

**MINUTES**  
**OPERATIONS & ENGINEERING COMMITTEE MEETING**  
**DECEMBER 8, 2020 (VIRTUAL)**

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Attendants: Messrs. Boland, DiSantis, Hurst, Kern, Knapp, Lehman, Lucas, Mullen, Pileggi, Pisani, Willert, and Mesdames Amadio, Bonnett, Byrd, Caulk, Nichols, and Sage.

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

There were two unidentifiable persons present for the bid openings. (Phone numbers only were visible.) There were no other members of the public present.

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

3. BID OPENINGS:

- Contract No. P2020-06 (Re-Bid) – Janitorial Services

Ms. Caulk stated that there were two bids received.

	<u>TOTAL BID AMOUNT</u>
CNS Cleaning Company	\$ 78,600.00
TG Cleaning Service LLC	\$ 29,995.00

Mr. Mullen stated that these bids will be reviewed by Staff and our Solicitor's office, and consideration of award will be placed on the agenda for the December 15<sup>th</sup> Board meeting.

- Contract No. P2020-08 – Primary Clarifier Spare Parts

Ms. Caulk stated that there were two bids received.

	<u>TOTAL BID AMOUNT</u>
Eastern Environmental Contractors, Inc.	\$ 288,300.00
G.M.H. Associates of America, Inc.	\$ 145,921.98

Mr. Mullen stated that these bids will be reviewed by Staff and our Solicitor's office, and consideration of award will be placed on the agenda for the December 15<sup>th</sup> Board meeting.

- Contract No. P2020-11 – Trash Removal/Recycle/Disposal & Grit/Screenings Relocation; Removal, Hauling & Disposal at Approved Landfill

Ms. Caulk stated that there were three bids received.

	<u>TOTAL BID AMOUNT</u>
J & K Trash Removal, Inc.	\$ 349,680.00
Eastern Environmental Ind.	\$ 13,848.50
J.P. Mascaro & Sons	\$ 653,796.00

Mr. Mullen stated that these bids will be reviewed by Staff and our Solicitor's office, and consideration of award will be placed on the agenda for the December 15<sup>th</sup> Board meeting.

In response to a request from Ms. Nichols, Ms. Caulk said she will send the current trash removal contract amount information to her.

4. BID RESULTS RECEIVED ELECTRONICALLY THROUGH THE PENNBID PROGRAM ON DECEMBER 8, 2020:

- Contract No. P2020-12 – Liquid Chlorine In One Ton Cylinder

Ms. Caulk stated that there were three bids received. Upon request, Ms. Caulk read the total amounts of the following bids received: Kuehne Chemical Company \$225,000.00; JCI Jones Chemicals \$142,200.00; and Univar USA \$176,700.00. The apparent low bidder was JCI Jones Chemical, Inc. with a bid amount of \$142,200.00.

In response to a question from Mr. Kern, Ms. Caulk stated that the contract specified 300 total tons for purchase.

Mr. Mullen stated that these bids will be reviewed by Staff and our Solicitor's office, and consideration of award will be placed on the agenda for the December 15<sup>th</sup> Board meeting.

- Contract No. P2020-13 – Liquid Caustic Soda

Ms. Caulk stated that there were two bids received. Upon request, Ms. Caulk read the total amounts of the following bids received: PVS Minibulk \$27,625.00 and Univar Solutions USA \$28,300.00. The apparent low bidder was PVS Minibulk, Inc. with a bid amount of \$27,625.00.

Mr. Mullen stated that these bids will be reviewed by Staff and our Solicitor's office, and consideration of award will be placed on the agenda for the December 15<sup>th</sup> Board meeting.

5. MONTHLY REPORT – DIRECTOR OF OPERATIONS & MAINTENANCE: Mr. DiSantis highlighted certain items in the written report. He stated that there were no violations at the WRTP or at the remote facilities during the month of November. However, there were seven reportable incidents during the month. Six of these were wet weather SSOs due to two significant rain events on November 11<sup>th</sup> and November 30<sup>th</sup>. One reportable incident was for air emissions. An air regulator failed on an RTO causing a short stack to open. The regulators will be inspected on a quarterly basis and replaced as needed to prevent recurrences. Due to the significant rain events, flow was substantially higher in November than October; rising from 34 MGD to 38 MGD; annual year-to-date average is 35 MGD. Under Maintenance, Mr. DiSantis reported routine and extra maintenance was performed on the incinerator systems in preparation for the stack tests. Sewer Maintenance continues to make good progress on cleaning of the mains and interceptors, especially the Delaware River Interceptor. Central Maintenance continued with the normal routine of belt filter press and primary clarifier repairs; however, this work will slow down in the cold weather months. Regarding the Trucked Waste business, he reported that it continues to do very well with approximately 24 million gallons received in November. Overall, it has been a very good year for hauled waste. Mr. Kern congratulated Mr. DiSantis and his staff on plant performance. Mr. DiSantis had no additional comments to the written report. The Committee had no questions regarding the written report.

6. MONTHLY REPORT – DIRECTOR OF ENGINEERING: Mr. Hurst highlighted certain items in the written report. He reported that the first several projects listed on the report are in various stages of close out. Regarding the Sewer Maintenance contract, A. J. Jurich has been assisting with tank cleaning at the WRTP and performing exploratory work associated with the water line leak at the WRTP. Referencing the Springhill Farm project, Mr. Hurst noted that this work is essentially complete. Pump station start-up testing was completed but we are waiting for the completion of the Pettinaro force main. That is expected to be done within the next week or two. Once that is completed, the new pump station will be placed online and then the plant will be decommissioned. Under the 2020 WRTP Plant Upgrades project, Mr. Hurst reported that the contractors are making progress in order to take some of the sludge holding tanks offline to do the required structural rehab work. Under Design / ESA Alternatives, he noted that the four main design firms continue to make good progress with their preliminary design tasks, i.e. the work at the WRTP and the pump stations, the tunnel design, and the drilling of bore holes along Rt. 291. Concerning the CSO / LTCP, Mr. Hurst stated that since the time of writing of this report, we received feedback from the EPA and the PADEP. They issued a lengthy letter via email with a long list of requests. Some of which can be met; some cannot. He stated that we were hoping for conditional approval but that has not happened yet. He is scheduling a meeting with the EPA and PADEP to review the items noted in their letter. There is a professional services proposal from Greeley & Hansen on the agenda for consideration that he will explain at that time. Lastly, Mr. Hurst reported that the DRI project is complete so now this facilitates lowering of the influent into PS-6. Mr. Hurst had no additional comments to the written report. The Committee had no questions regarding the written report.

7. 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 they switched over to the new model as requested by the DELCORA staff for the CSO modeling which was used for reporting recently observed COS discharge flows. The metering program continues to move forward by gathering data and processing it on a monthly basis. Mr. Lehman reported that Weston is also providing assistance with mapping needed relative to the updated Act 537 Plan that is being prepared. Mr. Lehman had no additional comments to the written report. The Committee had no questions regarding the written report.

