

MINUTES
OPERATIONS & ENGINEERING COMMITTEE MEETING
JANUARY 14, 2020

Attendants: Messrs. Boland, Cherico, DiSantis, Hurst, Kester, Knapp, Kochubka, Lucas, Mullen, Pileggi, Pisani, Willert, and Mesdames Caulk and Cummings.

1. ROLL CALL: Six members of the DELCORA Board of Directors were present at the meeting constituting a quorum.
2. PLEDGE OF ALLEGIANCE: All parties present at the meeting recited the Pledge of Allegiance.
3. BID OPENING: Mr. Boland 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. He stated that there was one violation at the W RTP for exceeding the instantaneous maximum TRC limit on December 4th. Operations found the issue to be a tripped breaker for the dichlorination pumping system. The reason for this tripped breaker was found to be caused by ongoing construction activity. Mr. DiSantis also stated that there were three reportable incidents during the month. Two incidents were for RTO short stack openings caused by a failed thermocouple. The last reportable incident was for wet weather post 24-hour CSO discharge. After investigating this issue, it was discovered that there was a partial clog in the Delaware River Interceptor Relief Lift Station pump, which has been addressed. Mr. DiSantis stated that due to ongoing construction at the W RTP there continues to be various tank outages and process interruptions which he stated Operations is handling well. Mr. DiSantis stated that there were five violations in remote operations. Chadds Ford Ridings had four violations due to a failure of their sand filter. The media was replaced, and the filter is now up and running. There was also a violation at the Chadds Ford Turners Mill facility due to an exceeding weekly limit of TSS which was determined to be a contaminated sample container. Regarding the Trucked Waste business, he reported that it continues to do well. 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 Incinerator Maintenance Contract is up for renewal and will be put out for bid in the next six months. Mr. Hurst reported on the Bar Screen Replacements project stating that this project is in the close out process. He also noted that the PS-6 Construction, Phase I Part D is still open due to the remaining Fiberoptic Communication work that still needs to be completed. He stated that the Solids Handling is also complete besides some remaining electrical work that needs to be completed. He reported that the W RTP Plant Upgrades project is ongoing. Mr. Hurst also reported on the HVAC Energy Savings Upgrade stating that Phase 2 work is underway. Mr. Hurst reported on the Design Items on his report. He stated that the CSO Long Term Control Plan was submitted and that DELCORA has not heard back from the PADEP yet. He reported that the Springhill Farm WWTF Pump

Station work will start next month. Mr. Kester asked why there were seven Notices of Violation in the pretreatment section of his report. Mr. Hurst responded stating that these violations are from the Industrial Users not following their permits and that we do fine them. Mr. Hurst had no additional comments to the written report. The Committee had no additional questions regarding the written report.

6. MONTHLY REPORT – ENGINEERING ADVISOR: Mr. Kochubka 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 monthly Stormwater Modeling evaluation and report was completed and submitted to DELCORA. Also, the monthly Flow Metering report was completed. Regarding the Force Main project, Weston completed the PennDOT road opening permit application for Release Valve 55 and construction of the ARV will start this month. Regarding General Engineering Support, he reported that work was completed on the Engineering Assessment for the PUC submission. Mr. Kochubka also reported that the annual report to TD Bank for DELCORA's System Reserve Requirements Repair and Replacement Fund Account was also completed. Mr. Kochubka had no additional comments to the written report. The Committee had no questions regarding the written report.

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

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

10. AUTHORIZATION FOR PROFESSIONAL SERVICES:

- A. Bradford Engineering Associates, Inc. – Proposal Dated January 4, 2020 – For Professional Engineering Services For The Preparation Of The 2019 Chapter 94 Report For Edgmont Township – Total Amount Not To Exceed \$6,500.00 (Operating Funds)
- B. Castle Valley Consultants, Inc. – Proposal Dated December 23, 2019 – Professional Engineering Services For Preparation Of Municipal Wasteload Management Report For The Preserves (Corinne Village) Wastewater Treatment Plant, Pocopson Township, Chester County, Pa – Total Amount Not To Exceed \$1,984.00 (Operating Funds)
- C. Castle Valley Consultants, Inc. – Proposal Dated December 23, 2019 – Professional Engineering Services For Preparation Of Groundwater Report For The Preserves (Corinne Village) Wastewater Treatment Plant, Pocopson Township, Chester County, Pa – Total Amount Not To Exceed \$1,323.00 (Operating Funds)
- D. Castle Valley Consultants, Inc. – Proposal Dated December 23, 2019 – Professional Engineering Services For Preparation Of Municipal Wasteload Management Report For The Riverside Wastewater Treatment Plant,

Pocopson Township, Chester County, Pa – Total Amount Not To Exceed \$1,984.00 (Operating Funds)

