EXHIBIT E3

CHAPTER 94 REPORT FOR 2020
PHILADELPHIA WATER DEPARTMENT
NORTHEAST WATER POLLUTION CONTROL PLANT

MUNICIPAL WASTELOAD MANAGEMENT REPORT

2020

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: 2020

☐ Permittee is owner and/or operator of a POTW or other sewage treatment facility
☐ Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION			
Permittee Name:	**Northeast Water Pollution Control Plant**	Permit No.:	**PA0026689**
Mailing Address:	**3899 Richmond Street**	Effective Date:	
City, State, Zip:	**Philadelphia PA 19137-1415**	Expiration Date:	
Contact Person:	**Mary Ellen Senss**	Renewal Due Date:	
Title:	**Wastewater Treatment Plant Manager**	Municipality:	**Philadelphia**
Phone:	**215-685-6258**	County:	**Philadelphia**
Email:	**Maryellen.Senss@Phila.Gov**	Consultant Name:	

CHAPTER 94 REPORT COMPONENTS

1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (25 Pa. Code § 94.12(a)(1))

   Check the appropriate boxes:
   ☐ Line graph for flows attached (**Attachment**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☐ Section 1 is not applicable (report is for a collection system).

2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))

   Check the appropriate boxes:
   ☐ Line graph for organic loads attached (**Attachment**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☐ Section 2 is not applicable (report is for a collection system).

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3))

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

   Check the appropriate boxes:

   ☐ Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment**)

   ☐ List summarizing each extension or project attached (**Attachment**)

   ☐ Schedules describing how each project will be completed over time and effects attached (**Attachment**)

   Comments:

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

Check the appropriate boxes:

☐ System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.

☐ System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

Check the appropriate boxes:

☐ The collection system does not contain pump stations

☐ The collection system does contain pump stations (Number –)

☐ Discussion of condition of each pump station attached (**Attachment**)

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.

b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.

c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers.

Check the appropriate boxes:

☐ Industrial waste report as described in 8 a., b. and c. attached (**Attachment**)

☐ Industrial pretreatment report as required in an NPDES permit attached (**Attachment**)

9. Existing or Projected Overload.

Check the appropriate boxes:

☐ This report demonstrates an existing hydraulic overload condition.
☐ This report demonstrates a projected hydraulic overload condition.
☐ This report demonstrates an existing organic overload condition.
☐ This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

☐ Corrective Action Plan attached (**Attachment**)

10. Where required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

☐ Sewage Sludge Management Inventory attached (**Attachment**)

11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).

☐ Annual CSO Report attached (**Attachment**)

12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

☐ Flow calibration report attached (**Attachment**)

RESPONSIBLE OFFICIAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my 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 my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Name of Responsible Official	Signature
Telephone No.	Date

PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Name of Preparer	Signature
Telephone No.	Date

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT INSTRUCTIONS

This form has been developed to promote consistency in the development of annual municipal wasteload management reports ("Chapter 94 reports") required by 25 Pa. Code § 94.12. At least two copies of the complete report must be submitted to the appropriate regional office of the Department of Environmental Protection (DEP) by March 31.

Enter the calendar year that the report covers at the top of the form. Check the appropriate box to indicate whether the permittee is the owner/operator of a publicly owned treatment works (POTW) or other sewage treatment facility, or is the owner/operator of a sewage collection system that is tributary to a POTW owned/operated by a different entity.

General Information

Record the name of the permittee, the permittee's full mailing address, the permittee's contact person and this person's title, phone number and email address. Also record the permit number (NPDES or WQM), the effective date of permit coverage, the expiration date of permit coverage (if applicable), the date by which an application or NOI is due for reissuance (renewal) (if applicable), the municipality and county where the sewage treatment facility or collection system is located, and the name of the consultant (company name), if any, who assisted in the preparation of the form.

Chapter 94 Report Components

This section requests responses to 12 questions that, if applicable, must be addressed for a complete Chapter 94 report. Questions 1 – 9 and 12 come directly from the Chapter 94 regulations, i.e., 25 Pa. Code §§ 94.12(a)(1) – 94.12(a)(9) and 94.13(b). Some questions request that you check an appropriate box, attach the information requested, and specify the attachment number, while responses to other questions may be entered directly on the form.

For Questions 1 and 2, permittees may use DEP's Chapter 94 Spreadsheet to satisfy 25 Pa. Code §§ 94.12(a)(1) and 94.12(a)(2), respectively. DEP encourages use of the Chapter 94 Spreadsheet to provide consistency in the format and calculations associated with hydraulic and organic load evaluations (see www.depweb.state.pa.us/chapter94). If the Chapter 94 Spreadsheet was used, check the appropriate box(es) and attach printouts of the data and graphs to the Chapter 94 report. If this report is being used for a collection system only, these graphs are not needed.

For Question 6, if the permittee checks the box that there were capacity-related bypasses or SSOs during the report year, in general the box for existing hydraulic overload in Question 9 should be checked. If the permittee checks the box in Question 6 because surcharging occurred during the report year, in general the box for projected hydraulic overload in Question 9 should be checked.

For Question 8, if the permittee has an EPA-approved pretreatment program, attachment of an annual pretreatment report as required in an NPDES permit will satisfy the requirement for an industrial waste report.

For Question 10, if a permit requires a "Sewage Sludge Management" inventory, check the appropriate box if the inventory is attached to the Chapter 94 report.

For Question 11, if an NPDES permit (individual permit or, for satellite collection systems, PAG-06 General NPDES permit coverage) requires an Annual CSO (Status) report, attach the CSO report to the Chapter 94 report and check the appropriate box.

Certification

In accordance with 25 Pa. Code § 94.12(a), both the individual who prepared the report and (a responsible official of) the permittee must sign the report. The term "responsible official" for a municipality is a principal executive officer or ranking elected official.

Questions on the completion of Chapter 94 reports may be directed to DEP's Bureau of Point and Non-Point Source Management at (717) 787-8184 or to the appropriate DEP regional office (contact information available by visiting DEP's website, www.depweb.state.pa.us, and selecting Regional Resources).

BRIEF NARRATIVE

2020

1. Introduction

The information presented here comprises the text of the Philadelphia Water Department's (PWD) Northeast Water Pollution Control Plant (NEWPCP) **2020 MUNICIPAL WASTELOAD MANAGEMENT REPORT** as required by the general requirements of Chapter 94 of the Rules and Regulations of the Pennsylvania Department of Environmental Protection (PADEP).

The NEWPCP serves the area comprised of the northeast section of the City of Philadelphia. The plant also treats flows from Lower Moreland, Lower Southampton, Bucks, Bensalem, Abington and Cheltenham Townships.

The NEWPCP is a 210 MGD activated sludge treatment facility that discharges into the Delaware River. The effluent is disinfected with sodium hypochlorite. The existing facility was upgraded to its present dry weather capacity in the late 1970's. Currently, the plant has a peak flow capacity of 435 MGD.

Citywide there were 1,857 new water meters installed over the past year. The resultant total flow from these connections is estimated to be less than 2 million gallons per day across all three plants. The impact of these flows on the dry weather capacity is approximately 1 percent of the available capacity of the existing WPC plants. Maximum (maximum three consecutive months) projected plant flows have been calculated using the actual 5 year average hydraulic ratio and the estimated dry weather flow.

Clearly, compliance with the 3-month maximum flow requirements of Chapter 94 depends to a great degree upon the quantity of wet weather flow that is actually treated. The hydraulic and organic loading projections, as calculated, fall within plant design parameters. The PWD is pleased to report that, in compliance with the Nine Minimum Controls contained in the CSO portion of our NPDES permits, we are making every effort to maximize wet weather capture and treatment.

On September 27, 2012, EPA Region 3 and the Water Department agreed to an "Administrative Order for Compliance on Consent" which incorporates the Water Department's Consent Order and Agreement (COA) signed with DEP in June of 2011. The COA with the PADEP provides the basis for reducing the impact of combined sewer overflows (CSO's) to the region's streams and rivers. The COA requires the Water Department to implement its Long-Term Control Plan Update (LTCPU) also known as the Green City, Clean Waters (GCCW) program. Within this report and appendix is submitted a status of the progress to date on targeted CSO overflow mitigation projects.

The enclosed envelope contains the 2020 Municipal Wasteload Management Report from the Philadelphia Water Department.

Please sign this receipt that this report has been delivered to this Facility by the required March 31, 2021 deadline.

_____ _____

Name Date

FLOW METER CALIBRATION

2020

OPTIMUM CONTROLS
CORPORATION

ADDRESS: 1044 MacArthur Rd
Reading, PA 19605

DATE: 4/20/2020
OCC JOB#: 6123P
P.M. ASSIGNED: Mores M.
Contact: 610.375.0990

INSTRUMENT CALIBRATION REPORT

Customer: *City of Philadelphia, Philadelphia Water Department, Northeast WPCP*
Contact: Robert Volker
215 685 1334

Instrument Description: Differential Pressure Indicating Transmitter
Instrument ID: PST-VFT-N

Manufacturer: SIEMENS
Model#: SITRANS P
Part #: 7MF443-1DA22-1AC7-Z
Serial #: 9024170

Calibration Date: 4/20/2020
Date of Next Calibration: 4/20/2021
Calibration Frequency: Annually

Calibration Specifications

Nominal In Value		Instrument In Value	
(psi)	*(Inches H2O)*	*MGD*	*(Inches H2O)*
0.00	0.00	0.00	0.09
0.50	13.90	91.00	13.87
1.00	27.80	129.00	27.73

Stated Accy: Pct of Range
Range Acc %: 1.00
Plu/Minus: 0.16

Nominal Output Value		Instrument Output Value / Found As		Left As	
4.00	**mA**	4.00	**mA**	4.00	**mA**
15.30	**mA**	15.30	**mA**	15.30	**mA**
20.00	**mA**	19.99	**mA**	19.99	**mA**

Calibration Notes:

Found Out of Tolerance (Yes/No):	No
Adjustment Made (Yes/No):	No
Calibration Result :	Pass