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

9. REQUEST FOR APPROVAL OF CONTRACT CLOSE-OUT & FINAL PAYMENT:

- Contract No. TC-1707-C – PS-6 Construction, Phase 1 – Contract D – Electrical (Philips Brothers Electrical Contractors, Inc.)
- Contract No. PR-1804-C – Marcus Hook Pump Station & Chester Ridley Creek Pump Station Electrical Upgrades (Philips Brothers Electrical Contractors, Inc.)

Mr. Hurst noted that the PS-6 project had been completed but a portion of the fiber optic work that was on hold until completion of the 2018 WRTF Plant Upgrades project is now completed and this project can be closed out. He stated that for the Marcus Hook Pump Station Electrical Upgrades that a maintenance piece of that contract is now finished and can be closed out.

It was the consensus of the Committee to recommend Board approval of the above contract close-outs. These items will be placed on the agenda for the December 15<sup>th</sup> Board meeting.

10. AUTHORIZATION FOR PROFESSIONAL SERVICES:

- A. Greeley & Hansen – Proposal Dated December 7, 2020 – For Professional Services To Revise The Combined Sewer Overflow Long Term Control Plan Update (CSO-LTCPU) And The Nine Minimum Controls (NMC) Update Reports To Address Comments From The USEPA – Total Amount Not To Exceed \$150,000.00 (Capital Funds)

Mr. Hurst stated that this proposal is to address all of the requests made in the EPA/PADEP letter regarding the CSO / LTCP.

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 December 15<sup>th</sup> Board meeting.

- B. AQUALAW PLC Of Richmond Virginia – Proposal Dated November 30, 2020 – For Professional Services For Continued Assistance With EPA And PADEP – Total Additional Amount Not To Exceed \$50,000.00 (Operating Funds) (AQUALAW Is Not Affiliated With AQUA PA)

Mr. Hurst stated that AquaLaw has been supporting our efforts with the EPA and the PADEP regarding the Long Term Control Plan.

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 December 15<sup>th</sup> Board meeting.

- C. Weston Solutions, Inc. – Proposal Dated December 1, 2020 – For Professional Engineering Services To Prepare DELCORA's Annual Chapter 94 Municipal Wasteload Management Reports For 2020 – Total Amount Not To Exceed \$34,000.00 (Operating Funds)

Mr. Hurst stated that the Chapter 94 report is an annual report. Weston gathers all of the information required from the municipalities and combines it all together for submission to the PWD for the Eastern service area and PADEP for the Western service area.

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 December 15<sup>th</sup> Board meeting.

Ms. Nichols inquired as to the due date of the Chapter 94 report. Mr. Lehman responded that the reports are due by March 31<sup>st</sup> each year; however, due to the COVID virus restrictions with offices being closed, the report was sent after March 31<sup>st</sup>. Ms. Nichols asked if the municipalities receive a copy of the report. Mr. Lehman responded that each municipality prepares its own report and submits it to DELCORA. All of the Eastern information is compiled then submitted to the PWD who, in turn, submits it to the PADEP. Similarly, the Western municipal information is assembled and submitted to the PADEP. He also stated that electronic copies are available if requested by anyone. Under the current statute, the PADEP requires paper copies but portions can be sent electronically, if requested. Mr. Hurst said that he would provide Ms. Nichols an electronic version if she would like it. Mr. Lehman added that he prefers receiving all of the municipal information in electronic format to lessen the paper burden and for long term storage of the reports.

- D. Material Matters, Inc. – Proposal Dated December 7, 2020 – For Professional Services For Assistance With The Solid Waste Permit Renewal Application – Total Amount Not To Exceed \$26,700.00 (Operating Funds)

Mr. Hurst stated the proposal was solicited to support DELCORA in renewal of its Solid Waste Permit.

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 December 15<sup>th</sup> Board meeting.

11. AUTHORIZATION TO ADVERTISE FOR BIDS:

- Contract No. P2020-14 – Removal, Transportation And Disposal Of Dry Ash

Mr. Hurst stated that this Purchasing contract is a standard contract up for renewal. This contract is used to haul ash from the silos to the landfill; however, this contract will be of a shorter term since the 2020 Plant Upgrade project includes installation of equipment that better manages the dust. There will be a new contract that will integrate the new ash unloading equipment.

It was the consensus of the Committee to recommend Board approval of the above Authorization to Advertise. This item will be placed on the agenda for the December 15<sup>th</sup> Board meeting.

12. ADVISOR APPOINTMENT:

- Weston Solutions, Inc. – Proposal Dated November 30, 2020 – Engineering Advisor Services For The First Quarter 2021 – Total Amount Not To Exceed \$2,500.00 Per Quarter

Mr. Hurst stated that this is a routine authorization for Weston to continue to support DELCORA in an advisory role for various projects.

It was the consensus of the Committee to recommend Board approval of the above Advisor Appointment. This item will be placed on the agenda for the December 15<sup>th</sup> Board meeting.

13. RESOLUTION NO. 2020-34 – RESOLUTION AUTHORIZING THE ACQUISITION OF EASEMENTS THROUGH THE PROPERTIES SET FORTH ON EXHIBIT A THERETO BY CONDEMNATION OR DEED IN LIEU OF CONDEMNATION IN CONJUNCTION WITH THE WASTEWATER TUNNEL PROJECT:

Mr. Hurst stated that this resolution is to acquire various property easements for the tunnel project and the Long Term Control Plan.

It was the consensus of the Committee to recommend Board approval of the above resolution. This item will be placed on the agenda for the December 15<sup>th</sup> Board meeting.

ADJOURNMENT: It was moved by Mr. Lucas, seconded by Mr. Knapp, and unanimously carried to adjourn the regular meeting at 4:05 p.m.



## INTER-OFFICE MEMORANDUM

**TO:** Robert J. Willert, Executive Director

**FROM:** Michael J. DiSantis, Director of Operations and Maintenance *mgd/bab*

**SUBJECT:** Board Report for the December 8, 2020, O & E Committee Meeting

**DATE:** December 4, 2020

- I. PROCESS INFORMATION – As of the date of this report, there were no violations at WRTP during the month of November. Please note that cBOD data is through 11/27. November data points of interest are:

A.	<u>Liquid Process Averages:</u>	<u>Month:</u>	<u>YTD:</u>
1.	Flow	38.53 MGD	34.96 MGD
2.	TSS	15 mg/L	13 mg/L
3.	cBOD <sub>5</sub>	9 mg/L	10 mg/L
4.	cBOD <sub>20</sub> % Removal	96.06%	97.12%
5.	cBOD <sub>20</sub> Loading	4,499 lbs.	4,449 lbs.
B.	<u>Solids Processing:</u>	<u>Month:</u>	<u>YTD:</u>
1.	Dry Tons Treated -	2,029.60	2,025.87
2.	Dry Tons/Day -	67.65	66.52
3.	Total Gallons Pumped -	11,280,536	12,080,661
4.	Average Feed Solids -	4.30%	4.05%
5.	Average Cake Solids -	20.28%	21.67%
6.	Pounds of Polymer/DT -	248.25	204.23
7.	MCF/DT -	5.75	4.83
8.	Monthly Cost/DT -	\$46.95	\$42.45

