gannett Fleming has completed a review of the Seaport Drive DRI Relief Pump Station and submitted a final report on its operation. GF has completed design of a section of 48" interceptor pipe from PS-6 to the ending manholes of the Delaware River Interceptor (DRI) and West End Interceptor (WEI). The plan is to remove a 1.4' step in the last manhole of the DRI and to remove a hydraulically inefficient crossing and connection of the two interceptors. This improvement will result in more efficient flows in the DRI, WEI and PRF pipes reducing dry weather and wet weather hydraulic issues. These improvements are required to facilitate the flow increases projected in the Long-Term Control Plan Update (LTCPU). GF applied for the required WQM Part II Permit on February 21, 2020.

PRETREATMENT/LABORATORY

1. RULES & REGULATIONS, LOCAL LIMITS DEVELOPMENT, ENFORCEMENT RESPONSE PLAN, & STREAMLINING

No updates at this time.

2. PERMIT ISSUES

The following draft permit was issued in the month of March:

- Delaware County Linen

The following final permit was issued in the month of March:

- M. Cohen and Sons

The following Industrial Users were issued a Notice of Violation in the month of March:

- Eldredge
- WAWA Dairy

3. INDUSTRIAL USER SAMPLING AND INSPECTIONS

The following Industrial Users were sampled in the month of March:

- Barry Callebaut
- C & R Laundry
- PQ Corp.

No Industrial Users were inspected in the month of March.

4. MISCELLANEOUS

The following were sampled during the month of March:

- Monthly Plant Sampling
- DRBC Weekly Sampling
- Weekly Sludge Metals
- Weekly Remotes
- Hauled Waste Metals
- ESA WRTP Expansion Study

All were sent to the contract laboratories for analysis.

REGULATORY FILINGS/ISSUES

- DRBC – Letter sent on February 12, 2018 addressing DRBC’s concerns about the acceptance of “out of basin” wastewater and the request for increased BOD and TDS waste load allocations.
- Met with DRBC on June 25, 2018 to discuss DRBC’s ongoing impact on DELCORA’s operations.
- Title V Permit was received December 21, 2018 – Effective December 17, 2018 – Expires December 17, 2023.
- DRBC Docket Modification for an increased cBOD20/cBOD5 Waste Load Allocation was posted for Public Comment on February 13, 2019.
- 2019 Annual Report – SARA Title III – Tier II Report was submitted to the PA Dept. of Labor & Industry on February 5, 2020.
- AIMS report for the reporting year 2019 was submitted on March 2nd, 2020.
- Title V Annual Compliance Certification was submitted to PADEP and EPA on March 30, 2020.

CNH:mc/bab

cc: (via email)
M. DiSantis
J. Pileggi
C. Lenton
I. Fitzgerald
S. Labrum
J. Centrone
D. Dutton
M. Sweeney
J. Yochim
T. Diwald
File



Weston Solutions, Inc.
1400 Weston Way
West Chester, PA 19380
610-701-3000 • Fax 610-701-3401
www.westonsolutions.com



8 April 2020

Mr. Robert Willert
Executive Director
DELCORA
100 East Fifth Street
P.O. Box 999
Chester, PA 19016

W.O. No. 05623.035.001.0001

RE: Summary of Activities for March 2020

Dear Mr. Willert:

The progress on current Weston Solutions, Inc. (WESTON®) authorized project assignments for DELCORA is summarized below.

CHAPTER 94 ANNUAL REPORT

Proposal No.:	133360
WESTON WO No.	05623.035.002
Start Date:	January 1, 2020
End Date:	March 31, 2020
Percent Complete	100%

This project is to prepare the Chapter 94 Municipal Wasteload Management Reports for 2019. This report is mandated for all owners for municipal treatment plant and sewage collection systems. DELCORA is required to submit a report for the Western Service Area (WSA) which will include reports submitted by each municipality or municipal authority that owns a collections that discharges to DELCORA's Western Regional Treatment Plant. DELCORA is also required to prepare a report for the Eastern Service Area (ESA) which will be provided to the Philadelphia Water Department (PWD) for inclusion in their Chapter 94 Report for the Southwest Water Pollution Control Plant. The reports are due to PADEP at the end of March. The reports include recorded flow and organic loads to the treatment facilities, five-year projections for flow and loads, and annual flows with two-year projected flows at pump stations.