- E. Cavallo Environmental Services, LLC. – Proposal Dated December 13, 2019 – For Professional Services To Prepare The Annual Pollutant Minimization Plan (PMP) Report – Total Amount Not To Exceed \$12,000.00 (Operating Funds)
- F. Industrial Controls Distributors, LLC – Proposal Dated September 26, 2019 – For Professional Services For Global Care Renewal For The SCADA System For 2020 – Total Amount Not To Exceed \$24,778.21 (Operating Funds)
- G. Weston Solutions, Inc. – Proposal Dated December 16, 2019 – For Professional Engineering Services To Prepare DELCORA's Annual Chapter 94 Municipal Wasteload Management Reports For 2019 – Total Amount Not To Exceed \$34,000.00 (Operating Funds)
- H. Corrosion Probe, Inc. – Proposal Dated January 6, 2020 – For Professional Services To Provide On-Call Technical Services For Corrosion And Materials Engineering – Total Amount Not To Exceed \$30,000.00 (Operating Funds)
- I. Entech Engineering, Inc. – Proposal Dated January 7, 2020 – For Professional Services To Prepare Springhill Farm WWTP's Annual Chapter 94 Municipal Wasteload Management Report For 2019 – Total Amount Not To Exceed \$3,600.00 (Operating Funds)
- J. Entech Engineering, Inc. – Proposal Dated January 7, 2020 – For Professional Services To Prepare The NPDES Permit Renewal For Springhill Farm WWTP – Total Amount Not To Exceed \$4,900.00 (Operating Funds)
- K. Material Matters, Inc. – Proposal Dated January 13, 2020 – For Professional Services To Prepare An Environmental Evaluation Of Solids Handling Operations – Total Amount Not To Exceed \$85,000.00 (Operating Funds)

Mr. Hurst provided an overview of the above proposals. Following discussion, it was the consensus of the Committee to recommend Board approval of the above proposals. These items will be placed on the agenda for the January 21st Board meeting.

11. AUTHORIZATION TO ADVERTISE FOR BIDS:

- Contract No. TC-2001-C – Incinerator – Annual Maintenance & Emergency Repairs 2020
- Contract No. SEW-2002-CO – Furnishing Equipment, Labor & Supervision For Sewer Maintenance, Repairs & Other Construction Related Projects
- Contract No. SEW-2003-CO – Furnishing Equipment, Labor & Supervision For Paving Restoration Services
- Contract No. P2020-01 Lawn Mowing And Maintenance
- Contract No. P2020-02 Sewer Lateral Line Cleaning Service

Following discussion, it was the consensus of the Committee to recommend Board approval of the above contract advertisements. These items will be placed on the agenda for the January 21st Board meeting.

ADJOURNMENT: It was moved by Mr. Lucas, seconded by Mr. Mullen, and unanimously carried to adjourn the regular meeting at 3:59 p.m.



Inter - Office Memorandum

To: Robert J. Willert, Executive Director
From: Michael J. DiSantis, Director of Operations and Maintenance *MJD/mc*
Subject: Board Report for the January 14, 2020, O & E Committee Meeting
Date: January 10, 2020

- I. PROCESS INFORMATION – There was one violation at WRTP during the month for exceeding the instantaneous maximum TRC limit on 12/4. This occurred due to a tripped breaker for the dechlorination pumping system. A root-cause analysis determined that construction activity inadvertently caused this failure. December data points of interest are:

A.	<u>Liquid Process Averages:</u>	<u>Month:</u>	<u>YTD:</u>
1.	Flow	37.44 MGD	37.26 MGD
2.	TSS	16 mg/L	15 mg/L
3.	cBOD ₅	10 mg/L	9 mg/L
4.	cBOD ₂₀ % Removal	96.02%	96.4%
5.	cBOD ₂₀ Loading	4,684 lbs.	4,335 lbs.
B.	<u>Solids Processing:</u>	<u>Month:</u>	<u>YTD:</u>
1.	Dry Tons Treated -	1,972.10	1,955.43
2.	Dry Tons/Day -	63.62	64.29
3.	Total Gallons Pumped -	12,052,167	11,376,256
4.	Average Feed Solids -	3.90%	4.15%
5.	Average Cake Solids -	20.87%	22.30%
6.	Pounds of Polymer/DT -	201.85	185.83
7.	MCF/DT -	5.15	4.87
8.	Monthly Cost/DT -	\$40.15	\$37.48

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

December 2019	Total Flow	Daily Avg	High Daily	Low Daily
Darby Creek	590.26	19.04	33.23	15.10
Muckinipates	139.24	4.49	9.69	3.18
Central Delaware	307.96	9.93	19.37	7.43
Chester	254.18	8.20	18.39	5.66
Marcus Hook	25.77	0.83	2.08	0.54
Eddystone	13.11	0.42	0.77	0.31
Naamans Creek	68.05	2.20	4.04	1.60
Chi Pit	15.32	0.49	1.06	0.35
Chester-Ridley	138.69	4.47	6.92	3.65
Edgmont	3.82	0.12	0.15	0.10