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

November 2020	Total Flow	Daily Avg	High Daily	Low Daily
Darby Creek	572.14	19.07	32.78	16.27
Muckinipates	135.81	4.53	8.70	3.56
Central Delaware	298.21	9.94	19.25	7.99
Chester	268.68	8.96	20.36	6.74
Marcus Hook	30.65	1.02	2.82	0.68
Eddystone	13.76	0.46	0.82	0.34
Naamans Creek	69.26	2.31	4.46	1.84
Chi Pit	16.78	0.56	1.00	0.39
Chester-Ridley	139.41	4.65	7.50	4.07
Edgmont	3.53	0.12	0.16	0.11

II. MONTHLY FACILITY ACTIVITIES

A. Operations Highlights/Key Events

1. The plant received 95.7% of the flow from the Central Delaware Pump Station. Rain events during the month had minimal impact on the flow split with PWD.
2. There were seven reportable incidents during the month. There were six wet weather SSOs during the month, two on the 11/11 rain event and four on the 11/30 rain event. All were the result of high flows and not equipment failures. Normal operation resumed once the rain subsided. Additionally, there was one emissions incident. The failure of an air regulator for one of the RTO's poppet valves caused the opening of the #1 RTO short stack. CM replace the regulator then normal operation was resumed. Moving forward, to prevent recurrence of this failure, we have implemented a quarterly inspection of the regulators, replacing as needed.
3. Rainfall in November caused the flow to be much higher than last month as well as higher than the YTD average. The operational focus continued to be facilitating tank outages and process interruptions caused by on-going construction and maintenance. Overall plant performance and effluent quality continued to indicate the impact of some normal expected seasonal change. Most key process indicators were in target with the exception of primary clarifier TSS removal which remained at 50%. Tank outages and increased organic and hydraulic loading were the key factors affecting this performance standard. In solids handling, both incinerators were in service 83% of the month as there was both planned and unplanned down time for maintenance. As a result, 33 loads were hauled to compost during the month. Sludge quality, and hence polymer usage and natural gas usage, continued to be negatively affected by the high percentage of waste activated sludge (WAS) in the sludge feed. Chemical addition as needed continued for BFP room air quality. In remote operations, there were no violations.



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 performed belt filter press repairs, incinerator and related systems' repairs, primary clarifier inspections and repairs, various small pump repairs, responded to PECO requested outages, and provided labor to support plant operations. Sewer Maintenance continued to focus on area line cleaning and televising with the emphasis on the West End and Delaware River Interceptors, air relief inspections and maintenance, response to One-Calls and sewer complaints, metering support, various line repairs and replacement, Brookhaven Road PS upgrades, WRTP work, remote systems work, support of asset identification and I&I investigations, and support of capital projects.

C. Trucked Waste Business

1. During the month, 24.03MM gallons were received. Projected revenue for the month is expected to meet our monthly target and the year-to-date revenue is still pacing ahead of budget.

MJD:bab

attachments (NPDES DMR/Strategic Plan Reports)

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

**From:** [depgreenporthelpdesk@state.pa.us](mailto:depgreenporthelpdesk@state.pa.us)  
**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  
**Date:** Wednesday, November 18, 2020 10:18:01 AM

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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:** 10/01/2020-10/31/2020  
**Report Due Date:** 11/28/2020

**Submitted By:** Michael DiSantis  
**Submission Id:** 235134  
**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

November 13, 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 October 2020. There were no violations during the month.

Parameter averages for October 2020 were: Flow – 33.80 MGD; cBOD<sub>5</sub> – 12 mg/L; TSS – 14 mg/L; cBOD<sub>20</sub> % removal – 94.83%; and cBOD<sub>20</sub> – 5,957 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:mc  
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





**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, 19016-0999  
 FACILITY: DELCORA STP  
 LOCATION: 3201 W FRONT ST, CHESTER PA, 19013-1829  
 STAGE: Final Effluent

PA0027103  
 PERMIT NUMBER

001  
 OUTFALL NUMBER

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
FROM 2020	10	01	TO 2020	10	31

Reporting Frequency: Monthly  
 DMR Effective From: 10/01/2020  
 DMR Effective To: 10/31/2020  
 Permit Expires: 04/30/2018  
 Permit Application Due: 11/01/2017  
 No Discharge: ☐

## PARAMETERS REPORTED VALUES

PARAMETER		QUANTITY OR LOADING			QUANTITY OR CONCENTRATION			SAMPLING FREQUENCY	SAMPLING TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	UNITS		
pH (00400)	Sample Measurement	***	6.57	***	7.1	S.U.	1/day	Grab	
	Permit Requirement	***	6.0	Inst Min	***	9.0	1/day	Grab	
Total Suspended Solids (00530)	Sample Measurement	4428	7776	lbs/day	***	14.0	1/day	24-Hr Composite	
	Permit Requirement	11000	16500	Wky Avg	***	30.0	1/day	24-Hr Composite	
Oil and Grease (00556)	Sample Measurement	***	< 1409	lbs/day	***	Avg Mo	1/day	Grab	
	Permit Requirement	5500	***	***	***	15.0	1/day	Grab	
Ammonia-Nitrogen (00610)	Sample Measurement	***	***	***	***	3.84	3/month	24-Hr Composite	
	Permit Requirement	***	***	***	***	Monitor & Report	2/month	24-Hr Composite	
Nitrite as N (00615)	Sample Measurement	***	***	***	***	< .22	3/month	24-Hr Composite	
	Permit Requirement	***	***	***	***	Monitor & Report	2/month	24-Hr Composite	
Nitrate as N (00620)	Sample Measurement	***	***	***	***	< 1.15	3/month	24-Hr Composite	
	Permit Requirement	***	***	***	***	Monitor & Report	2/month	24-Hr Composite	
Total Kjeldahl Nitrogen (00625)	Sample Measurement	***	***	***	***	7.22	3/month	24-Hr Composite	
	Permit Requirement	***	***	***	***	Monitor & Report	2/month	24-Hr Composite	
Cyanide, Total (00720)	Sample Measurement	***	***	***	***	.021	1/month	24-Hr Composite	
	Permit Requirement	***	***	***	***	Monitor & Report	1/month	24-Hr Composite	
Chlorodibromomethane (34395)	Sample Measurement	***	***	***	***	.0008	1/month	Grab	
	Permit Requirement	***	***	***	***	Monitor & Report	1/month	Grab	
Cadmium, Total (01027)	Sample Measurement	***	***	***	***	< .0002	1/month	24-Hr Composite	
	Permit Requirement	***	***	***	***	Monitor & Report	1/month	24-Hr Composite	
Copper, Total (01042)	Sample Measurement	***	***	***	***	.011	1/month	24-Hr Composite	
	Permit Requirement	***	***	***	***	Monitor & Report	1/month	24-Hr Composite	
Lead, Total (01051)	Sample Measurement	***	***	***	***	< .001	1/month	24-Hr Composite	
	Permit Requirement	***	***	***	***	Monitor & Report	1/month	24-Hr Composite	
Zinc, Total (01092)	Sample Measurement	***	***	***	***	.039	1/month	24-Hr Composite	
	Permit Requirement	***	***	***	***	Monitor & Report	1/month	24-Hr Composite	
Dichlorobromomethane (32101)	Sample Measurement	***	***	***	***	.0013	1/month	Grab	
	Permit Requirement	***	***	***	***	Monitor & Report	1/month	Grab	
Flow (60060)	Sample Measurement	33.8	63.12	MGD	***	***	Continuous	Metered	
	Permit Requirement	Monitor & Report	Monitor & Report	***	***	***	Continuous	Metered	
Total Residual Chlorine (TRC) (60080)	Sample Measurement	***	***	***	***	.3	1/day	Grab	
	Permit Requirement	***	***	***	***	Avg Mo	1/day	Grab	