Calibrated By: Jesse Hunter

Test Instrument Used During Calibration*

Instrument ID#	*Description*	*Manufacturer*	*Model #*	*Serial #*	*Last Cal Date*	*Next Cal Date*
10902	Handhel Pressure Calibrator	Ashcroft	ATE-100	10902	2/7/2020	2/7/2021
AQS-30019	Pressure Module (0-15 PSIG)	Ashcroft	AQS-2	AQS-30019	2/7/2020	2/7/2021

**** This Calibration is Traceable to the National Institute of Standards & Technology (N.I.S.T.)***

PLANT FLOWS AND LOADINGS

2020

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PADEP Chapter 94 Spreadsheet
Sewage Treatment Plants

Reporting Year: 2020

Facility Name: Northeast Water Pollution Control Plant

Permit No.: PA0026689

Persons/EDU: 3.5

Existing Hydraulic Design Capacity: 210 MGD
Upgrade Planned in Next 5 Years? NO **Year:**
Future Hydraulic Design Capacity: MGD

Existing Organic Design Capacity: 350,000 lbs BOD5/day
Upgrade Planned in Next 5 Years? NO **Year:**
Future Organic Design Capacity: lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2016	2017	2018	2019	2020
January	157.0	152.1	167.3	231.0	173.4
February	183.3	138.0	210.7	387.5	184.5
March	163.4	163.0	235.4	218.2	171.4
April	146.0	164.7	188.6	184.7	182.1
May	158.2	170.2	198.4	206.6	169.1
June	139.8	156.9	209.6	202.8	152.4
July	153.0	159.1	171.0	187.8	167.3
August	128.4	161.6	171.9	175.9	180.5
September	131.7	131.6	207.5	144.3	144.8
October	137.8	149.4	189.5	154.2	158.7
November	137.4	141.9	235.3	163.8	164.3
December	149.9	142.3	219.8	191.6	196.1
Annual Avg	148.8	152.6	200.4	204	170.4
Max 3-Mo Avg	167.9	166	214.9	279.4	183.2
Max : Avg Ratio	1.13	1.09	1.07	1.37	1.08
Existing EDUs	3.5	3.5	3.5	3.5	3.5
Flow/EDU (GPD)	42514285.7	43600000.0	57257142.9	58285714.3	48685714.3
Flow/Capita (GPD)	12146938.8	12457142.9	16359183.7	16653061.2	13910204.1
Exist. Overload?	**NO**	**NO**	**NO**	**YES**	**NO**

Monthly Average BOD5 Loads for Past Five Years (lbs/day)

Month	2016	2017	2018	2019	2020
January	186,873	175,084	215,687	225,590	214,252
February	190,852	188,131	231,926	415,705	215,378
March	196,005	213,247	231,396	231,570	212,938
April	175,494	194,407	203,639	196,057	200,873
May	184,692	202,320	202,672	216,292	203,628
June	169,404	182,751	207,331	219,461	203,162
July	165,075	188,606	193,561	181,516	226,588
August	162,005	178,911	274,603	196,779	204,215
September	195,393	159,831	207,218	176,500	179,870
October	191,712	194,490	210,796	191,318	226,146
November	199,381	203,671	215,611	239,477	202,306
December	193,314	190,840	216,062	217,766	249,079
Annual Avg	184,183	189,357	217,542	225,669	211,536
Max Mo Avg	199,381	213,247	274,603	415,705	249,079
Max : Avg Ratio	1.08	1.13	1.26	1.84	1.18
Existing EDUs	4	4	4	4	4
Load/EDU	52623.829	54102.078	62154.801	64476.971	60438.902
Load/Capita	15035.380	15457.736	17758.514	18421.992	17268.258
Exist. Overload?	**NO**	**NO**	**NO**	**YES**	**NO**

Projected Flows for Next Five Years (MGD)

	2021	2022	2023	2024	2025
New EDUs	3.5	3.5	3.5	3.5	3.5
New EDU Flow	175.24	175.24	175.24	175.24	175.24
Proj. Annual Avg	350.5	525.74	700.98	876.22	1051.46
Proj. Max 3-Mo Avg	401.9	602.8	803.8	1004.7	1205.7
Proj. Overload?	**YES**	**YES**	**YES**	**YES**	**YES**

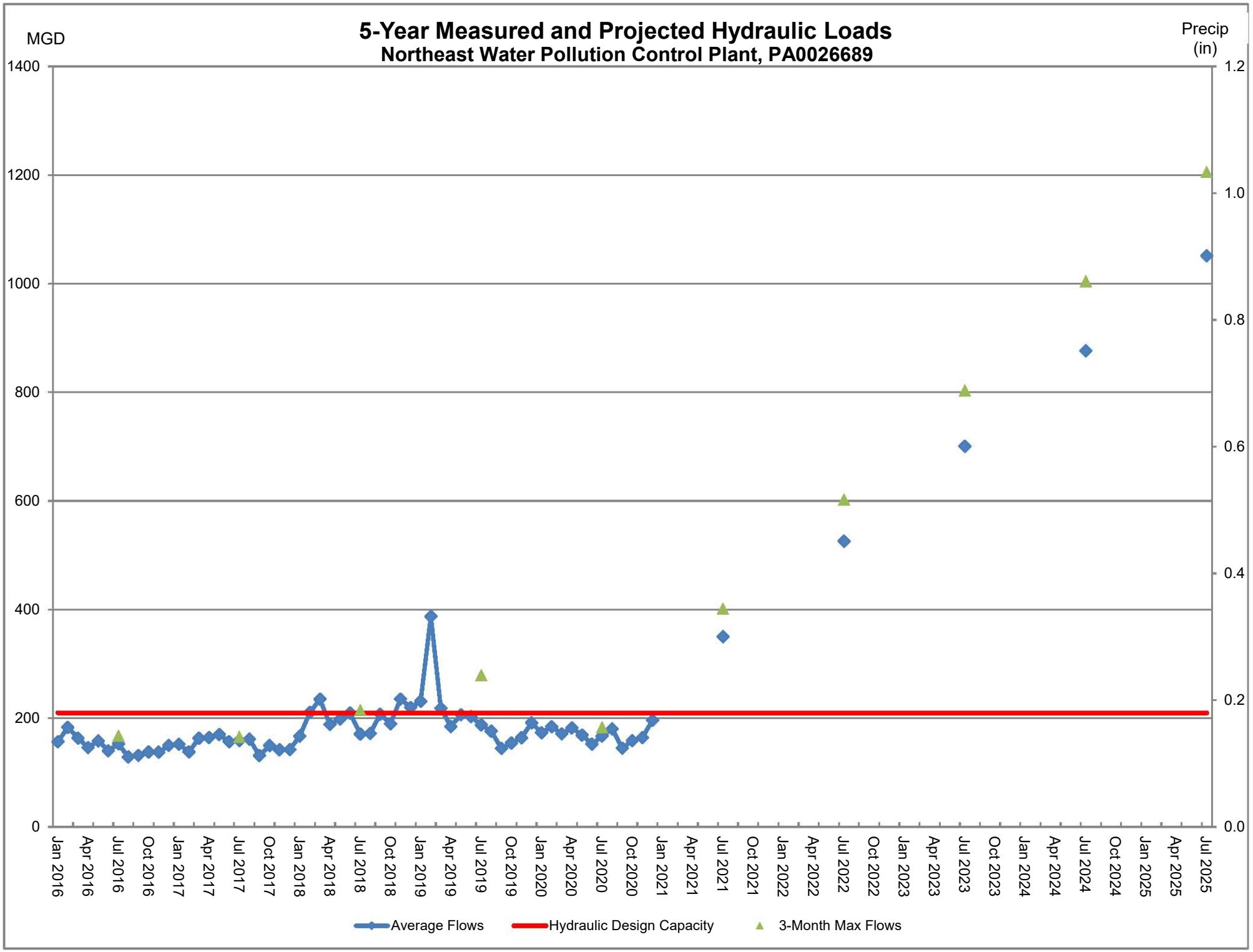
Projected BOD5 Loads for Next Five Years (lbs/day)

	2021	2022	2023	2024	2025
New EDUs	3.5	3.5	3.5	3.5	3.5
New EDU Load	205657.606	205657.606	205657.606	205657.606	205657.606
Proj. Annual Avg	411,315	616,973	822,630	1,028,288	1,233,946
Proj. Max Avg	533,932	800,899	1,067,865	1,334,831	1,601,797
Proj. Overload?	**YES**	**YES**	**YES**	**YES**	**YES**

Show Precipitation Data on Hydraulic Graph?