II. MONTHLY FACILITY ACTIVITIES

A. Operations Highlights/Key Events

1. WRTP received 98% of the flow from the Central Delaware Pump Station.
2. There were three reportable incidents during the month. Two incidents were for RTO short stack openings caused by a failed thermocouple. The initial investigation found some moisture and loose wires in a junction box for one of the unit's thermocouples. This was addressed but upon restart another failure occurred. The thermocouple was then promptly replaced and normal operation resumed. The remaining reportable incident was for a wet weather post 24-hour CSO discharge. Upon investigation it was found that there was a partial clogging of the suction of the Delaware River Interceptor Relief Lift Station pump. Staff addressed the issue, immediately stopping the overflow.
3. Flows in the system reflect typical levels of precipitation and were in line with year-to-date flows. Due to on-going construction, there continues to be multiple tank outages, process interruptions, and operation of interim equipment. Overall plant performance continued to meet or exceed permit parameters and operational targets. Primary clarifier and gravity belt thickener (GBT) performance both met operational targets. There was a 72% average total suspended solids (TSS) removal at the primaries and GBT cake was >5% TS with 103 mg/L TSS in the filtrate. In solids handling, incinerator up time was over 95% for the month leading to no loads being hauled to compost during the month. Both polymer and natural gas usage met operational and budget targets. Chemical addition to address belt press room H₂S levels continued as needed. In remote operations, there were five violations. At the Chadds Ford Ridings facility, a failure of the sand filter led to an instantaneous and monthly geometric mean exceedance. Additionally, there were exceedances of both the monthly and weekly cBOD₅ limits due to a single cBOD₅ result. The result on the next day was well within permit parameters so no root cause could be determined. At the

Chadds Ford Turners Mill facility, there was an exceedance of the weekly TSS limit. It was determined that this was the result of a contaminated sample container. Measures have been taken to ensure recurrence.

B. Maintenance Highlights/Key Events

1. There were no system failures during the month. In addition to routine plant, pump station, remote system, and collection system O&M; work on multiple in-house projects, support of capital projects, new system start-up, and troubleshooting new equipment start-up issues remained the major focus of the maintenance departments during the month. Additional tasks during the month included the continued troubleshooting and addressing of on-going RTO issues. As part of this initiative, a multi-day hands-on training was held for O&M staff. Central Maintenance also worked on the completion of winterization tasks, belt filter press repairs, continued work on inventory control, continuation of integration of new equipment and the creation of related PM tasks into the Infor system, B-3 boiler troubleshooting, primary clarifier repairs, various pump repairs, grit system 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, asset identification work, I&I investigation and remediation work, air relief inspections and maintenance, metering support, various line repairs/replacements in our service area, and the continued support of capital projects, WRTP and remote facility operation, and sludge receiving operations.

C. Trucked Waste Business

1. During the month, 28.78 MM gallons were received. The projected revenue for the month is expected to meet our monthly target. 2019 year-to-date revenue remains on budget.

MJD:mc
attachments (NPDES DMR/Strategic Plan Reports)

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



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

December 20, 2019

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 November, 2019.

All parameters were in compliance during the month. Parameter averages for November, 2019 were: Flow – 30.15 MGD; cBOD₅ – 7 mg/L; TSS – 13 mg/L; cBOD₂₀ % removal – 96.67%; and cBOD₂₀ – 2,694 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

Reporting Frequency: Monthly
 DMR Effective From: 11/01/2019
 DMR Effective To: 11/30/2019
 Permit Expires: 04/30/2018
 Permit Application Due: 11/01/2017
 No Discharge: ☐

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
FROM 2019	11	01	TO 2019	11	30