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

Sample Measurement Permit Requirement	***	***	***	***	603 Monitor & Report Avg Mo	719 Monitor & Report Daily Max	mg/L	2/week 2/month	24-Hr Composite 24-Hr Composite
Total Dissolved Solids (70255)	***	***	***	***	8	140.8	No./100 ml	1/day	Grab
Fecal Coliform (74055) (Oct-Apr)	***	***	***	***	200 Geo Mean	1000 90%SAMPLES		1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5) (80082)	3971 7000 Avg Mo	7284 15500 Wkly Avg	15500 Wkly Avg	15500 Wkly Avg	12.0	16.0	mg/L	1/day	24-Hr Composite
BOD, carbonaceous, 20 day, 20 C (80087) - -	5957 10500 Avg Mo	10500 Avg Mo	10500 Avg Mo	10500 Avg Mo	19.0 Avg Mo	29.0 Wkly Avg		1/day	24-Hr Composite
Facility Sampling Point Comments								1/week	24-Hr Composite



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,  
19016-0999  
FACILITY: DELCORA STP  
LOCATION: 3201 W FRONT ST, CHESTER PA, 19013-1829  
STAGE: Percent Removal

PA0027103  
PERMIT NUMBER

001  
OUTFALL NUMBER

Reporting Frequency: Monthly  
DMR Effective From: 10/01/2020  
DMR Effective To: 10/31/2020  
Permit Expires: 04/30/2018  
Permit Application Due: 11/01/2017  
No Discharge: ☐

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
2020	10	01	2020	10	31

FROM

## PARAMETERS REPORTED VALUES

PARAMETER	QUANTITY OR LOADING			QUANTITY OR CONCENTRATION			SAMPLING FREQUENCY	SAMPLING TYPE
	VALUE	VALUE	UNITS	VALUE	VALUE	UNITS		
BOD, carbonaceous, 20 day, 20 C (80087)	**	**	**	94.83	**	%	1/day	24-Hr Composite
	**	**	**	89.25	**	%	1/week	24-Hr Composite
				Min Mo Avg				
Facility Sampling Point Comments								



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, 19016-0999  
FACILITY: DELCORA STP  
LOCATION: 3201 W FRONT ST, CHESTER PA, 19013-1829  
STAGE: Raw Sewage Influent

PA0027103  
PERMIT NUMBER

001  
OUTFALL NUMBER

Reporting Frequency: Monthly  
DMR Effective From: 10/01/2020  
DMR Effective To: 10/31/2020  
Permit Expires: 04/30/2018  
Permit Application Due: 11/01/2017  
No Discharge: ☐

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
FROM 2020	10	01	TO 2020	10	31

## PARAMETERS REPORTED VALUES

PARAMETER	QUANTITY OR LOADING			QUANTITY OR CONCENTRATION			SAMPLING FREQUENCY	SAMPLING TYPE
	VALUE	UNITS	VALUE	VALUE	UNITS	VALUE		
Biochemical Oxygen Demand (BOD5) (00310)	67535 Monitor & Report Avg Mo	lb/day	***	225.88 Monitor & Report Avg Mo	mg/L	***	2/week 1/week	24-Hr Composite 24-Hr Composite
Total Suspended Solids (00530)	84940 Monitor & Report Avg Mo	lb/day	***	263.35 Monitor & Report Avg Mo	mg/L	***	1/day	24-Hr Composite 24-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) (00082)	85991 Monitor & Report Avg Mo	lb/day	***	275.61 Monitor & Report Avg Mo	mg/L	***	1/day 1/day	24-Hr Composite 24-Hr Composite
Facility Sampling Point Comments								





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

**ATTACHMENT DETAILS**

File Name	Attachment Type	Uploaded Time	Attachment Comments
MUR Lab Analytical Report_October 6 2020.pdf	Laboratory Analytical Report	2020-11-16T11:20:13-05:00	
DELCORA Lab Analytical Report (Effluent)_October 2020.pdf	Laboratory Analytical Report	2020-11-16T11:17:43-05:00	
Daily Effluent Monitoring Form_October 2020.xls	Daily Effluent Monitoring Form	2020-11-16T11:20:58-05:00	
Influent & Process Control Form_October 2020.xls	Influent and Process Control Form	2020-11-16T11:23:17-05:00	
Influent & Process Control Lab Analytical Report_October 2020.pdf	Laboratory Analytical Report	2020-11-16T11:19:06-05:00	
DELCORA Lab Analytical Report (Influent)_October 2020.pdf	Laboratory Analytical Report	2020-11-16T11:14:03-05:00	
ALS Lab Analytical Report (EFF)_October 2020.PDF	Laboratory Analytical Report	2020-11-16T11:19:49-05:00	
DMR MURPRE (CBOD, TSS, BOD)_October 2020.pdf	Laboratory Analytical Report	2020-11-16T11:20:35-05:00	
MUR Lab Analytical Report_October 13 2020.pdf	Laboratory Analytical Report	2020-11-16T11:21:16-05:00	
Daily Influent Monitoring Form_October 2020.xls	Daily Influent Monitoring Form	2020-11-16T11:21:46-05:00	
Inf-PRF Calculations_October 2020.xls	Other	2020-11-16T11:22:15-05:00	Inf PRF Calculations October 2020
Hauled in Municipal Waste Form_October 2020.xls	Hauled-In Municipal Waste Form	2020-11-16T11:22:15-05:00	
DELCORA Lab Analytical Report (Effluent control)_October 2020.pdf	Laboratory Analytical Report	2020-11-16T11:22:48-05:00	
Hauler Totals_FORM 43 & Trucked Waste_October 2020.xls	Other	2020-11-16T11:24:19-05:00	Hauler Totals FORM 43 and Trucked Waste October 2020
Sewage Sludge : Biosolids Production and Disposal Form_October 2020.xls	Sewage Sludge / Biosolids Production and Disposal Form	2020-11-16T11:24:19-05:00	
Hauled in Residual Waste Form_October 2020.xls	Hauled-In Residual Waste Form	2020-11-16T11:24:19-05:00	
Residual Waste_October 2020.pdf	Other	2020-11-16T11:24:19-05:00	Residual Waste Report October 2020
DMR Laboratory Accreditation ALS_October 2020.docx	Laboratory Accreditation Form	2020-11-16T11:24:19-05:00	
DMR Laboratory Accreditation MUR_October 2020.doc	Laboratory Accreditation Form	2020-11-16T11:24:19-05:00	
Sludge Incinerated (DELCORA)_October 2020.pdf	Laboratory Analytical Report	2020-11-16T11:24:19-05:00	
DMR Cover Letter_October 2020.doc	Cover Letter	2020-11-16T11:24:19-05:00	
DMR Laboratory Accreditation DELCORA_October 2020.doc	Laboratory Accreditation Form	2020-11-16T11:24:19-05:00	