Total Monthly Precipitation for Past Five Years (Inches)

Month	2016	2017	2018	2019	2020
January	2.63	2.91	2.85	3.92	2.64
February	4.36	1.3	6.02	3.27	2.46
March	2.01	4.26	4.74	3.85	3.94
April	1.75	3.15	3.94	3.02	3.75
May	6.65	6.33	5.21	5.22	2.2
June	1.87	1.86	3.34	7.94	3.21
July	3.88	5.35	3.06	6.03	5.54
August	1.7	6.05	4.11	2.78	8.53
September	3.52	3.86	9.76	1.16	4.23
October	2.06	3.66	3.08	3.87	4.09
November	2.17	1.3	9.03	1.16	4.79
December	2.72	1.31	6.38	5.21	4.38


5-Year Measured and Projected Hydraulic Loads
Northeast Water Pollution Control Plant, PA0026689
MGD
Precip (in)
1400
1200
1000
800
600
400
200
0
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Jan 2016
Apr 2016
Jul 2016
Oct 2016
Jan 2017
Apr 2017
Jul 2017
Oct 2017
Jan 2018
Apr 2018
Jul 2018
Oct 2018
Jan 2019
Apr 2019
Jul 2019
Oct 2019
Jan 2020
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Jan 2022
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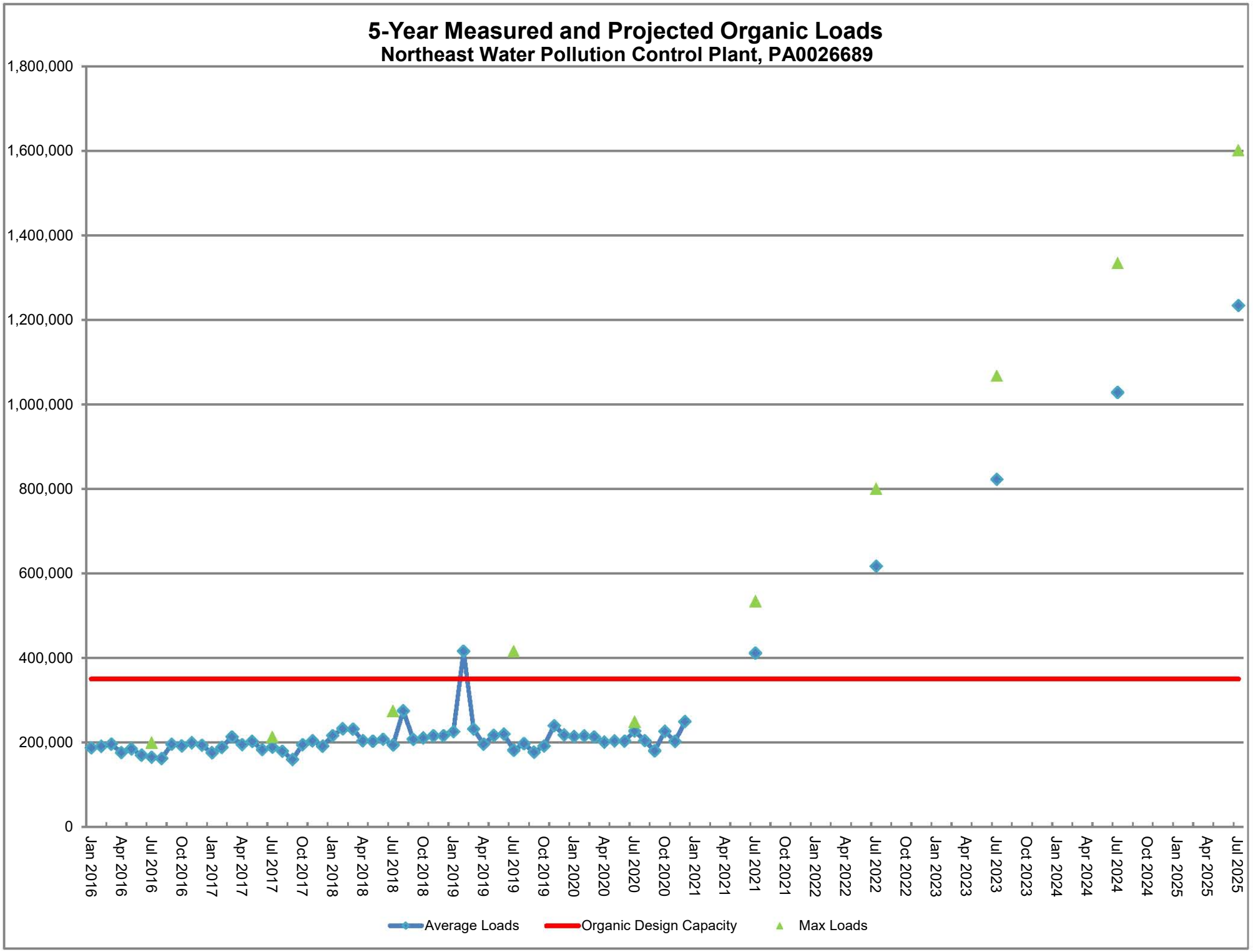
Jan 2023
Apr 2023
Jul 2023
Oct 2023
Jan 2024
Apr 2024
Jul 2024
Oct 2024
Jan 2025
Apr 2025
Jul 2025
Average Flows
Hydraulic Design Capacity
3-Month Max Flows


5-Year Measured and Projected Organic Loads
Northeast Water Pollution Control Plant, PA0026689
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Jan 2016
Apr 2016
Jul 2016
Oct 2016
Jan 2017
Apr 2017
Jul 2017
Oct 2017
Jan 2018
Apr 2018
Jul 2018
Oct 2018
Jan 2019
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Apr 2023
Jul 2023
Oct 2023
Jan 2024
Apr 2024
Jul 2024
Oct 2024
Jan 2025
Apr 2025
Jul 2025
Average Loads
Organic Design Capacity
Max Loads

OUTLYING TOWNSHIP FLOW

2020

NE Chamber Meter Flow Data 2020

	Location	Jan	Feb	Mar	1st QTR	Apr	May	Jun	2nd QTR	Jul	Aug	Sep	3rd QTR	Oct	Nov	Dec	4th QTR	Annual Total
*	Brentwood	0.865	0.865	0.865	2.595	0.865	0.865	0.865	2.595	0.865	0.865	0.865	2.595	0.865	0.865	0.865	2.595	10.380
*	Brookmont	0.777	0.777	0.777	2.332	0.777	0.777	0.777	2.332	0.777	0.777	0.777	2.332	0.777	0.777	0.777	2.332	9.328
	Byberry & Philmont	11.854	10.707	11.854	34.415	11.472	11.854	11.472	34.798	11.854	11.854	11.472	35.180	11.854	11.472	11.854	35.180	139.573
	Pine Rd & Radburn Rd	0.261	0.261	0.261	0.783	0.261	0.261	0.261	0.783	0.261	0.261	0.261	0.783	0.261	0.261	0.261	0.783	3.132
	Steven Lane	0.164	0.164	0.164	0.493	0.164	0.164	0.164	0.493	0.164	0.164	0.164	0.493	0.164	0.164	0.164	0.493	1.972
	Welsh Road	0.119	0.119	0.119	0.356	0.119	0.119	0.119	0.356	0.119	0.119	0.119	0.356	0.119	0.119	0.119	0.356	1.424
	Welsh Road & City Line	37.910	30.746	36.385	105.041	26.664	32.648	31.134	90.446	24.396	23.935	17.725	66.056	19.006	19.444	26.997	65.447	326.990
	Lukens	0.970	0.970	0.970	2.911	0.970	0.970	0.970	2.911	0.970	0.970	0.970	2.911	0.970	0.970	0.970	2.911	11.644
	Trevose & Kelvin	276.063	212.189	261.632	749.884	200.592	238.489	225.625	664.706	197.115	179.549	136.151	512.815	136.657	145.023	195.507	477.187	2,404.592
	Chapel Hill	2.172	2.172	2.172	6.515	2.172	2.172	2.172	6.515	2.172	2.172	2.172	6.515	2.172	2.172	2.172	6.515	26.060
	Pine Rd & Pennypack	63.911	51.493	61.185	176.589	50.259	55.030	51.953	157.242	54.668	47.056	41.705	143.429	41.156	40.555	45.613	127.324	604.584
	Shady Lane & Pennypack Creek	7.233	7.233	7.233	21.700	7.233	7.233	7.233	21.700	7.233	7.233	7.233	21.700	7.233	7.233	7.233	21.700	86.800
*	Beechwood Blvd	0.370	0.370	0.370	1.110	0.370	0.370	0.370	1.110	0.370	0.370	0.370	1.110	0.370	0.370	0.370	1.110	4.440
*	Bensalem Shopping Ctr	8.891	8.891	8.891	26.672	8.891	8.891	8.891	26.672	8.224	8.224	8.224	24.672	8.224	8.224	8.224	24.672	102.688
*	Betz Laboratories	0.407	0.407	0.407	1.220	0.407	0.407	0.407	1.220	0.407	0.407	0.407	1.220	0.407	0.407	0.407	1.220	4.880
*	Colonial Creek	0.505	0.505	0.505	1.515	0.515	0.515	0.515	1.545	0.515	0.515	0.515	1.545	0.515	0.515	0.515	1.545	6.150
*	Doral Apts	6.063	6.063	6.063	18.190	6.063	6.063	6.063	18.190	6.063	6.063	6.063	18.190	6.063	6.063	6.063	18.190	72.760
	Dunks & Poquessing	9.001	8.130	9.001	26.132	8.710	9.001	8.710	26.421	12.348	10.435	10.098	32.881	10.094	7.575	9.518	27.187	112.621
*	Evelyn & Emerson	0.846	0.846	0.846	2.537	0.846	0.846	0.846	2.537	0.846	0.846	0.846	2.537	0.846	0.846	0.846	2.537	10.148
*	Elmwood Apts	7.646	7.646	7.646	22.938	7.646	7.646	7.646	22.938	7.646	7.646	7.646	22.938	7.646	7.646	7.646	22.938	91.752
	Grant & James	35.910	32.435	35.910	104.255	49.602	62.036	66.551	178.189	39.649	39.649	38.370	117.668	23.290	13.145	22.208	58.643	458.755
	Gravel & Poquessing	23.889	21.754	23.345	68.988	23.449	24.230	23.446	71.125	24.230	24.230	23.449	71.909	24.230	23.449	24.230	71.909	283.931
	Kay & Poquessing	6.458	6.458	6.458	19.373	6.458	6.458	6.458	19.373	6.458	6.458	6.458	19.373	6.458	6.458	6.458	19.373	77.492
	Knights & Frankford	3.400	3.400	3.400	10.200	3.400	3.400	3.400	10.200	3.400	3.400	3.400	10.200	3.400	3.400	3.400	10.200	40.800
	Townsend & Poquessing	5.637	5.091	5.637	16.365	5.455	5.637	5.455	16.547	5.637	5.637	5.455	16.729	5.637	5.455	5.637	16.729	66.370
	Nesh Pmp Sta (Totem)	851.330	670.121	830.769	2,352.220	635.890	801.990	734.180	2,172.060	638.497	540.860	425.210	1,604.567	447.551	457.854	650.809	1,556.214	7,685.061
	Adams & Cresentville	346.568	323.069	351.460	1,021.097	300.738	318.315	297.018	916.071	275.201	265.271	237.097	777.569	241.895	244.321	270.727	756.943	3,471.680
	Bouvier & Cheltenham	17.329	14.593	16.866	48.788	15.126	16.496	12.559	44.181	11.712	12.920	11.566	36.198	12.283	11.887	12.283	36.453	165.620
	Filmore & Shelmire	12.945	10.787	12.895	36.627	11.329	11.769	10.633	33.731	10.049	10.042	7.950	28.041	8.544	7.749	8.810	25.103	123.502