PARAMETERS REPORTED VALUES

PARAMETER	QUANTITY OR LOADING			QUANTITY OR CONCENTRATION			SAMPLING FREQUENCY	SAMPLING TYPE
	VALUE	UNITS	VALUE	VALUE	UNITS	VALUE		
pH (03400)	Sample Measurement	***	6.28	6.84	S.U.	6.84	1/day	Grab
	Permit Requirement	***	6.0	8.0	IMAX	8.0	1/day	Grab
Total Suspended Solids (00530)	Sample Measurement	3201	16500	15.0	mg/L	15.0	1/day	24-Hr Composite
	Permit Requirement	11000	Wdy Avg	45.0	Wdy Avg	45.0	1/day	24-Hr Composite
Oil and Grease (00558)	Sample Measurement	<1257	***	<5.0	mg/L	<5.0	1/day	Grab
	Permit Requirement	5500	Avg Mo	30.0	IMAX	30.0	1/day	Grab
Ammonia-Nitrogen (03510)	Sample Measurement	***	***	3.51	mg/L	***	1/week	24-Hr Composite
	Permit Requirement	***	***	Monitor & Report	***	***	2/month	24-Hr Composite
Nitrite as N (00515)	Sample Measurement	***	***	.74	mg/L	.87	1/week	24-Hr Composite
	Permit Requirement	***	***	Monitor & Report	***	Monitor & Report	2/month	24-Hr Composite
Nitrate as N (00520)	Sample Measurement	***	***	4.26	mg/L	5.22	1/week	24-Hr Composite
	Permit Requirement	***	***	Monitor & Report	***	Monitor & Report	2/month	24-Hr Composite
Total Kjeldahl Nitrogen (00625)	Sample Measurement	***	***	6.76	mg/L	***	1/week	24-Hr Composite
	Permit Requirement	***	***	Monitor & Report	***	***	2/month	24-Hr Composite
Cyanide, Total (00720)	Sample Measurement	***	***	.00	mg/L	***	1/month	24-Hr Composite
	Permit Requirement	***	***	Monitor & Report	***	***	1/month	24-Hr Composite
Chlorobromomethane (04065)	Sample Measurement	***	***	.0011	mg/L	***	1/month	Grab
	Permit Requirement	***	***	Monitor & Report	***	***	1/month	Grab
Cadmium, Total (01027)	Sample Measurement	***	***	<.0002	mg/L	***	1/month	24-Hr Composite
	Permit Requirement	***	***	Monitor & Report	***	***	1/month	24-Hr Composite
Copper, Total (01042)	Sample Measurement	***	***	.0058	mg/L	***	1/month	24-Hr Composite
	Permit Requirement	***	***	Monitor & Report	***	***	1/month	24-Hr Composite
Lead, Total (01051)	Sample Measurement	***	***	<.001	mg/L	***	1/month	24-Hr Composite
	Permit Requirement	***	***	Monitor & Report	***	***	1/month	24-Hr Composite
Zinc, Total (01052)	Sample Measurement	***	***	.027	mg/L	***	1/month	24-Hr Composite
	Permit Requirement	***	***	Monitor & Report	***	***	1/month	24-Hr Composite
Dichlorobromomethane (02101)	Sample Measurement	***	***	.002	mg/L	***	1/month	Grab
	Permit Requirement	***	***	Monitor & Report	***	***	1/month	Grab
Flow (00500)	Sample Measurement	43.6	MGD	***	***	***	Continuous	Measured
	Permit Requirement	30.15	MGD	***	***	***	Continuous	Measured
Total Radical Chlorine (TRC) (00563)	Sample Measurement	***	***	.5	mg/L	.78	1/day	Grab
	Permit Requirement	***	***	Monitor & Report	***	1.0	1/day	Grab

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

Sample Measurement	Permit Requirement	***	***	***	***	***	***	749	834	mg/L	1/week 2/month	24-Hr Composite 24-Hr Composite
Total Dissolved Solids (70295)	Sample Measurement	***	***	***	***	***	***	Monitor & Report Avg Mo	Monitor & Report Daily Max	mg/L	2/month	24-Hr Composite
Fecal Coliform (74055)	Sample Measurement	***	***	***	***	***	***	<15	250.3	No./100 ml	1/day	Grab
	Permit Requirement	***	***	***	***	***	***	Geo Mean	1000		1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5) (80052)	Sample Measurement	1795	2038	1/day	1/day	***	***	7.0	8.0	mg/L	1/day	24-Hr Composite
	Permit Requirement	7000	10500	***	***	***	***	Avg Mo	29.3		1/day	24-Hr Composite
BOD, carbonaceous, 20 day, 20 C (80387)	Sample Measurement	2694	***	1/day	1/day	***	***	***	***	***	1/day	24-Hr Composite
	Permit Requirement	10500	***	***	***	***	***	***	***	***	1/week	24-Hr Composite
Facility Sampling Point Comments												



COMMONWEALTH OF PENNSYLVANIA
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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: 11/01/2019
DMR Effective To: 11/30/2019
Permit Expires: 04/30/2018
Permit Application Due: 11/01/2017
No Discharge: ☐

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
2019	11	01	2019	11	30

FROM

PARAMETERS REPORTED VALUES

PARAMETERS REPORTED VALUES								
PARAMETER	QUANTITY OR LOADING			QUANTITY OR CONCENTRATION			SAMPLING FREQUENCY	SAMPLING TYPE
	VALUE	UNITS	VALUE	VALUE	UNITS			
	---	---	---	96.67	---	%		
BOD, carbonaceous, 20 day, 20 C (80087)	---	---	---	89.25	---	---	1/day	24-Hr Composite
	---	---	---	Min-Max Avg	---	---	1/week	24-Hr Composite
Facility Sampling Point Comments								