**PERMIT VIOLATIONS**

Non-Compliance ID	Event Start Date	Event End Date	Parameter	Limit Type	Reported Value	Event Location	Unit	Sampling Point	Cause Of Non-Compliance	Corrective Action	Comments
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**UNAUTHORIZED DISCHARGES**

Non-Compliance ID	Event Start Date	Event End Date	Date and Time Discovered	Substance Discharged	Volume (gal)	Duration (hrs)	Receiving Waters	Impact On Waters	Cause Of Discharge	Date and Time DEP Notified Orally	Comments
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**OTHER PERMIT VIOLATIONS**

Non-Compliance ID	Non-Compliance Type	Parameter	Sampling Point	Reported Value	Permit Limit	Comments
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**COMMENT DETAILS**

Comments	Operator Name	Operator Certification Number	Operator Contact Number
	Michael J. Disantis	T0403	(610)-876-5523

**SUBMISSION INFORMATION**

SUBMISSION INFORMATION		*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 assure 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 statement may be subject to substantial civil and criminal penalties, including 18 P.S. section 4904 (relating to unsworn falsification to authorities).	TELEPHONE		DATE		
SUBMITTED BY GREENPORT USER	disantis		Michael Disantis	(610)	876-5523	2020	11
			SUBMITTED BY FULL NAME	AREA CODE	NUMBER	YEAR	MO



# OPERATIONS STRATEGIC PLAN REPORT

## NOVEMBER 2020

<b>Missed Samples Per Month</b>	<b>#</b>	<b>YTD</b>
Goal is zero	0	0
<b>Deviations from Required Sampling Or Analytical Protocol</b>	<b>#</b>	
Goal is 100% compliance	0	0
<b>Samples with Analytical Results Outside of QA/QC Standards</b>	<b>#</b>	
Goal is 100% compliance	18	129
<b>Hours in Training for Month</b>	<b>#</b>	
Total DEP Approved	18.5	172.5
<b>DEP Certified Operators</b>	<b>#</b>	
Regulations Require One	12	

# CENTRAL MAINTENANCE MATRIX

## NOVEMBER 2020

		CURRENT MONTH	YTD
<b>Work Order Aging</b>		<b>#</b>	
31-60 days		24	
61-90 days		11	
Over 90 days		41	
<b>Work order hours/Available hours</b>		<b>%</b>	<b>%</b>
**Mechanical Maintenance		91%	91%
Electrical Maintenance		85%	87%
Instrument Maintenance		87%	90%
**Includes all Preventive Maintenance			
<b>Work Ratio Hours</b>		<b># / %</b>	<b># / %</b>
Corrective		672 / 25%	10458 / 29%
Preventive		1971 / 73%	25265 / 69%
Predictive		43 / 2%	757 / 2%
<b>System Failures</b>		<b>#</b>	<b>#</b>
<b>Hours in Training</b>		<b>#</b>	<b>#</b>
Mechanics/Helpers		NA	NA
Electricians		NA	NA
Instrument Techs		NA	NA
<b>Call-Ins</b>		<b>#</b>	<b>#</b>
WRTP		27	320
Pump Stations		17	122



**Work Order Summary Report for Date  
Range: 11/1/2020 to 11/30/2020**

<b>Asset Type</b>	<b>Work Order Type</b>	<b>Labor Hours</b>	<b>Labor Cost</b>
<b>FLEET_ASSETS</b>		<b>0</b>	<b>65.00</b>
	OIL CHANGE	0	\$65.00
<b>SCHAMBER</b>		<b>101</b>	<b>2,812.54</b>
	CLEAN GRATES	90	\$2,486.45
	TIDE GATE/CHAMBER CLEANING	11	\$326.09
<b>SCONTROLVALVE</b>		<b>100</b>	<b>2,863.90</b>
	SERVICE AIR RELIEF VALVE	100	\$2,863.90
<b>SCSOREGULATOR</b>		<b>190</b>	<b>5,315.29</b>
	CSO INSPECTION	153	\$4,323.01
	REMOVE FLOATABLES/VAC DEBRIS FROM CHAMBERS	8	\$121.16
	TOTAL REGULATOR MAINTENANCE	30	\$871.12
<b>SGRAVITYMAIN</b>		<b>658</b>	<b>19,750.31</b>
	AREA LINE CLEANING	8	\$242.32
	EMERGENCY CALL IN	40	\$1,299.78
	GNET TV INSPECTION	347	\$10,798.13
	INSPECTION OF POSSIBLE CAVE IN	3	\$94.32
	INTERCEPTOR - RIDLEY INTERCEPTOR INSPECTION	12	\$372.68
	INTERCEPTOR CLEANING	44	\$1,358.10
	MISCELLANEOUS	2	\$62.88
	MONTHLY LINE CLEANING	44	\$666.38
	PA ONE CALL LINE LOCATING	100	\$3,046.79
	PIPE REPAIR	40	\$1,244.48
	ROOT CUT	6	\$187.17