* Calculated Outlying Flows

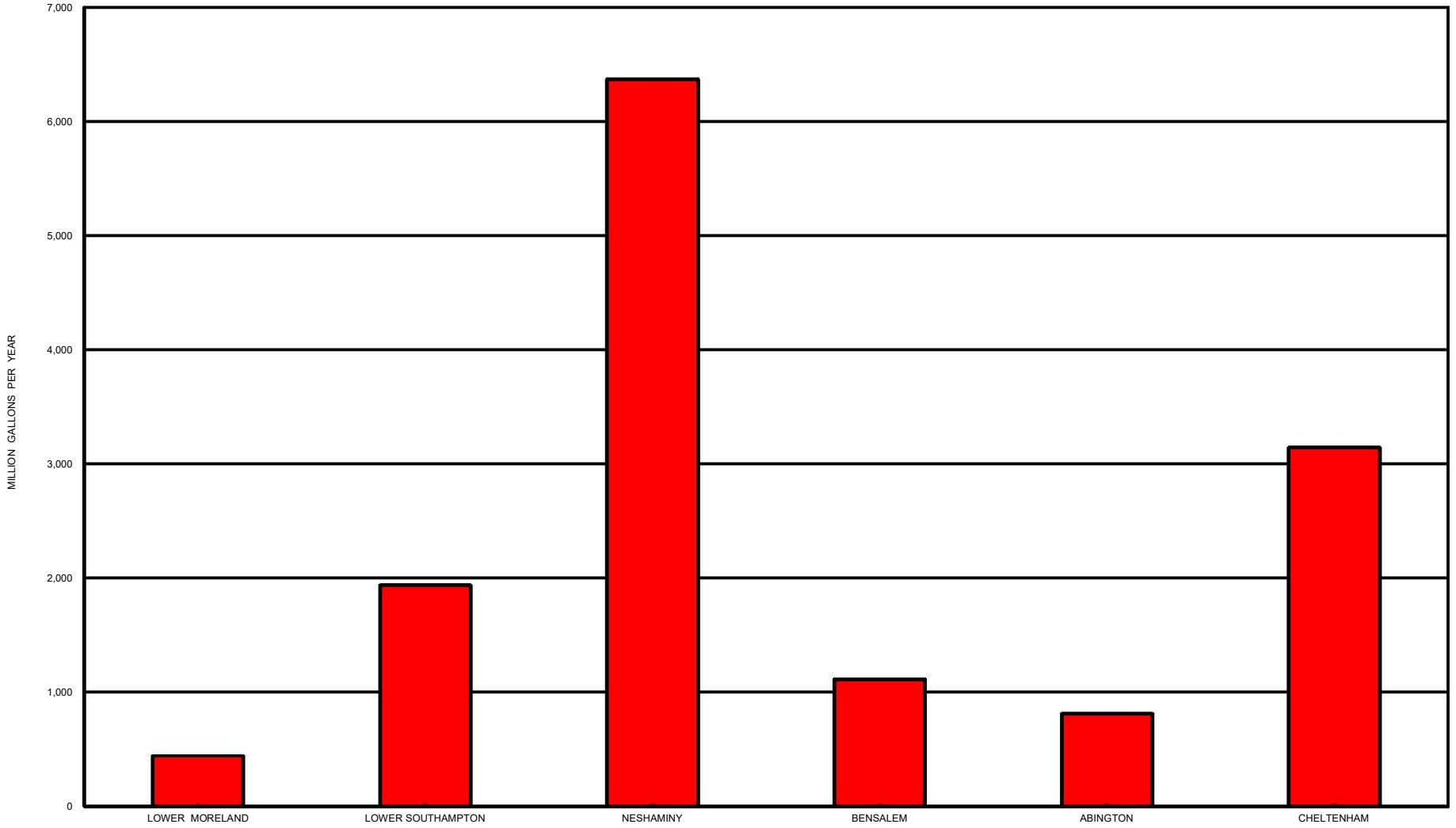
TOTAL OUTLYING FLOWS FOR CALENDAR 2020 ---------- 16,405.129

FILE NAME: Outlying Township Flows 2020
PRINT DATE: 03/11/2021

OUTLYING FLOWS 2020

TOWNSHIP	METER CHAMBER	METER - ID	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL MG	TOWNSHIP FLOW
Lower Moreland	Byberry & Philmont	PHILMONT	12	11	12	11	12	11	12	12	11	12	11	12	140	
	Pine Rd & Radburn Rd	RADBURN	0	0	0	0	0	0	0	0	0	0	0	0	3	
	Welsh Road	WELSHRD	0	0	0	0	0	0	0	0	0	0	0	0	1	
	Welsh Road & City Line	WELSHCL	24	25	26	27	24	19	20	20	18	21	22	28	274	
	* Brookmont	BROOKMT	1	1	1	1	1	1	1	1	1	1	1	1	9	
	* Brentwood	BRENTWD	1	1	1	1	1	1	1	1	1	1	1	1	10	
	Steven Lane	STEVEN	0	0	0	0	0	0	0	0	0	0	0	0	2	440
Lower Southampton	Trevose & Kelvin	TREVOSE	178	179	180	199	171	134	131	135	121	139	157	200	1,925	
	Lukens	LUKENS	1	1	1	1	1	1	1	1	1	1	1	1	12	1,936
Bucks	Nesh Pmp Sta (Totem)	TOTEMRD	584	589	595	652	548	424	443	453	403	473	521	685	6,369	6,369
Bensalem	Kay & Poquessing	KAY	6	6	6	6	6	6	6	6	6	6	6	6	69	
	Townsend & Poquessing	TOWNSEND	6	5	6	5	6	5	6	6	5	6	5	6	67	
	Dunks & Poquessing	DUNKS	9	9	10	11	10	8	10	10	9	10	9	10	115	
	Gravel & Poquessing	GRAVELPK	24	23	24	23	24	23	24	24	23	24	23	24	286	
	Knights & Frankford	KNIGHTS	3	3	3	3	3	3	3	3	3	3	3	3	40	
	Grant & James	GRANT	22	22	24	30	24	18	22	21	16	20	19	20	259	
	* Betz Laboratories	BETZ	0	0	0	0	0	0	0	0	0	0	0	0	5	
	* Beechwood Blvd	BEECHWOOD	0	0	0	0	0	0	0	0	0	0	0	0	5	
	* Bensalem Shppg Ctr	BENSHOP	8	8	8	8	8	8	8	8	8	8	8	8	97	
	* Colonial Creek	COLONIAL	1	1	1	1	1	1	1	1	1	1	1	1	6	
	* Doral Apts	DORALAPT	6	6	6	6	6	6	6	6	6	6	6	6	71	
	* Elmwood Apts	ELMWOOD	7	7	7	7	7	7	7	7	7	7	7	7	83	
	* Evelyn & Emerson	EANDE	1	1	1	1	1	1	1	1	1	1	1	1	11	1,112
Abington	Chapel Hill	CHAPEL	2	2	2	2	2	2	2	2	2	2	2	2	26	
	Filmore & Shelmire	FILSHEL	10	10	9	11	11	9	12	11	11	11	12	14	130	
	Shady Lane & Pnyp	SHADYLN	7	7	7	7	7	7	7	7	7	7	7	7	87	
	Pine Rd & Pennypack	PINERD	45	43	47	51	51	46	50	50	43	43	46	53	567	810
Cheltenham	Adams & Cresentville	ADAMSAVE	273	246	262	265	264	230	256	268	227	241	217	225	2,974	
	Bouvier & Cheltenham	BOUVIER	13	13	14	13	13	13	14	15	16	15	15	15	169	3,144
TOTAL			1,246	1,220	1,254	1,344	1,202	985	1,044	1,069	951	1,060	1,102	1,337	13,812	**13,812**

OUTLYING TOWNSHIP FLOWS 2020



FILE NAME: Outlying Township Flows 2020
PRINT DATE: 03/11/2021

OUTLYING FLOWS 2020

TOWNSHIP	METER CHAMBER	METER - ID	I	II	III	IV	TOTAL MG	TOWNSHIP FLOW
Lower Moreland	Byberry & Philmont	PHILMONT	35	35	35	35	140	
	Pine Rd & Radburn Rd	RADBURN	1	1	1	1	3	
	Welsh Road	WELSHRD	0	0	0	0	1	
	Welsh Road & City Line	WELSHCL	75	70	58	71	274	
	* Brookmont	BROOKMT	2	2	2	2	9	
	* Brentwood	BRENTWD	3	3	3	3	10	
	Steven Lane	STEVEN	0	0	0	0	2	440
Lower Southampton	Trevose & Kelvin	TREVOSE	538	504	387	496	1,925	
	Lukens	LUKENS	3	3	3	3	12	1,936
Bucks	Nesh Pmp Sta (Totem)	TOTEMRD	1,768	1,624	1,299	1,678	6,369	6,369
Bensalem	Kay & Poquessing	KAY	17	17	17	17	69	
	Townsend & Poquessing	TOWNSEND	17	17	17	17	67	
	Dunks & Poquessing	DUNKS	28	29	29	29	115	
	Gravel & Poquessing	GRAVELPK	71	71	72	72	286	
	Knights & Frankford	KNIGHTS	10	10	10	10	40	
	Grant & James	GRANT	69	72	59	59	259	
	* Betz Laboratories	BETZ	1	1	1	1	5	
	* Beechwood Blvd	BEECHWOOD	1	1	1	1	5	
	* Bensalem Shppg Ctr	BENSHOP	24	24	24	24	97	
	* Colonial Creek	COLONIAL	2	2	2	2	6	
	* Doral Apts	DORALAPT	18	18	18	18	71	
	* Elmwood Apts	ELMWOOD	21	21	21	21	83	
	* Evelyn & Emerson	EANDE	3	3	3	3	11	1,112
Abington	Chapel Hill	CHAPEL	7	7	7	7	26	
	Filmore & Shelmire	FILSHEL	29	30	34	37	130	
	Shady Lane & Pnyp	SHADYLN	22	22	22	22	87	
	Pine Rd & Pennypack	PINERD	135	148	142	142	567	810
Cheltenham	Adams & Cresentville	ADAMSAVE	781	759	752	683	2,974	
	Bouvier & Cheltenham	BOUVIER	40	38	45	46	169	3,144
NEWPCP - TOTAL			**3,719**	**3,531**	**3,063**	**3,499**	**13,812**	**13,812**