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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: 11/01/2019
 DMR Effective To: 11/30/2019
 Permit Expires: 04/30/2018
 Permit Application Due: 11/01/2017
 No Discharge: ☐

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
2019	11	01	2019	11	30

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) (05310)	66735	lbs/day	---	283	mg/L	---	1/week	24-Hr Composite
	Monitor & Report Avg Mo		---	Monitor & Report Avg Mo		---	1/week	24-Hr Composite
Total Suspended Solids (0530)	74755	lbs/day	---	277	mg/L	---	1/day	24-Hr Composite
	Monitor & Report Avg Mo		---	Monitor & Report Avg Mo		---	1/day	24-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) (60082)	65905	lbs/day	---	246	mg/L	---	1/day	24-Hr Composite
	Monitor & Report Avg Mo		---	Monitor & Report Avg Mo		---	1/day	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
DMR Cover Letter November 2019.doc	Cover Letter	2019-12-20T14:08:51-05:00	
Daily Effluent Monitoring Form-11-2019.xlsx	Daily Effluent Monitoring Form	2019-12-20T11:02:09-05:00	
DMR Laboratory Accreditation-ALS-11-2019.doc	Laboratory Accreditation Form	2019-12-20T11:02:09-05:00	
DMR Laboratory Accreditation-WRTP-11-2019.doc	Laboratory Accreditation Form	2019-12-20T11:02:09-05:00	
DMR Laboratory Accreditation-MUR-11-2019.doc	Laboratory Accreditation Form	2019-12-20T11:02:09-05:00	
Hauled in Municipal Wastes_11-2019.xls	Hauled-in Municipal Wastes Form	2019-12-20T11:02:09-05:00	
Hauled in Residual Wastes_11-2019.xls	Hauled-in Residual Wastes Form	2019-12-20T11:02:09-05:00	
WRTP_Process_11-2019.pdf	Influent and Process Control Form	2019-12-20T11:02:09-05:00	
Influent and Process Control_11-2019.xls	Influent and Process Control Form	2019-12-20T11:02:09-05:00	
Sewage Sludge Biosolids Production and Disposal Form_11-2019.xls	Sewage Sludge / Biosolids Production and Disposal Form	2019-12-20T11:02:09-05:00	
November 2019 SWMM Report.docx	Other	November 2019 SWMM Report	
Sludge Hauled 11-2019.xlsx	Other	Sludge Hauled 11 2019	
Trucked Waste_11-2019.xlsx	Other	Trucked Waste 11 2019	
Inf-PRF November 2019 Calculations.xlsx	Other	Inf-PRF November 2019 Calculations	
WRTP_Effluent_11-2019.pdf	Laboratory Analytical Report		
EFF_11-21-19.PDF	Laboratory Analytical Report		
WRTP_Influent_11-2019.pdf	Laboratory Analytical Report		

PERMIT VIOLATIONS

Non-Compliance ID	Event Start Date	Event End Date	Parameter	Limit Type	Reported Value	Permit Limit	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	Event Location	Volume (gal)	Duration (hrs)	Resolving 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	Sampling Point	Parameter	Reported Value	Permit Limit	Comments
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COMMENT DETAILS

Comments	Operator Name	Operator Certification Number	Operator Contact Number
	Michael J. Disantis	TO403	(610) 376-5523

SUBMISSION INFORMATION

SUBMITTED BY GREENPORT USER	*Pursuant to the Pennsylvania Electronic Transactions Act - Act 60, 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	
	Michael Disantis			(610)	876-5523	2019	12
	SUBMITTED BY FULL NAME			AREA CODE NUMBER		YEAR	MO DAY

OPERATIONS STRATEGIC PLAN REPORT

DECEMBER 2019

Missed Samples Per Month	#	YTD
Goal is zero	0	5
Deviations from Required Sampling Or Analytical Protocol	#	
Goal is 100% compliance	1	6
Samples with Analytical Results Outside of QA/QC Standards	#	
Goal is 100% compliance	3	101
Hours in Training for Month	#	
Total	19.5	370.5
DEP Approved	0.0	152.0
DEP Certified Operators	#	
Regulations Require One	10	