Asset Type	Work Order Type	Labor Hours	Labor Cost
	SEAPORT PUMP	6	\$190.94
	TRAFFIC CONTROL	6	\$186.34
SLATERALPOINT		106	3,058.10
	EMERGENCY CALL IN	80	\$2,263.68
	SEWER COMPLAINT INVESTIGATION	26	\$794.42
SMANHOLE		8	391.08
	EMERGENCY CALL IN	8	\$391.08
SPUMPSTATION		109	3,206.45
	MARCUS HOOK PUMP STATION	12	\$181.74
	ROSE VALLEY PS ON BROOKHAVEN RD.	82	\$2,556.78
	THORNBURY TOWNSHIP T.P.	15	\$467.93
STREATMENTPLANT		219	7,895.92
	CLEAN GRIT PIT/LOAD CONTAINER	44	\$1,383.87
	CONTRACTOR ASSISTANCE	8	\$251.52
	EB-2	12	\$360.54
	EMERGENCY CALL IN	8	\$195.54
	JET STORM LINES OPEN	4	\$124.78
	MISCELLANEOUS VAC WORK	16	\$499.12
	ODR MAINTENANCE	16	\$363.48
	SLUDGE RECEIVING	7	\$154.90
	SLUDGE TRAILER SWITCH OUT	83	\$3,796.97
	THE BEAST	21	\$765.20
SVARIOUS		128	3,875.46
	CLEAN SM GARAGE	1	\$30.29
	EMPLOYEE MEETING	8	\$232.93
	ENGINEERING SUPPORT	26	\$805.79
	EQUIPMENT MALFUNCTIONS AND REPAIRS	26	\$749.47
	MISCELLANEOUS	9	\$279.51
	PARTS /TOOLS/ EQUIPMENT PROCUREMENT	17	\$526.77
	VEHICLE INSPECTON	41	\$1,250.70
Grand Total:		1,619	\$49,234.04



## INTER-OFFICE MEMORANDUM

**TO:** Robert J. Willert, Executive Director  
**FROM:** Charles N. Hurst, Director of Engineering *CNH/bab*  
**SUBJECT:** Board Report for the December 8, 2020 O&E Committee Meeting  
**DATE:** December 4, 2020

### CONSTRUCTION PROJECTS

#### 1. 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. PS-6 Fiber work was completed. The close out documents for Contract Part D - Electrical have been received and the close out process will be finalized pending Board approval.

#### 2. 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:	99.69% - through previous month – FINAL

Electrical (Part B):	Philips Brothers Electric
Contract Amount:	\$1,833,200.00
Percentage Paid:	100% - Final

Notice of Award:	10/17/2017
Notice to Proceed:	12/04/2017
Substantial Completion:	01/03/2019
Final Completion:	02/01/2019

The close out process is on-going.

### 3. W RTP 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:	98.60% through previous month

Electrical (Part B):	Philips Brothers Electric
Contract Amount:	\$6,220,777.00
Percentage Paid:	90.48% 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 poured concrete for the duct bank and backfilled at PS-6. They added additional support for the vac truck garage and repaired the skimmer arm of secondary clarifier T-16. They removed all inlet protection and installed a snout in an inlet around the new truck entrance road. Philips Brothers continued work on the electrical installations in the second floor of B-3 and is nearing completion on this.

### 4. 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:	\$887,317.20
Percentage Paid:	100% - Final

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. They removed a vibrating motor from Darby Creek Pump Station so it could have bearing work performed on it. Additionally, Philips Brothers responded to a call out to Pocopson to investigate motors tripping out during ATS transfers. They identified loose screws in the ATS, fixed the issue and replaced the ATS controller. Philips Brothers assisted with installing conduits between the Pocopson Preserve Pump Station and the lagoons with 3 quazite boxes and installed a receptacle to temporarily feed an outlet for the upgraded aeration system. Philips Brothers also removed and replaced a VFD at Darby Creek Pump Station including the servicing of the VFD motor. Philips Brothers supplied and installed two generators at WRTP at each substation to support Plant operations during a PECO outage. Power Solutions was utilized for an emergency call-out to Chester Pump Station to diagnose, resolve, and test issue with low voltage tie circuit breaker. At WRTP, Philips Brothers installed, welded and installed wiring for six rotorks in B-3/incinerator. Brothers will bill next month for the work completed this month including: providing two 2MW generators at WRTP for outages, servicing a 750MW existing generator, transporting the next motor to be serviced and later reinstalled at Chester Pump Station, procuring the EATON switch for installation at Chester Ridley Creek Pump Station, and electrical repairs in B-3 at WRTP. C.O. # 1 was approved by the BOD last month. Philips Brothers provided two 2MW generators at WRTP for outages, serviced a 750MW existing generator, transported the next motor to be serviced and later reinstalled at Chester Pump Station, procured the EATON switch for installation at Chester Ridley Creek Pump Station, completed electrical repairs in B-3 at WRTP, and provided a generator for an outage at 8<sup>th</sup> St Pump Station. The closeout documents have been received and the close out process will be finalized pending Board approval.

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

Funding:	Capital
Design:	In-House
Inspection:	In-House
Contractor:	CM3 Building Solutions
Contract Amount:	\$6,883,486.00
Percentage Paid:	88.85% - through previous month
Notice of Award:	9/13/2017
Notice to Proceed:	9/13/2017

Phase 2 work working from punch list. Phase 3 work is nearing completion. All roof fans in PS-3 PS-4 mechanical louvers are installed and opened. Controller and louvers to be wired for operation when boards arrive. B-4 work; curbing and structural reinforcement for air handlers and new fans is complete. Building duct work complete; all units wired, new control boards needed, ordered. B-3 new exhaust scrubber fan and duct installed and in service.

#### 6. SEWER MAINTENANCE (#SEW-2002-CO)

Funding:	Capital
Design:	In-House
Inspection:	In-House
Contractor:	A. J. Jurich, Inc.
Contract Amount:	\$2,079,310.00
Percentage Paid:	1.68% - through previous month
Notice of Award:	07/21/2020
Notice to Proceed:	08/19/2020
Final Completion:	07/31/2022

November maintenance work included:

- Chester Pump Station boring and site clearing
- T-23 Tank cleaning at WRTP
- Fence set up at Boring Rental location
- WRTP water leak exploratory excavation

#### 7. 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:	65.43% - 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

No work this month.



8. W RTP 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:	76.22% - through previous month
Notice of Award:	04/16/2019
Notice to Proceed:	05/10/2019
Substantial Completion:	12/11/2021
Final Completion:	01/29/2021

Substation in service and online. SCADA fiber is completely pulled and tested and being placed in service by Automation. New Press room MCC being installed in hallway of B-3; VFD's installed old lunchroom. Conduit being replaced in press room. Junction boxes installed, and conduit run. Conduit ran for CM3 work. Control boxes and power feeds marked out by CM3. Electrical feeders pulled; conduit run from new MCC to press room complete. DWD/CM3 will start the removal of controls from press room and into the hallway MCC area in January.

9. 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:	\$470,004.00
Percentage Paid:	64.40% - 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

Pump station start-up is completed. Diversion of flow and conversion from WWTP to pump station – 2 day's work- is pending completion of Pettinaro force main. Demolition and site restoration will be completed following start-up and operational check.

10. 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:	23.56% - 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

Concurrent with the pump station start-up, the electrical and controls installation passed its start-up and operational check. Final elevation controls must be set by remote pump station staff. Pump station is ready to turn on pending completion of Pettinaro force main.