FILE NAME: PRECIPITATION 2020

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
PRECIPITATION DATA - PHILADELPHIA INTERNATIONAL AIRPORT
ANNUAL PRECIPITATION DATA - 2017

2020	JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		OCT		NOV		DEC		TOTAL
	WTR	*SNW*	*WTR*	*SNW*	*WTR*	*SNW*	*WTR*	*SNW*	*WTR*	*SNW*	*WTR*	*SNW*	*WTR*	*SNW*	*WTR*	*SNW*	*WTR*	*SNW*	*WTR*	*SNW*	*WTR*	*SNW*	*WTR*	*SNW*	
01	T	T	0.05	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	T	0.00	0.00	0.00	T	0.00	0.07	0.00	0.54	0.00	0.00	0.00	0.67
02	0.00	0.00	T	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.10
03	0.21	0.00	0.00	0.00	0.12	0.00	T	0.00	0.15	0.00	0.89	0.00	T	0.00	T	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44
04	0.15	0.00	0.10	0.00	0.00	0.00	T	0.00	0.01	0.00	0.65	0.00	0.00	0.00	4.16	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.30	0.00	5.38
05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	T	0.00	0.00	0.00	0.77	0.00	1.17
06	0.00	0.00	0.47	0.00	0.35	0.00	T	0.00	0.09	0.00	T	0.00	0.24	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59
07	0.13	T	0.23	0.00	T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39
08	T	T	0.00	0.00	0.00	0.00	0.27	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59
09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	T	0.00	0.00	0.00	0.00	0.00	T	0.00	0.48	0.00	0.00	0.00	0.00	0.00	T	T	0.53
10	0.00	0.00	0.26	0.00	T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	T	0.00	0.00	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20
11	0.00	0.00	0.43	0.00	T	0.00	0.00	0.00	0.06	0.00	0.62	0.00	4.15	0.00	0.00	0.00	0.00	0.00	0.09	0.00	1.48	0.00	0.00	0.00	6.83
12	0.20	0.00	0.06	0.00	T	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.07	0.00	1.44	0.00	0.00	0.00	0.73	0.00	0.57	0.00	0.00	0.00	3.14
13	0.00	0.00	0.22	0.00	0.37	0.00	1.62	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.05	0.00	0.00	0.00	0.01	0.00	0.08	0.00	T	0.00	2.39
14	0.03	0.00	0.00	0.00	T	0.00	T	0.00	T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.56
15	T	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.06	0.00	0.00	0.00	0.00	0.00	T	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.54
16	T	T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.70	6.30	2.33
17	0.00	0.00	0.00	0.00	0.03	0.00	T	0.00	0.00	0.00	0.00	0.00	0.01	0.00	T	0.00	0.04	0.00	0.01	0.00	T	0.00	0.21	0.30	0.30
18	0.25	0.20	0.00	0.00	0.08	0.00	0.06	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
19	0.03	0.00	0.00	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97
20	T	T	0.00	0.00	T	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	T	0.00	0.60
21	0.00	0.00	0.00	0.00	T	0.00	0.10	0.00	0.00	0.00	0.00	0.00	T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.12
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	T	0.00	0.03	0.00	0.86
23	0.00	0.00	0.00	0.00	0.80	0.00	0.46	0.00	1.05	0.00	T	0.00	0.15	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	2.76
24	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	T	0.00	0.00	0.00	0.11	0.00	T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.34	0.00	2.04
25	1.60	0.00	0.17	0.00	0.01	0.00	0.02	0.00	T	0.00	T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	T	0.00	0.00	0.00	0.44	T	2.24
26	0.00	0.00	0.21	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	T	0.00	0.00	0.00	0.15	0.00	0.06	0.00	0.51	0.00	0.00	0.00	1.06
27	0.00	0.00	0.21	0.00	T	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.38	0.00	T	0.00	0.00	0.00	0.00	0.00	0.63
28	0.00	0.00	T	T	1.14	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.00	0.00	0.52	0.00	0.00	0.00	T	0.00	0.00	0.00	T	0.00	1.74
29	0.00	0.00	0.00	0.00	T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	1.56	0.00	1.59	0.00	0.00	0.00	0.00	0.00	3.27
30	0.00	0.00			0.06	0.00	0.34	0.00	T	0.00	T	0.00	0.20	0.00	0.00	0.00	0.57	0.00	0.43	0.00	0.98	0.00	0.00	0.00	2.58
31	0.04	0.00			T	0.00			0.00	0.00			0.12	0.00	0.02	0.00			0.00	0.00			0.04	0.00	0.22
TOTAL	2.64	0.20	2.46		3.94		3.75		2.20		3.21		5.54		8.53		4.23		4.09		4.79		4.38	6.60	49.76

Shaded area indicates weekend

CSO STATUS REPORT

2020

2020 SWWPCP
Chapter 94 Sec. (a) (5) Collector System
Flow Control Unit Report

CHAPTER 94.12 ANNUAL REPORT
Sec. (a) (5) COLLECTOR SYSTEM
FLOW CONTROL UNIT-2020
OPERATION and MAINTENANCE

The Collector System Flow Control Unit's primary responsibilities are divided into four groups: Combined Sewer Overflow (CSO) Regulator Maintenance, Pumping Station Operation & Maintenance, Collector System Instrumentation and CCTV Technical Inspections. The Wastewater Pumping Group main office is located at 5202 Pennypack Street in the Torresdale Raw Water Pumping Station. The WWP Group assembles at this facility, which also has a maintenance machine shop, storage garage, and workshop to handle maintenance assignments. The other three groups have maintenance shops and assemble at the Fox Street Headquarters Facility. Brief descriptions of each group's responsibilities and their 2020 annual year highlights follow.

CSO REGULATOR MAINTENANCE GROUP

Inspecting and servicing the combined sewer overflow regulating and diversion chambers are completed by 19 Interceptor maintenance personnel. This group is responsible for the operations, maintenance, inspections and cleaning of 175 combined sewer-regulating chambers, 89 tide gate chambers, 26 storm relief chambers, 12 sanitary flow diversions, several siphons and other related wastewater control devices throughout the collection system.

Currently the Philadelphia Water Department Flow Control Unit maintains ten types of CSO regulators and storage systems:

- Brown & Brown (B&B) mechanical
- Computer Controlled Sluice Gates
- Computer Controlled B&B Shutter Gates
- Static Dams
- Slot type regulators
- Mechanical Sluice Gates
- Side Overflow Weirs
- Inflatable Rubber Dam
- Water Hydraulic Sluice Gates
- Computer Controlled Crest Gates

Mechanical or operational malfunctions of regulators and tide gates can cause dry weather discharges and stream and river inflow. These types of events can have a major impact on the Wastewater and Fresh Water Treatment Plant's performance and the quality of stream water. They can also affect the recreational use of our local waterways. Thus, the combined sewer regulator systems are closely monitored for potential blockages and when identified the problems are corrected quickly. CSO chamber Inspections and clearing of any regulator blockages prior to causing a dry weather discharge are the primary responsibilities of this group and are key areas in assessing the group's overall performance.

By continually tracking and analyzing Dry Weather Discharges it can be determined if new or modified maintenance procedures would help to prevent them from occurring. Although our established procedures have greatly reduced the number and duration of these discharges, the combined system picks up all manner of trash and debris that is unpredictable in its pattern of causing flow disruptions. Despite incorporating best management practices such as having all inlets trapped and cleaned, preventative maintenance schedules for sewer flushing and cleaning of the regulators, CCTV inspection of DWO pipes, etc., it is virtually impossible to eliminate all blockages before they occur.

The PWD Flow Control Unit continues to aggressively control and minimize these dry weather overflows by utilizing the latest technology-based controls including our Collector System Remote Monitoring Network that currently includes over 320 sites with over 720 individual level and/or flow measurements. Training the CSO maintenance personnel in the use of the system's computer programs for analyzing the trend data has developed a comprehensive understanding of individual CSO sites and their distinctive flow patterns. This familiarity helps them recognize abnormal conditions quickly at a location so that they can respond before the conditions develop into a dry weather CSO blockage or discharge.

The CSO Maintenance Group performed 4223 inspections of the regulating chambers in 2020. The work includes frequent visual inspections of the equipment and flow patterns to make sure everything is operating properly. The more comprehensive work such as the cleaning and

lubricating of the mechanical equipment is scheduled during lower flow periods between rain events.

In 2020, the crews cleared 138 regulator blockages before they developed into a CSO dry weather discharge. There were ten CSO dry weather discharges for this annual year.

Many discharges are a result of debris such as rags, sticks, stones and other debris that become lodged in the CSO regulator diversion or the dry weather outlet pipe during dry weather periods. These types of blockages are virtually unpredictable so frequent inspections and closely observing the monitoring trend data is essential to our prevention program. Following moderate to heavy rain events the CSO regulators can have grit, sticks, rags and other debris caught at various places in and around the regulator that could eventually result in a discharge. The CSO maintenance crews perform quick topside inspections of the CSO sites throughout the City for several days following these events to remove or clear away any of this storm debris. The work schedule will then revert to the more comprehensive maintenance such as cleaning, lubricating, adjusting equipment and performing minor repairs to the mechanical regulators.