CENTRAL MAINTENANCE MATRIX DECEMBER 2019

		CURRENT MONTH	YTD
Work Order Aging		#	
31-60 days		48	
61-90 days		23	
Over 90 days		40	
Work order hours/Available hours		%	%
**Mechanical Maintenance		89%	89%
Electrical Maintenance		100%	92%
Instrument Maintenance		100%	94%
**Includes all Preventive Maintenance			
Work Ratio Hours		# / %	# / %
Corrective		803 / 26%	14082 / 30%
Preventive		2135 / 69%	31059 / 66%
Predictive		166 / 5%	1862 / 4%
System Failures		#	#
Hours in Training		#	#
Mechanics/Helpers		NA	NA
Electricians		NA	NA
Instrument Techs		NA	NA
Call-Ins		#	#
WRTP		5	220
Pump Stations		15	143



**Work Order Summary Report for Date
Range: 12/1/2019 to 12/31/2019**

Asset Type	Work Order Type	Labor Hours	Labor Cost
SCHAMBER		84	2,364.70
	CLEAN GRATES	84	\$2,364.70
SCONTROLVALVE		34	999.94
	SERVICE AIR RELIEF VALVE	24	\$705.84
	VAC AND CLEAN	10	\$294.10
SCSOREGULATOR		138	3,906.66
	CSO INSPECTION	138	\$3,906.66
SGRAVITYMAIN		457	13,556.11
	AREA LINE CLEANING	51	\$1,499.91
	EMERGENCY CALL IN	64	\$2,873.04
	GNET TV INSPECTION	90	\$2,646.90
	MISCELLANEOUS	36	\$1,001.75
	MONTHLY LINE CLEANING	32	\$941.12
	PA ONE CALL LINE LOCATING	94	\$1,985.87
	PIPE REPAIR	35	\$1,060.57
	SEAPORT PUMP	20	\$606.04
	SINKHOLE INVESTIGATION	16	\$352.92
	SURVEYING	20	\$587.99
SLATERALPOINT		199	7,373.03
	EMERGENCY CALL IN	96	\$4,386.00
	SEWER COMPLAINT INVESTIGATION	74	\$2,162.44
	TV INSPECTION	29	\$824.60

Asset Type	Work Order Type	Labor Hours	Labor Cost
SMANHOLE		5	136.65
	MANHOLE INSPECTION	2	\$46.19
	SURVEY / VERIFICATION	3	\$90.46
SMETER		21	617.61
	TRAFFIC CONTROL	21	\$617.61
SPUMPSTATION		29	881.88
	SEAPORT DRIVE	9	\$271.38
	THORNBURY TOWNSHIP T.P.	20	\$610.50
SSCADASENSOR		19	441.15
	TRAFFIC CONTROL	19	\$441.15
STREATMENTPLANT		294	9,339.50
	B-3	8	\$352.92
	CLEAN GRIT PIT/LOAD CONTAINER	99	\$2,960.44
	EB-2	26	\$875.40
	EMERGENCY CALL IN	8	\$377.76
	POCOPSON RIVERSIDE WWTP	6	\$183.15
	POCOPSON PRESERVE WWTP	6	\$183.15
	REPAIR WORK	15	\$454.53
	RIDINGS WWTP	48	\$1,289.16
	SLUDGE RECEIVING	8	\$352.92
	T-2	47	\$1,401.97
	THE BEAST	24	\$908.10
SVARIOUS		271	7,448.76
	ENGINEERING SUPPORT	119	\$3,485.09
	EQUIPMENT MALFUNCTIONS AND REPAIRS	34	\$725.01
	MISCELLANEOUS	13	\$389.02
	PARTS /TOOLS/ EQUIPMENT PROCUREMENT	42	\$1,162.39
	SNOW REMOVAL	20	\$467.01
	VEHICLE INSPECTON	45	\$1,220.25
Grand Total:		1,549	\$47,065.98



Inter - Office Memorandum

To: Robert J. Willert, Executive Director
From: Charles N. Hurst, Director of Engineering *CNH Inc*
Subject: Board Report for the January 14, 2020 O&E Committee Meeting
Date: January 10, 2020

CONSTRUCTION PROJECTS

1. EMERGENCY REPAIRS (December)

- Completed fabrication and installation of Shielding on both sides of Chester Pump Station grit chamber.
- Replaced Decking for Grit and Screening container at Chester Pump Station.
- Worked on drainage system at B-3 W RTP

2. 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

3. REMOTE PUMPING STATIONS BAR SCREEN REPLACEMENTS (#PR-1703-C)

Funding:	Capital
Design:	Gannett Fleming
Inspection:	In-house
General (Part A):	Eastern Environmental Contractors, Inc.
Contract Amount:	\$2,565,492.06
Percentage Paid:	97.64% - through previous month

Electrical (Part B):	Eastern Environmental Contractors, Inc.
Contract Amount:	\$571,000.00
Percentage Paid:	99% - through previous month
Notice of Award:	02/27/2017
Notice to Proceed:	03/22/2017
Substantial Completion:	03/16/2018 (05/09/18)
Final Completion:	04/26/2018 (06/19/18) Projected 3/31/2020

The contractor has completed the installation of all new bar screens. The installation of a conveyor, conveyor panel, repurposed screw and trough, gratings and handrail work is complete. The close out process has been initiated. Awaiting close out documentation from Contractor.