During the month of March, WESTON worked with DELCORA on obtaining specific information from select DELCORA staff including influent flows and organic loads to the WRTP, flows to pump stations, a listing of planning module submissions to DELCORA for both the ESA and WSA. WESTON updated PADEP forms required for each report, narrative text, figures, and spreadsheets (planning modules, pump stations, treatment flows) for the ESA and the WSA needed to produce the report narrative, tables, and graphics. Additionally, WESTON

TRUST – PERFORMANCE – PEOPLE



Mr. Robert Willert
DELCORA

8 April 2020
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processed the daily pump station data into monthly summaries and assigning the EDU counts provided in the list of planning module submissions to its receiving pump station to use in the two-year flow projection. The ESA report was submitted to PWD the first week of March. WESTON prepared a draft of the report for the WSA for DELCORA review and the final document for WSA was provided to DELCORA in mid-March.

ANNUAL SWMM MODELING

Proposal No.: 133462
WESTON WO No.: 05623.034.006
Start Date: August 2019
End Date: December 2020
Percent Complete: 39%

This project is for completion of monthly SWMM model runs and for submission of month-end reports and a year-end letter report for DELCORA's use and reference in the annual Chapter 94 Report. DELCORA's NPDES permit for the WRTP requires that information of the volume and duration of discharges from the Combined Sewer Overflows be reported monthly. PADEP accepts discharge information from a calibrated numerical model in lieu of measured flows. WESTON utilized the calibrated SWMM model created for the LTCP Revision.

During the month of March, WESTON simulated precipitation events for February and reported simulation results to DELCORA. The simulation is based on precipitation recorded on the rain gauge located at the WRTP. During the month of February, DELCORA experienced a total of 2.33 inches of precipitation over 11 separate days. This resulted in roughly 0 to 11 CSO overflow events per outfall depending on the sensitivity to rainfall. During small precipitation events, some outfalls with small drainage areas do not overflow, while other outfalls with large drainage areas overflow frequently. The results of the simulation are loaded into a PADEP form that is included in DELCORA's monthly DMR submission for the WRTP.

METERING PROGRAM

Proposal No.: 137102
WESTON WO No.: 05623.034.003
Start Date: March 19, 2019
End Date: Open
Percent Complete: 50%

This project is to assist DELCORA in implementation of the Delaware County Metering Program. This program was initiated in 2005 to provide more accurate distribution of sewage flows to contributing communities in Delaware County. The program maintains and collects data from 122 flow meters deployed in sewers and incorporates data from 12 meters at pump stations.



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The sewer meters capture approximately 75% of the flow discharged. The remaining unmetered areas did not have a capture point that would provide reliable and repeatable data so they are estimated based on EDU counts for the unmetered areas. The unmetered areas are estimated using the EDU count for that area and the flow per EDU for the metered areas in the same municipality.

During the month of March, WESTON received the sewer flow meter data from DELCORA's flow metering contractor and pump station data from DELCORA staff. The data was loaded summary flow data for February to the apportionment spreadsheets and reviewed for any potential discrepancies. WESTON also updated the county-wide summary spreadsheets, the eastern authorities' summary spreadsheets, and summary spreadsheets for select municipalities for 2020. The monthly report and spreadsheets were submitted to DELCORA.

FORCE MAIN TEST COUPONS and ARV REPAIR

Proposal No.: 137483
WESTON WO No.: 05623.034.004
Start Date: June 2019
End Date: December 2019
Percent Complete: 54%

The scope of services for this project include preparation of contract documents to obtain pipe coupons from the Eastern Force Main. The pipe coupons will be analyzed to determine the condition of the force main. The project also includes preparation of contract documents to clean and repair the ARV's located on the Central Bypass and Eastern Force Mains.

WESTON has completed the Project Kick-Off data Collection and the Field Investigation phases of the work. Follow-up field investigation will be required at a few ARV locations to further verify the existing design information with the existing conditions. WESTON is currently working on the Phase III Detailed Design scope of work.

In October, WESTON completed the design for one of the ARV locations, ARV-55, located on the Central By-Pass Force Main. Since this location does not have an existing ARV and it is located at a critical spot (creek crossing) along the force main the team decided to design and construct this ARV first. The results of this installation will be used to determine the improvements to the force main and the information will be implemented in the final design for the remaining locations. In December WESTON submitted an application to PennDOT for a Road Opening Permit. The permit approval was received on January 7, 2020; construction of the ARV will start when all material has been received. During the month of March, WESTON prepared a Scope of Services revision based on DELCORA's change to the project process as described above.