CSO Regulator Group with the help of Sewer maintenance and Mobile Dredging Vactoring Services, cleaned and removed approximately 48 tons of debris and grit from the D-25 regulating chamber.

WASTEWATER PUMPING STATION MAINTENANCE GROUP

The Wastewater Pumping Station Maintenance Group consisting of 35 maintenance personnel are located at the 5202 Pennypack St. Maintenance Shop. They are responsible for the operations and maintenance of 16 wastewater-pumping stations, 3 stormwater pumping stations, 2 sodium hypochlorite dosing stations, 11 computer controlled CSO storage regulators and several in-line and offline wastewater-storage facilities among other duties.

Many of the pumping stations provide for only one running pump and one reserve pump. This arrangement means that pump breakdowns are responded to immediately and that overhauls need to be completed in a minimum amount of time. The main pump availability statistic is a good indicator of the Maintenance Group's performance in this area. The main pumping units were in service 99% of the time in 2020. The WWP Group completed sixteen main wastewater pump overhauls at the stations. These overhauls consist of repair and replacement of the worn pump and motor components to bring the equipment's performance up to new operating condition.

The Wastewater Pumping Station Maintenance Group had no main pumps out of service during annual year 2020 because of failures or breakdowns. The reason for this is that during pump maintenance and overhauls the in-service pump was rotated out of activity and replaced by the spare pump for the station. This accomplishes two things; one the station always has its full complement of pumps available and the spare pump for the station gets used. The only pump station that did have a pump out or was not at full capacity was the Central Schuylkill Pump station which is going through a Capital Project of replacing all pumps. Pump #2 and Pump #1 were out of service for 8 weeks while the replacement was being completed. The pumps were back in service in August.

In addition to the pumping station maintenance, the group maintains a variety of other equipment throughout the Collector System. They are responsible for the operations and maintenance of the two sodium hypochlorite dosing stations. The stations are located next to the Queen Lane Raw Water pumping station, which injects hypo into the Upper Schuylkill East Interceptor, and at the Totem Rd. pumping station, which injects hypo into the Bucks County force main. The group is responsible for maintaining adequate supply of the chemical, over 808,912 gallons in 2020, for monitoring the downstream hydrogen sulfide levels and adjusting the dosage levels in addition to the maintenance and repair of the equipment.

The group also fabricates and repairs bar screens, debris grills and other equipment for the Collector System and performs major maintenance of the CSO mechanical regulators such as installation of tide gates, overflow gates and servicing of the Brown & Brown regulators.

COLLECTOR SYSTEM INSTRUMENTATION MAINTENANCE GROUP

The fourteen Instrument and Electronic Technicians located at the Fox Street facility are primarily responsible for installing, calibrating and maintaining the electronic and instrumentation equipment in the Collector System monitoring and control network. They also repair, calibrate and certify the hazardous gas detection meters for the Department as well as install temporary flow and level monitors for various units in the Water Department.

One of the primary responsibilities of the CS Instrumentation Group is to maintain the network of level sensors, flow meters, and rain gauges and keep them up and running with a minimum of downtime while maintaining accurate and reliable data. The network currently consists of 258 level and flow monitoring locations in the NE, SE, and SW Drainage Districts, 35 gauges in the citywide rain gauge network, 56 Township flow-metering stations, and a number of additional monitors at various control sites. It is crucial that the remote site equipment is communicating and downloading data to the server so that the information is available for trend chart viewing and analysis for the users. The CSO maintenance group relies heavily on these charts to monitor the performance of all the CSO regulators while paying special attention to the sites that have had recent or a history of discharges. The monitoring data is used for a wide variety of other purposes such as calibrating the Collector System's hydraulic model, generating township sewage flows for billing and for various Planning and Engineering studies.

The CS Instrumentation Maintenance group performed 1340 maintenance inspections in 2020. The data collections used by Flow Control are TELOG units.

CCTV TECHNICAL INSPECTIONS GROUP

The CCTV Technical Inspections group consists of one Supervisor, two group leaders, and sixteen technicians who operate and maintain the seven closed circuit TV camera trucks and Green Storm Infrastructure inspection cameras. The seven CCTV trucks and CCTV Contractor logged 25.14 miles of sewer inspections in 2020. The CCTV GSI Unit completed 1005 Post Construction Inspections, 430 Maintenance Inspections, and 78 NASSCO PACP Inspections in 2020.

The CCTV group has several primary functions which include inspections of sewers turned in for sewer complaints, special inspection requests from the Water/ Sewer Design group and the post construction inspection program which involves videoing the sewer at the completion of all sewer construction work. Another function of the group is to work with the Defective Connection Program group to identify the defective lateral connections.

SERVICE LEVEL GOALS

The goal of the Flow Control Unit is to maintain and exceed the service level goals. One area that directly affects the service level of the Flow Control Unit is personnel vacancies.

MONTH	CSO Discharges per 100 Inspections	% Metering Chambers Operational	% CSO Level Meters Operational	CCTV Inspections	Main Pump Availability
Goal -->	**0**	**95% or Higher**	**90% or Higher**	**2.8 Miles**	**95% or Higher**
Jan-20	0.50	97.0%	99.0%	3.27	98.2%
Feb-20	0.00	100.0%	99.0%	2.96	98.2%
Mar-20	0.20	96.0%	99.6%	2.57	98.2%
Apr-20	0.70	89.0%	97.7%	1.00	98.2%
May-20	0.00	85.0%	97.1%	1.59	100.0%
Jun-20	0.80	83.0%	93.0%	2.34	100.0%
Jul-20	0.30	91.0%	92.2%	2.42	100.0%
Aug-20	0.90	97.0%	92.4%	2.04	100.0%
Sep-20	0.00	98.0%	93.8%	2.04	100.0%
Oct-20	0.00	93.0%	95.4%	2.44	100.0%
Nov-20	0.00	96.0%	90.4%	1.98	100.0%
Dec-20	0.00	91.0%	93.9%	0.49	100.0%

FLOW CONTROL PERSONNEL SUMMARY

The Flow Control Unit makes every effort to fill all 97 approved positions in order to maintain the service level goals.

97 Flow Control Positions	Active	Vacant	Total
Clerk III	1	0	1
Clerk Typist II	1	1	2
Data Services Support Clerk	1	0	1
Electrician 1	3	0	3
Electronic Equipment Supervisor	2	0	2
Electronic Technician 1	8	5	13
Electronic Technician 2	10	2	12
Electronic Technician Grp. Ldr.	4	0	4
Electronic Technician Trainee	9	0	9
Ind. Process Mach. Mech. Grp. Ldr.	2	0	2
Industrial Electrician 1	0	1	1
Industrial Electrician 2	1	1	2
Industrial Electrician Group Leader	1	0	1
Industrial Process Mach. Mech.	3	2	5
Interceptor Service Worker I	4	5	9
Interceptor Service Worker II	4	1	5
Interceptor Services Supervisor	2	0	2
Mach. & Equipment Mech.	10	1	11
Public Works Maintenance Trainee	5	0	5
Sewer Maintenance Inspector	1	0	1
Trades Helper (P)	1	0	1
Water Conveyance Sys. Asst. Supt. (P)	1	1	2
Water Conveyance Sys. Supt.	1	0	1
Water Operations Repair Helper	2	0	2
Totals	**77**	**20**	**97**