4. 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.

5. 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
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Contract Amount: \$1,833,200.00
Percentage Paid: 89.11% - 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 are preparing their as-built drawings for submission and completing punch list items.

6. 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: **78.68% - through previous month**

Electrical (Part B): Philips Brothers Electric
Contract Amount: \$6,220,777.00
Percentage Paid: **56.56% - 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 the demolition of the equipment within T-16 and the installation of the small diameter piping, ladders, and unit heaters in PS-3. They are working on the installation of pier caps and gates and concrete repair in T-12. They have installed the kneewalls, baffle walls, and access ladders in T-19 and T-20. They have paved around EPS-1, begun the ceiling demolition in B-3, and moved the grease pumps to T-26. Philips Brothers is installing the conduit and wiring around the aeration tanks including the permanent power to the valves. They have completed the installation of the cable tray and conduit in the basement of PS-4 and are installing the conduit and wiring around the chlorine contact tanks. They have installed the duct bank for Substation 1 and are preparing to install the slab. They have completed the wiring of the sump pumps in PS-3.

7. 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:	57.77% - through previous month
Notice of Award:	09/19/2018
Notice to Proceed:	10/15/2018
Substantial Completion:	3/14/2019
Final Completion:	5/3/2019 Maintenance Alternate: 10/31/2020

Philips Brothers completed work to install the 150KW generator at Marcus Hook Pump Station and the 600KW generator at Chester Ridley Creek Pump Station. PECO service updates at Marcus Hook Pump Station were completed and inspected by PECO. Programming work was completed at Chester Ridley Creek Pump Station. Philips Brothers completed maintenance projects including 480V feeder work and outdoor gear work at Muckinipates Pump Station, and they are preparing As-Built engineering drawings for B-3. A PECO line, transfer switch and meter discovered on parcel previously owned by Covanta was removed and made safe. Philips Brothers also provided assistance during an emergency call-in at T-16 and an emergency call-in regarding the 15KV system at Chester Ridley Creek Pump Station.

8. 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:	80.45% - through previous month
Notice of Award:	9/13/2017
Notice to Proceed:	9/13/2017

Phase 2 work is underway.

9. 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:	16.55% - through previous month
Notice of Award:	06/19/2019
Notice to Proceed:	07/16/2019
Final Completion:	08/31/2020

10. 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:	71.40% - 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

11. WRTTP 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 connections remain.

DESIGN (November 2019)

1. CSO LONG TERM CONTROL PLAN UPDATE

The LTCP Semi-Annual Report No. 8 was submitted on June 28, 2019. The LTCP Team is still awaiting comments from the USEPA/PADEP.

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 formed a cross functional team to evaluate the various alternatives for the treatment and conveyance of the ESA. DELCORA's procurement of ESA Engineers is completed. The kickoff for final design of the ESA design is underway.

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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.

The Engineering Design Phase has begun. Site Survey is completed. A draft of the final Hydrological and Hydraulic Study was received on November 15, 2019. Final acceptance of the H&H Study is contingent upon the Stormwater Authority of The City of Chester. Design of pipe plan and profile is proceeding. Soil Borings and Soil Sampling (Geotechnical and Environmental) was conducted on November 14, 2019. Utility companies are now being contacted regarding conflict resolutions and relocations. Progress meeting is scheduled for January 13, 2020.

4. SPRINGHILL FARM WWTF PUMP STATION AND SANITARY FORCE MAIN PROJECT (#PFR-1903-C)

Contract 1: General Construction
Contract 2: Electrical / SCADA Construction

Design: Entech Engineering, Inc.

Re-Bid Date: 12/10/2019

Project was awarded as two contracts. They are:

CONTRACT 1: GENERAL CONSTRUCTION

A. J. Jurich, Inc. \$480,304.00

CONTRACT 2: ELECTRICAL/SCADA CONSTRUCTION

AJM Electric, Inc. \$198,543.00

Entech is continuing permit acquisition. We are awaiting issuance of the Part 2 permit. Planning Module was approved

After the township's postponement of the construction, the developer, Pettinaro Construction, will again construct the force main that Springhill Farms will connect with to convey the wastewater to Concord Township's system. A spring construction schedule has been confirmed by the developer and we will coordinate with that construction schedule.

5. 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. Engineer has applied for a PennDOT HOP. Offsite design work has begun.

6. 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 has been scheduled for January 13, 2020.

PRETREATMENT/LABORATORY

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

No updates at this time.