11. INCINERATOR MAINTENANCE AND EMERGENCY REPAIRS (#TC-2001-C)

Funding:	Capital
Design:	In-House
Inspection:	In-House
Contractor:	Industrial Furnace Company, Inc.
Contract Amount:	\$686,750.00
Percentage Paid:	25.39% - through previous month
Notice of Award:	04/22/2020
Notice to Proceed:	05/05/2020
Substantial Completion:	03/31/2022
Final Completion:	05/30/2022

IFCO removed slag and cleaned-out Incinerator 2. They installed a new top sand seal, top shaft section with spare wear spool, top bearing, and oxygen analyzer flange in the breach box within Incinerator 2. They also blanked-off the center shaft warm air duct return. They replaced one end tooth in Hearth 4 and missing brick in the body of Hearth 6 in Incinerator 2. They developed a list of notes and considerations for work to be completed in a subsequent outage and within the coming few years.

12. SPRINGHILL FARM SANITARY SEWER FORCE MAIN EXTENSION  
(#PFR-2004-C) – GENERAL CONSTRUCTION

Funding:	Capital
Design:	Entech Engineering, Inc.
Inspection:	In-House
Contractor:	A. J. Jurich, Inc.
Contract Amount:	\$76,295.00
Percentage Paid:	67.42% - through previous month
Notice of Award:	05/20/20
Notice to Proceed:	06/15/2020
Substantial Completion:	09/14/2020
Final Completion:	10/13/2020

The force main is tested and asphalt surface restoration is completed. Force main is ready to accept flow pending completion and acceptance, by Concord Township, of Pettinaro force main.

13. W RTP PLANT UPGRADES – 2020 (#TC-2006-C)

Funding:	Capital
Design:	D'Huy Engineering, Inc.
Inspection:	D'Huy Engineering, Inc.
General (Part A):	Allan Myers.
Contract Amount:	\$7,142,020.00
Percentage Paid:	0.00% - through previous month
Electrical (Part B):	Philips Brothers Electric
Contract Amount:	\$892,000.00
Percentage Paid:	0.00% - through previous month
Notice of Award:	07/22/2020
Notice to Proceed:	08/24/2020
Substantial Completion:	11/01/2021
Final Completion:	12/01/2021

Both contractors are proceeding with the submittal process. Allan Myers installed a lane closure sign for the initiation of the hauled waste receiving lane construction, which they began in lanes 1 and 2. They demolished the existing blacktop and concrete at the new trench tie-in and kiosk locations. They excavated and proceeded to install the new kiosk piping, conduit duct bank, and trench drain floors. Philips Brothers has not begun work.

## **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 EAP letter included an offer to meet to discuss items. This meeting occurred on February 26, 2020. There was an updated LTCP submitted to EPA and PADEP on July 15, 2020 in accordance with the commitments made during the February 26<sup>th</sup> meeting.

### **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 W RTP. A team of consultants to complete the design has been hired. The initial stages of design are underway as detailed on a Design Contract basis below. At the program level, HDR is leading permitting efforts to coordinate the Design Contract firms for a meeting with the Army Corps of Engineers regarding program-wide permitting. In February 2020, DELCORA convened a Value Engineering workshop of national wastewater experts to review the design and provide suggestions on improvements that would increase value (either reduce cost or increase function). The suggestion to consider a tunnel alternative was an outcome of the Value Engineering workshop. To support consideration of a tunnel, Gannett Fleming completed the drilling of 5 test borings DELCORA facilities. These borings showed rock conditions that are very favorable for tunnel construction. Also, a preliminary meeting was held with PennDOT representatives to introduce the project and start the dialogue about their concerns and requirements for tunnel or pipeline construction. Concurrently, the design of the pipeline approach proceeded. As the pipeline design proceeded, new challenges were identified that increase the pipeline estimated costs. These included the impacts of the newly identified Norwood Dump & Landfill, new PADEP requirement for soil management, pipeline routing changes to reduce impacts on residents, and impacts caused by uncertainty about future wet-weather peak flows from satellite communities. The tunnel design proceeded such with the goal of identifying the challenges and costs of the tunnel approach. The tunnel approach achieves a large amount of storage in the tunnel. This attenuates the wet-weather peak flows, so the requirements/costs of wet-weather treatment are dramatically reduced. The outcome of the concurrent pipeline and tunnel showed that the recent developments in pipeline approach have resulted in a pipeline cost greater than the budget while the tunnel approach is on budget. Specific tasks on the individual design contracts are listed below.

A. Pipeline Contract 1 - Segments 1 and 2 (D19-01) and Pipeline Contract 2 – Segments 3 and 4 (D19-02) – This report is combined because of the separate but collaborative efforts of the two design teams, Mott MacDonald and AECOM, is being realized. The 10% tunnel design has been reviewed and the designers have re-directed their efforts toward the tunnel design. Phase 1 ESA's are being performed at the shaft sites. The designers are delineating wetlands and tidal limits. Surveyors are working across the site confirming aerial topography and hydraulic structures, identifying properties and laying out boring sites for the geotechnical crews. The soil boring crews have mobilized to implement the second phase of the geotechnical investigation. Concurrently, property easements are being investigated and identified in preparation for the Easement Acquisition forms to contact property owners to gain access to private properties for the above surveys and investigations. Technical Memorandums addressing Tunnel Alignment Impediments and Development, Blasting for the ESA Shafts and Adjacent Tunnel Sections, and One versus Two Shaft Configuration Evaluation at WRTP have been submitted for review. The goal of these efforts is to complete a 30% tunnel design in April 2021.

B. Pipeline Contract 2 - Segments 3 and 4 (D19-02) –See A.

C. Pump Station Upgrades and Equalization Basin Design Contract (D19-03): Detailed Condition Assessments including lidar scanning and hazardous material testing were conducted at remote pump stations to inform design. HDR submitted their Condition Assessment report and Code Compliance Review technical memo to DELCORA for review last month. With the assistance of DCJA, HDR completed a walkthrough of the Darby Creek Joint Authority site adjacent to Darby Creek Pump Station to complete a Phase I site assessment to review available environmental information, required before any acquisition of land if deemed necessary to meet design needs of the ESA Program. Final Asset Condition and Replacement Recommendation Report were delivered and are under review by the Engineering Department. HDR submitted An Opinion of Probable Cost regarding portions of conveyance design options developed during the VE. A field visit to the eastern pump stations was completed for the purposes of informing environmental permitting and survey work to support design. Scope and fee for the ESA Tunnel Pump Station Alternatives Analysis has been awarded. HDR collaborated with the Tunnel Design team to provide an Alternatives Analysis for the 50 MGD tunnel dewatering pump station design by the end of August 2020. HDR presented the Alternatives Analysis deliverable to the Engineering, Maintenance, and Operations teams last month for the purpose of discussion regarding operations of the TDPS. Ongoing work includes progress towards the 30% basis of design of the pump station upgrades as well as hydraulic analysis and modeling of the existing conditions. HDR submitted their revised scope for the design of the Tunnel Dewatering Pump Station and has continued to evaluate the site layout of the TDPS in coordination with the Tunnel Team. HDR will be facilitating workshops between pump manufacturers and the DELCORA Engineering, Operations, and Maintenance Departments this month.