PART 1 DRY WEATHER STATUS REPORT	PHILADELPHIA WATER DEPARTMENT WASTE AND STORM WATER COLLECTION FLOW CONTROL UNIT											Section 1 January 2020 - December 2020	
COLLECTOR	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**	**Aug-20**	**Sep-20**	**Oct-20**	**Nov-20**	**Dec-20**	**Totals**
UPPER PENNYPACK - 5 UNITS													
INSPECTIONS	10	10	5	9	5	10	8	10	6	17	11	11	112
DISCHARGES	0	0	0	0	0	1	0	0	0	0	0	0	1
BLOCKS CLEARED	1	0	0	0	0	1	0	0	0	0	1	0	3
UPPER DELAWARE LOW LEVEL - 12 UNITS													
INSPECTIONS	21	25	20	14	12	30	24	29	24	33	27	25	284
DISCHARGES	0	0	0	0	0	0	0	0	0	0	0	0	0
BLOCKS CLEARED	4	0	1	0	0	1	4	3	0	3	0	0	16
LOWER FRANKFORD CREEK - 6 UNITS													
INSPECTIONS	13	12	10	6	8	13	10	13	12	21	13	10	141
DISCHARGES	0	0	0	0	0	0	0	0	0	0	0	0	0
BLOCKS CLEARED	0	0	1	0	0	1	2	1	1	0	1	0	7
LOWER FRANKFORD LOW LEVEL - 10 UNITS													
INSPECTIONS	27	21	24	11	18	27	18	27	22	21	21	21	258
DISCHARGES	1	0	0	0	0	0	0	0	0	0	0	0	1
BLOCKS CLEARED	2	0	0	0	0	4	1	1	1	0	1	1	11
FRANKFORD HIGH LEVEL - 14 UNITS													
INSPECTIONS	31	28	29	21	18	28	33	30	28	37	19	30	332
DISCHARGES	1	0	0	0	0	0	0	0	0	0	0	0	1
BLOCKS CLEARED	1	0	0	0	0	0	0	2	2	1	1	1	8
SOMERSET - 9 UNITS													
INSPECTIONS	20	23	16	15	8	27	15	21	22	25	19	18	229
DISCHARGES	0	0	0	0	0	0	0	0	0	0	0	0	0
BLOCKS CLEARED	0	0	0	0	0	0	0	0	0	0	0	0	0
LOWER DELAWARE LOW LEVEL - 33 UNITS													
INSPECTIONS	69	62	43	35	38	77	53	67	37	78	62	65	686
DISCHARGES	0	0	0	0	0	0	0	0	0	0	0	0	0
BLOCKS CLEARED	4	0	0	1	2	4	2	4	2	0	3	2	24
CENTRAL SCHUYLKILL EAST - 18 UNITS													
INSPECTIONS	37	36	24	27	23	35	37	28	39	39	34	38	397
DISCHARGES	0	0	0	0	0	2	1	0	0	0	0	0	3
BLOCKS CLEARED	0	1	0	0	2	5	2	1	5	0	4	4	24
LOWER SCHUYLKILL EAST - 9 UNITS													
INSPECTIONS	19	23	28	8	7	8	20	24	11	15	15	20	198
DISCHARGES	0	0	0	0	0	0	0	0	0	0	0	0	0
BLOCKS CLEARED	0	0	0	0	0	0	1	2	1	0	1	1	6
CENTRAL SCHUYLKILL WEST - 9 UNITS													
INSPECTIONS	18	20	21	9	11	18	12	15	22	24	16	20	206
DISCHARGES	0	0	0	0	0	0	0	0	0	0	0	0	0
BLOCKS CLEARED	0	0	0	0	0	2	0	0	0	0	0	1	3
SOUTHWEST MAIN GRAVITY - 10 UNITS													
INSPECTIONS	30	24	25	12	13	7	14	15	17	15	26	28	226
DISCHARGES	0	0	0	0	0	0	0	0	0	0	0	0	0
BLOCKS CLEARED	0	0	0	0	1	0	9	0	0	0	0	1	11
LOWER SCHUYLKILL WEST - 4 UNITS													
INSPECTIONS	8	8	11	4	4	4	10	6	6	7	9	13	90
DISCHARGES	0	0	0	0	0	0	0	0	0	0	0	0	0
BLOCKS CLEARED	0	0	0	0	0	0	0	1	0	0	0	0	1
COBBS CREEK HIGH LEVEL - 24 UNITS													
INSPECTIONS	54	51	31	33	22	35	47	31	59	60	61	48	532
DISCHARGES	0	0	0	1	0	0	0	3	0	0	0	0	4
BLOCKS CLEARED	2	0	0	1	0	0	1	4	1	1	4	2	16
COBBS CREEK LOW LEVEL - 13 UNITS													
INSPECTIONS	25	24	18	12	12	13	17	8	24	26	21	29	229
DISCHARGES	0	0	0	0	0	0	0	0	0	0	0	0	0
BLOCKS CLEARED	0	0	0	0	1	0	2	1	0	2	0	2	8
RELIEF SEWERS - 26 UNITS													
INSPECTIONS	21	11	23	24	32	41	16	26	33	24	15	37	303
DISCHARGES	0	0	0	0	0	0	0	0	0	0	0	0	0
BLOCKS CLEARED	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS / MONTH for 201 REGULATOR UNITS													Totals
TOTAL INSPECTIONS	403	378	328	240	231	373	334	350	362	442	369	413	4223
TOTAL DISCHARGES	2	0	0	1	0	3	1	3	0	0	0	0	10
TOTAL BLOCKS CLEARED	14	1	2	2	6	18	24	20	13	7	16	15	138
AVER. # of INSP. / BC	29	378	164	120	39	21	14	18	28	63	23	28	77
DISC / 100 INSPECTIONS	0.5	0.0	0.0	0.4	0.0	0.8	0.3	0.9	0.0	0.0	0.0	0.0	0.2

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my 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 my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for Knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

PART 1 **PRECIPITATION FOR THE PERIOD: January 2020 - December 2020**

DRY WEATHER STATUS **Section 2**

REPORT

Date	Rain Inches	Date	Rain Inches	Date	Rain Inches	Date	Rain Inches	Date	Rain Inches	Date	Rain Inches	Date	Rain Inches	Date	Rain Inches	Date	Rain Inches	Date	Rain Inches	Date	Rain Inches	Date	Rain Inches
01-01		02-01		03-01		04-01		05-01		06-01		07-01		08-01		09-01		10-01	**0.10**	11-01	**0.54**	12-01	
01-02		02-02		03-02		04-02		05-02		06-02		07-02		08-02		09-02		10-02		11-02		12-02	
01-03	**0.17**	02-03		03-03	**0.28**	04-03		05-03	**0.11**	06-03	**0.70**	07-03		08-03	**0.20**	09-03		10-03		11-03		12-03	
01-04	**0.18**	02-04		03-04		04-04		05-04		06-04	**0.50**	07-04		08-04	**3.40**	09-04		10-04		11-04		12-04	**2.70**
01-05		02-05		03-05		04-05		05-05		06-05		07-05		08-05		09-05		10-05		11-05		12-05	**1.70**
01-06		02-06	**0.60**	03-06	**0.30**	04-06		05-06		06-06		07-06	**2.51**	08-06	**0.30**	09-06		10-06		11-06		12-06	
01-07		02-07	**0.23**	03-07		04-07		05-07		06-07		07-07		08-07	**0.40**	09-07		10-07		11-07		12-07	
01-08		02-08		03-08		04-08	**0.58**	05-08	**0.46**	06-08		07-08		08-08		09-08		10-08		11-08		12-08	
01-09		02-09		03-09		04-09		05-09		06-09		07-09		08-09		09-09	**0.78**	10-09		11-09		12-09	
01-10		02-10	**0.29**	03-10		04-10		05-10		06-10		07-10	**2.88**	08-10		09-10	**0.28**	10-10		11-10		12-10	
01-11		02-11	**0.39**	03-11		04-11		05-11	**0.10**	06-11	**0.40**	07-11		08-11		09-11		10-11	**0.33**	11-11	**1.00**	12-11	
01-12	**0.16**	02-12		03-12		04-12	**0.17**	05-12	**0.50**	06-12		07-12	**0.40**	08-12	**0.21**	09-12		10-12	**0.90**	11-12	**0.50**	12-12	
01-13		02-13	**0.27**	03-13	**0.30**	04-13	**1.69**	05-13		06-13		07-13		08-13	**0.80**	09-13		10-13		11-13	**0.10**	12-13	
01-14		02-14		03-14		04-14		05-14		06-14		07-14		08-14	**0.42**	09-14		10-14		11-14		12-14	**2.10**
01-15		02-15		03-15		04-15		05-15		06-15		07-15		08-15		09-15		10-15		11-15	**0.38**	12-15	
01-16		02-16		03-16		04-16		05-16		06-16		07-16		08-16		09-16		10-16	**1.14**	11-16		12-16	
01-17		02-17		03-17		04-17		05-17		06-17		07-17		08-17		09-17		10-17		11-17	**0.10**	12-17	**0.60**
01-18	**0.29**	02-18		03-18	**0.23**	04-18		05-18		06-18	**0.60**	07-18		08-18		09-18		10-18		11-18		12-18	
01-19		02-19		03-19	**0.81**	04-19		05-19		06-19		07-19		08-19		09-19		10-19		11-19		12-19	
01-20		02-20		03-20		04-20		05-20		06-20	**0.16**	07-20		08-20		09-20		10-20		11-20		12-20	**0.15**
01-21		02-21		03-21		04-21	**0.16**	05-21		06-21		07-21		08-21		09-21		10-21		11-21		12-21	**0.32**
01-22		02-22		03-22		04-22		05-22		06-22		07-22	**0.44**	08-22		09-22		10-22		11-22		12-22	
01-23		02-23		03-23	**0.87**	04-23	**0.53**	05-23		06-23		07-23	**0.81**	08-23	**0.40**	09-23		10-23		11-23	**0.30**	12-23	
01-24		02-24		03-24		04-24	**0.43**	05-24		06-24		07-24	**1.50**	08-24		09-24		10-24		11-24		12-24	**2.50**
01-25	**1.79**	02-25	**0.22**	03-25		04-25		05-25		06-25		07-25		08-25		09-25		10-25		11-25		12-25	**0.10**
01-26		02-26	**0.30**	03-26		04-26	**0.19**	05-26		06-26		07-26		08-26		09-26		10-26		11-26	**1.80**	12-26	
01-27		02-27	**0.27**	03-27		04-27	**0.43**	05-27		06-27	**0.15**	07-27		08-27		09-27	**0.40**	10-27		11-27		12-27	
01-28		02-28		03-28	**0.97**	04-28		05-28		06-28		07-28		08-28	**1.00**	09-28		10-28		11-28		12-28	
01-29		02-29		03-29		04-29		05-29		06-29		07-29		08-29		09-29	**2.69**	10-29	**1.90**	11-29		12-29	
01-30				03-30	**0.15**	04-30		05-30		06-30		07-30		08-30		09-30	**0.26**	10-30	**0.41**	11-30	**2.50**	12-30	
01-31								05-31				07-31		08-31				10-31				12-31	**0.20**

Jan-2020 Total Rain	Feb-2020 Total Rain	Mar-2020 Total Rain	Apr-2020 Total Rain	May-2020 Total Rain	Jun-2020 Total Rain	Jul-2020 Total Rain	Aug-2020 Total Rain	Sep-2020 Total Rain	Oct-2020 Total Rain	Nov-2020 Total Rain	Dec-2020 Total Rain
2.59	**2.57**	**3.91**	**4.18**	**1.17**	**2.51**	**8.54**	**7.13**	**4.41**	**4.78**	**7.22**	**10.37**

Note: Rain Gauge RG-17 & RG-18 are being used for the Precipitation Report.