2. PERMIT ISSUES

No draft permits were issued in the month of November.

The following final permit was issued in the month of December

- Sunoco Darby Creek Tank Farm

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

- CSC Sugar
- Chester County Landfill
- Cintas
- Eldredge
- Qualawash Holdings
- Waste Management of PA
- WAWA

3. INDUSTRIAL USER SAMPLING AND INSPECTIONS

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

- Gloucester County Improvement Authority
- Cumberland County Landfill

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

- Sunoco Darby Creek Tank Farm
- Marcus Hook Energy Center
- Hydrol Chemical
- CSC Sugar
- Olympic Tool
- Oatly
- United Hospital Supply
- C&R Laundry

4. MISCELLANEOUS

The following were sampled during the month of November:

- Monthly Plant Sampling
- DRBC Weekly Sampling
- Weekly Sludge Metals
- Hauled Waste Metals
- Weekly Remote

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.
- Semi-Annual Monitoring report covering the period of 1/1/19-6/30/19 was submitted to the PADEP on 9/25/2019.
- Whole Effluent Toxicity Test (WETT) Report for the 4th Quarter 2019 was submitted to the PADEP on 12/5/2019.

CNH:mc

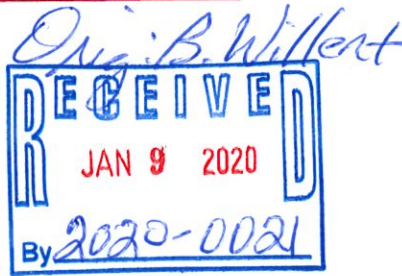
cc: (via email)
M. DiSantis
J. Pileggi
C. Lenton
I. Fitzgerald
S. Labrum
J. Centrone
D. Dutton
M. Sweeney
J. Yochim
T. Diewald
File



Weston Solutions, Inc.
1400 Weston Way
West Chester, PA 19380
610-701-3000 • Fax 610-701-3186
www.westonsolutions.com

8 January 2020

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



W.O. No. 05623.034.001.0001

RE: Summary of Activities for December 2019

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: 23%

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. WESTON utilized the calibrated SWMM model created for the LTCP Revision.

During the month of December, WESTON simulated precipitation events for November and reported simulation results to DELCORA. During the month of November, DELCORA experienced a total of 1.14 inches of precipitation over 6 separate days. This resulted in roughly 0 to 6 CSO overflow events per outfall depending on the sensitivity to rainfall.

METERING PROGRAM

Proposal No.: 137102
WESTON WO No.: 05623.034.003
Start Date: March 19, 2019
End Date: Open
Percent Complete: 46%

This project is to assist DELCORA in implementation of the Delaware County Metering Program.



Mr. Robert Willert
DELCORA

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During the month of December, WESTON loaded summary flow data for November to the apportionment spreadsheets. WESTON also updated the county-wide summary spreadsheets, the eastern authorities' summary spreadsheets, and summary spreadsheets for select municipalities for 2019.

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.

In October, WESTON completed the design for one of the ARV locations located on the Central By-Pass Force Main. This location does not have an existing ARV and will be constructed 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 this month.

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 December, WESTON continued to assist in The Engineering Assessment and Original Cost document for the PUC submission. WESTON staff participated in assembly of lists of assets (pump stations, force mains, gravity sewers, etc.), developing original costs from DELCORA records, site visits to document assets, and meetings for this task. WESTON also completed the annual report to TD Bank for DELCORA's System Reserve Requirements Repair and Replacement Fund Account.



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REGULATOR 04, 15, 17, 18, and 19 REPLACEMENT

Proposal No.: 130616
WESTON WO No.: 05623.032.003
Start Date: March 2017
End Date: Open
Percent Complete: 95%

The scope of services for this project includes preparation of the detailed design drawings and specifications for the replacement and rehabilitation of five sewage regulators, Numbers 04, 15, 17, 18 and 19, as well as supporting DELCORA during bidding and construction phases.

Installation of the new mechanisms is complete for both locations. The contractor completed punch list items and submitted As-Built Drawings for review. WESTON has reviewed this submittal and finalizing the project record drawings for submission in January.

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).

In February WESTON prepared additional modeling for two recent storm conditions. The results were similar to previous model results. In March 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. During the month of December, WESTON had no activity on this project.



Mr. Robert Willert
DELCORA

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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 December.

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. During the month of December, WESTON had no activity on this project.



Mr. Robert Willert
DELCORA

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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 W RTP. 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.

During the month of December, WESTON had no activity for this project. The construction has been completed and the remaining effort includes preparation of the record drawings after receipt of contractor marked 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 "John J. Kochubka".

John J. Kochubka, P.E.
Client Service Manager

cc: DELCORA Board of Directors
C. Hurst, DELCORA