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GENERAL ENGINEERING SUPPORT

Proposal No.: 37717
WESTON WO No.: 05623.021.107
Start Date: March 21, 2006
End Date: Open
Percent Complete: 96%

This project, a continuation of the previous “General Engineering” project, provides on-demand support to DELCORA for various services at the direction and approval of the Executive Director.

WESTON had no activity on this project during the month of March.

CENTRAL FORCE MAIN AND CHESTER FORCE MAIN EVALUATION

Proposal No.: 133118
WESTON WO No.: 05623.033.004
Start Date: July 2016
End Date: Open
Percent Complete: 75%

This project is to perform an engineering evaluation of the Central and Chester force mains to determine design parameters for sizing the future Crum Creek Pump Station equipment. The ultimate goal of the project is to determine how DELCORA can pump more flow from the CDPS to the Western Regional Treatment Plant (W RTP).

WESTON prepared and conducted modeling to evaluate the flow characteristics of both the Central By-Pass and the Chester force mains. The model took into account flow, pump discharge pressure, static conditions, pipe material, and pipe length and diameter. Flow conditions for the two force mains as well as the Kimberly Clark Pump Station and the total influent flow to the W RTP was also incorporated into the evaluation.

WESTON ran several model scenarios for both dry weather and storm conditions. The modeling was conducted during 2018 and 2019 and approximately 20 scenarios were evaluated. Each scenario was run over a period of several hours and real time operating data from DELCORA’s E-Ops was input into each model run. The results of each model scenario were consistent and showed that the performance of the Chester force main was very good and in line

After the first several model runs, WESTON and DELCORA staff performed a site assessment of the ARV locations. Where possible, the ARV’s were cleaned, tested, and put back into service. Several of the locations could not be inspected due to faulty isolation valves. After this



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inspection additional model runs were conducted and the results were similar previous model results.

WESTON met with DELCORA and discussed conducting additional field investigations and modifications to existing air release valve location. After further investigation it was decided to prepare contract documents to repair isolation valves, clean ARV's, and install new ARV's at locations where valves are missing. This work will be conducted under a separate project. WESTON had no activity on this project during the month of March.

FORCE MAIN TRANSIENT ANALYSIS

Proposal No.: 132758
WESTON WO No.: 05623.032.007
Start Date: October 15, 2017
End Date: December 2018
Percent Complete: 90%

The scope of services for this project includes preparation of a transient analysis of the Eastern Force Main and Chester Force Main. The goal is to determine a maximum flow value from the CDPS to the WRTP without increasing the risk of a pressure surge.

DELCORA and WESTON met and reviewed the preliminary results of the analysis. The main pump stations were modeled for two scenarios and results indicate that additional vacuum relief valves are required on the force mains. WESTON completed the model for additional scenarios and submitted the draft report. During the month of August, WESTON and DELCORA discussed additional analysis associated with the project. The additional work will be a part of the Crum Creek Force Main project. No additional work was completed during March. The transient analysis that was part of another contract (Crum Creek Force Main) has been completed. The results indicated that there was no additional impact to the Chester and Eastern By-Pass Force Mains. WESTON will submit a proposal to incorporate the recommendations included in the initial evaluation.



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WRTP AS-BUILT PLAN

Proposal No.: 133118
WESTON WO No.: 05623.032.006
Start Date: October 18, 2017
End Date: Open
Percent Complete: 97%

The scope of services for this project is to prepare a composite as-built plan of the WRTP in AutoCAD format that include both original plant information as well as new features added in recent years to document the existing site conditions specifically the underground utilities. The drawings are being prepared to facilitate a conversion to GIS for some of the features. WESTON had no activity on this project during the month of March.

UTILITY WATER SYSTEM REPLACEMENT BID & CONSTRUCTION PHASE SERVICES

Proposal No.: 127597
WESTON WO No.: 05623.031.003
Start Date: January 2016
End Date: Open
Percent Complete: 98%

This project is to provide bid support services and construction phase services relating to the Utility Water System Upgrade project at the WRTP. The existing system is at the end of its life and the system is critical to treatment operations. Bids were received on March 7, 2016.

WESTON had no activity for this project during the month of March. The construction has been completed and the remaining effort includes preparation of the record drawings after receipt of contractor marked-up drawings.



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Should you have any questions, please do not hesitate to contact me at (610) 701-3706.

Very truly yours,

WESTON SOLUTIONS, INC.

A handwritten signature in black ink, appearing to read "Roger W. Lehman". The signature is fluid and cursive, written over a light gray rectangular background.

Roger W. Lehman, P.E.
Technical/Project Manager

cc: DELCORA Board of Directors
C. Hurst, DELCORA