D. Western Regional Treatment Plant Expansion & WBTT Upgrades Design Contract (D19-04): Kleinfelder completed the geotechnical surveying of Chester Pump Station and its surrounding area and are developing the draft Geotechnical Investigation Data Report to be submitted in December. They provided a revised, final Amendment Scope of Work and Fee and are preparing a revised Schedule of Deliverables and burn rate to be provided in December. They participated in a further review of resiliency planning for WRTP and are continuing to develop a draft technical memorandum and recommendations. They conducted a workshop to review both the WRTP Dewatering Alternatives and the Chester Pump Station Disinfection Alternatives technical memorandums and are finalizing the Disinfection Alternatives technical memorandum. They continue to develop draft technical memorandums for the WRTP diffuser alternatives analysis and WRTP Master Site Plan for submission in December.

### 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.

Plans are now about 90% complete. Utility companies are being contacted regarding conflict resolutions and relocations. RVE has submitted to PennDOT for plan approval. SAC's design consultants, HDR, Inc. and AKRF, Inc., have met virtually with DELCORA engineering and RVE, and they understand the required effluent conditions out of Memorial Park. They have submitted a design memo requesting DELCORA to review and evaluate the effect of their design on the proposed DELCORA Separation Plan. RVE has provided a proposal to conduct the evaluation and determine the effects on the DELCORA Separation Plans. DELCORA has authorized ERM to procure the easements at the Marketplace property for both the new and existing pipes.

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

Engineer: Gannett Fleming, Inc.

Gannett Fleming (GF) has prepared a Soil management Plan for Boeing to approve their access to complete the utility location and geotechnical / environmental investigation of the proposed pipeline alignment. GF is evaluating and preparing a permit application to rate the flow capacities of the adjacent CDFM and Chester Force Main. PADEP does not have records of these capacities because the CDFM was constructed using ARRA funding – a rush for shovel ready projects.

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

Engineer: Catania Engineering Associates, Inc. (CEA)

CEA has submitted preliminary plans for DELCORA's review. CEA has submitted plans to Upland Borough for their approval of the storm culvert abandonment scope. DELCORA Engineering is reviewing plans and alternate to lower the sewer to eliminate a "dogleg" in the sanitary sewer that was constructed to avoid a storm culvert many years ago.

6. WRTP – LOWER DELAWARE RIVER IMPROVEMENTS

Engineer: Gannett Fleming, Inc. (GF)

These improvements were required to facilitate the flow increases projected in the Long-Term Control Plan Update (LTCPU). The flows of both the West End Interceptor and the DRI have been diverted to flow more directly toward the pump station. These diversions have removed the "step manhole" and improved the flow of the Plant Return Flow (PRF) pipe. Project is about 95% complete.

**PRETREATMENT/LABORATORY**

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

No updates at this time.

2. PERMIT ISSUES

The following draft permits were issued in the month of November:

- Burlington County Board of Chosen Freeholders
- Pennsylvania Machine Works, Inc.

No final permits were issued in the month of November:

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

- Bullen Chemical
- Cintas
- Eldredge
- WAWA Dairy

### 3. INDUSTRIAL USER SAMPLING AND INSPECTIONS

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

- Monroe Energy
- Esschem
- Pyromet
- WAWA Dairy
- Delaware County Linen

No Industrial Users were inspected in the month of November.

### 4. MISCELLANEOUS

The following were sampled during the month of November:

- Monthly Plant Sampling
- Weekly Sludge Metals
- Weekly Remote Sampling
- Bimonthly Nutrient Testing

All were sent to the contract laboratories for analysis.

### **REGULATORY FILINGS/ISSUES**

- WETT Report for the 3<sup>rd</sup> Quarter 2020 was submitted to PADEP on August 17, 2020.
- Title V Emissions Fee and Report for 2019 was submitted to the PADEP on August 14, 2020.
- Semi-Annual monitoring report was sent to PADEP on 9/24/2020 covering the reporting period 1/1/2020 thru 6/30/2020.
- Solid Waste Minor Modification Application for use of the radiation monitoring arch was received by PADEP on August 22, 2020 and was deemed "Administratively Complete" per PADEP correspondence dated September 29, 2020.
- Preventative and Corrective Maintenance report for the 3<sup>rd</sup> quarter was submitted to PADEP on October 20<sup>th</sup> 2020.
- Municipal Incinerator Ash Residue Monitoring Report (Form 41) for the 4<sup>th</sup> Quarter 2020 was submitted to the PADEP on November 9, 2020.
- Semi-Annual PCB Monitoring DMR for the second half of 2020 was submitted to PADEP on November 17, 2020.
- Annual Stormwater Monitoring DMR for 2020 was submitted to PADEP on November 24, 2020.

CNH:bab



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



**Weston Solutions, Inc.**  
1400 Weston Way  
West Chester, PA 19380  
610-701-3000 • Fax 610-701-3401  
[www.westonsolutions.com](http://www.westonsolutions.com)



2 December 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 November 2020

Dear Mr. Willert:

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

### **ANNUAL SWMM MODELING**

Proposal No.: 133462  
WESTON WO No.: 05623.034.006  
Start Date: August 2019  
End Date: December 2020  
Percent Complete: 78%

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 November, WESTON simulated precipitation events for October and reported simulation results to DELCORA. The updated model provided by Greeley and Hansen via email on 27 October 2020 was used for this simulation. The simulation is based on precipitation recorded on the rain gauge located at the WRTP. During the month of September, DELCORA experienced a total of 3.40 inches of precipitation over 11 separate days. This resulted in roughly 0 to 6 CSO overflow daily events per outfall depending on the sensitivity to rainfall with 1 of the daily events attributed to carryover from the previous days precipitation. 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

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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: 78%

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. 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 November, 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 September 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



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further verify the existing design information with the existing conditions. The project is currently in the Phase III Detailed Design scope of work.

In October 2019, 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 2019 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. WESTON had no activity on this project during the month of November.

### **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.

During the month of November, WESTON assisted DELCORA staff in revising a GIS map depicting DELCORA service areas for use in the Act 537 plan currently being prepared. WESTON staff also updated the annual insurance valuation for DELCORA assets.

### **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 (WRTP).

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



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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 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 November.

### **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 W RTP 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. 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 has submitted a proposal to incorporate the recommendations included in the initial evaluation. WESTON had no activity on this project during the month of November.



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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 November.

### **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 November. The construction has been completed and the remaining effort includes preparation of the record drawings after receipt of contractor marked-up drawings.

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".

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

cc: DELCORA Board of Directors  
C. Hurst, DELCORA