PART 1 **Section 3**

DRY WEATHER STATUS REPORT

DRY WEATHER DISCHARGES FOR THE PERIOD: January 2020 - December 2020

Discharge Observed		Discharge Stopped		Last Inspection						
Date	Time	Date	Time	Date	Time	Site ID	Collector	Type Unit	Location	Comment
28-Jan-20	10:50 AM	28-Jan-20	12:00 PM	11-Jan-20	1:10 PM	T-13	FHL	SLOT	Whitaker Ave. W of Tacony Creek	STICKS, PLASTIC BAGS AND LEAVES IN DWO PIPE
28-Jan-20	11:40 AM	28-Jan-20	1:30 PM	27-Jan-20	11:20 AM	F-06	LFLL	DAM	Worrell St. E of Frankford Creek	GRIT IN LINE.
14-Apr-20	12:30 PM	14-Apr-20	1:00 PM	08-Apr-20	10:50 AM	C-07	CCHL	SLOT	Lansdowne Ave. & 69th St.	DEBRIS IN SLOT.
02-Jun-20	9:00 AM	02-Jun-20	9:50 AM	13-May-20	9:00 AM	P-03	PP	SLOT	Torresdale Ave., NW of Pennypack St.	GRIT AND DEBRIS IN DWO PIPE.
04-Jun-20	11:00 AM	04-Jun-20	12:00 PM	21-May-20	9:10 AM	S-12	CSES	SLOT	24th St. N of Chestnut St. Bridge	GRIT AND DEBRIS IN SLOT AND DWO PIPE.
15-Jun-20	10:00 AM	15-Jun-20	11:10 AM	05-May-20	1:20 PM	S-25	CSES	B & B	Schuylkill Ave. & Christian St.	DEBRIS BLOCKING REGULATOR INLET.
08-Jul-20	9:00 AM	08-Jul-20	9:40 AM	01-Jul-20	12:10 PM	S-08	CSES	B & B	Race St. & Bonsall St.	DEBRIS IN REGULATOR INLET.
25-Aug-20	11:00 AM	25-Aug-20	9:00 PM	30-Jul-20	1:10 PM	C-11	CCHL	SLOT	63rd St. S of Market St.	ROCKS, BRICKS, GRIT, SAND AND DEBRIS IN SLOT AND
29-Aug-20	7:30 AM	29-Aug-20	5:00 PM	28-Aug-20	9:00 AM	C-11	CCHL	SLOT	63rd St. S of Market St.	ROCKS, BRICKS AND DEBRIS IN SLOT AND DWO PIPE.
31-Aug-20	9:00 AM	31-Aug-20	3:00 PM	29-Aug-20	7:30 AM	C-11	CCHL	SLOT	63rd St. S of Market St.	ROCKS, BRICKS AND DEBRIS IN SLOT AND DWO PIPE

Dry Weather Discharges are continually tracked and analyzed to determine if new or modified maintenance procedures would help to prevent them from occurring. Although our established procedures have greatly reduced the number and duration of these discharges, the combined system picks up all manner of trash and debris that is unpredictable in its pattern of causing flow disruptions. Despite incorporating best management practices including; having all inlets trapped and cleaned; preventative maintenance schedules for sewer flushing and cleaning or the regulators; CCTV inspection of DWO pipes; etc., it is virtually impossible to eliminate all blockages before they occur.

The City continues to aggressively control and minimize these dry weather overflows by utilizing the latest technology-based controls including our Collector System Remote Monitoring Network that currently includes over 320 sites with over 720 individual level and/or flow measurements. The CSO maintenance personnel are trained in the use of the system's computer programs for analyzing the data and have developed a comprehensive understanding of individual CSO site's distinct flow patterns. This familiarity allows them to quickly recognize abnormal conditions that may indicate accumulating debris so that they can respond before developing into a dry weather CSO blockage.

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	AVER	DTR
UPPER PENNYPACK 5 NEWPC UNITS															
P01	3	2	1	3	2	2	2	2	1	2	1	2	23	1.9	15.9
P02	2	2	1	3	3	2	2	2	1	2	1	2	23	1.9	15.9
P03	1	2	1	4	2	2	2	2	1	2	1	2	22	1.8	16.6
P04	1	2	1	4	2	3	2	2	1	1	1	2	22	1.8	16.6
P05	1	2	2	3	2	2	2	2	1	2	1	2	22	1.8	16.6
UPPER DELAWARE LOW LEVEL 12 NEWPC UNITS															
D02	2	2	2	4	3	4	2	2	2	1	1	2	27	2.3	13.5
D03	3	2	2	5	3	4	2	2	2	2	1	2	30	2.5	12.2
D04	1	3	2	3	4	2	2	3	2	2	1	2	27	2.3	13.5
D05	2	2	2	2	3	2	2	2	1	1	1	2	22	1.8	16.6
D06	2	2	2	2	2	2	2	2	1	1	1	3	22	1.8	16.6
D07	2	2	2	2	2	2	2	2	2	1	1	2	22	1.8	16.6
D08	2	3	2	2	2	2	2	2	2	1	1	3	24	2.0	15.2
D09	2	3	2	3	2	2	2	2	1	1	1	4	25	2.1	14.6
D11	2	2	2	3	2	2	2	2	2	1	1	4	25	2.1	14.6
D12	2	3	2	2	2	1	2	2	2	1	1	2	22	1.8	16.6
D13	2	2	2	2	1	1	1	2	2	1	1	2	19	1.6	19.2
D15	2	3	2	3	1	1	0	2	1	1	1	2	19	1.6	19.2
LOWER FRANKFORD CREEK 6 NEWPC UNITS															
F13	1	2	2	4	3	2	2	2	1	1	0	2	22	1.8	16.6
F14	2	2	2	3	2	2	2	2	1	1	0	3	22	1.8	16.6
F21	1	2	2	3	1	1	2	2	1	1	1	2	19	1.6	19.2
F23	2	3	2	4	2	2	2	2	4	1	2	2	28	2.3	13.0
F24	2	2	2	3	2	2	3	2	2	1	3	2	26	2.2	14.0
F25	2	2	2	4	3	1	2	2	1	1	2	2	24	2.0	15.2
LOWER FRANKFORD LOW LEVEL 10 NEWPC UNITS															
F03	2	2	2	2	2	2	2	2	2	1	2	3	24	2.0	15.2
F04	2	2	2	2	2	2	2	2	2	1	2	3	24	2.0	15.2
F05	2	3	2	2	3	3	2	2	2	1	1	4	27	2.3	13.5
F06	2	3	4	2	3	2	5	2	3	1	2	3	32	2.7	11.4
F07	1	2	2	3	2	2	2	2	2	1	1	5	25	2.1	14.6
F08	2	3	2	2	2	2	3	3	2	1	2	2	26	2.2	14.0
F09	2	4	2	2	2	2	4	2	4	1	1	2	28	2.3	13.0
F10	2	4	2	2	1	2	3	2	2	1	3	2	26	2.2	14.0
F11	2	2	2	2	2	2	2	2	3	2	3	1	25	2.1	14.6
F12	1	2	2	2	2	2	2	2	2	1	1	2	21	1.8	17.4
FRANKFORD HIGH LEVEL 14 NEWPC UNITS															
T01	2	1	1	2	2	2	2	2	2	1	1	2	20	1.7	18.2
T03	2	4	2	3	2	4	3	2	2	2	2	2	30	2.5	12.2
T04	3	3	2	2	2	2	2	2	2	2	1	2	25	2.1	14.6
T05	2	2	2	2	2	2	2	2	2	2	1	2	23	1.9	15.9
T06	2	2	2	2	2	2	2	2	2	2	1	2	23	1.9	15.9
T07	2	2	2	2	1	3	2	2	2	2	1	2	23	1.9	15.9
T08	2	2	2	2	1	3	2	2	2	2	1	2	23	1.9	15.9
T09	3	1	3	2	1	3	2	2	3	2	1	2	25	2.1	14.6
T10	3	3	3	4	1	3	2	2	3	1	2	2	29	2.4	12.6
T11	3	3	2	3	1	2	2	2	2	1	1	2	24	2.0	15.2
T12	3	3	2	6	1	1	2	2	2	1	2	2	27	2.3	13.5
T13	2	3	3	3	1	1	4	2	2	1	2	2	26	2.2	14.0
T14	2	1	1	2	1	1	2	2	2	1	1	2	18	1.5	20.3
T15	2	0	1	2	1	1	2	2	1	1	1	2	16	1.3	22.8

4	TOTAL DISCHARGES FOR NE & SE DISTRICTS	DTR	= DAYS TO RETURN TO SITE
0.3	AVERAGE DISCHARGES PER MONTH	I/D/C	= INSPECTIONS PER DAY PER CREW
15.9	AVER. DAYS BEFORE RETURNING TO SITE	I/D	= INSPECTIONS PER DISCHARGE
2.8	AVER. INSPECTIONS PER DAY PER CREW		

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	AVER	DTR
SOMERSET LOW LEVEL 9 NEWPC UNITS															
D17	2	2	2	3	2	3	2	3	2	2	1	2	26	2.2	14.0
D18	2	2	2	3	2	3	2	3	2	2	1	2	26	2.2	14.0
D19	2	2	2	3	2	3	2	2	2	3	1	2	26	2.2	14.0
D20	2	2	1	3	3	3	4	4	2	2	1	2	29	2.4	12.6
D21	2	1	1	3	2	2	2	2	2	2	1	2	22	1.8	16.6
D22	1	1	1	3	2	1	2	2	2	2	1	2	20	1.7	18.2
D23	1	1	1	2	2	1	2	2	1	0	1	2	16	1.3	22.8
D24	1	6	2	2	2	1	2	2	1	0	0	2	21	1.8	17.4
D25	2	4	10	3	2	1	2	3	2	2	1	11	43	3.6	8.5
LOWER DELAWARE LOW LEVEL 33 SEWPC UNITS															
D37	2	2	1	3	3	1	2	3	2	1	1	2	23	1.9	15.9
D38	2	2	2	3	2	1	2	4	2	1	1	2	24	2.0	15.2
D39	2	2	1	3	3	1	2	2	2	1	1	2	22	1.8	16.6
D40	2	2	1	3	2	1	2	2	2	1	1	2	21	1.8	17.4
D41	2	2	1	3	2	1	2	2	2	1	1	2	21	1.8	17.4
D42	2	2	1	3	2	1	2	2	2	1	1	3	22	1.8	16.6
D43	2	1	1	2	2	1	2	2	1	1	1	2	18	1.5	20.3
D44	1	1	1	2	2	1	2	1	1	1	1	2	16	1.3	22.8
D45	2	1	1	2	2	5	2	2	1	1	1	3	23	1.9	15.9
D46	2	2	1	2	2	2	2	2	2	1	2	3	23	1.9	15.9
D47	2	2	1	2	2	2	2	2	1	1	1	2	20	1.7	18.2
D48	1	6	1	2	2	2	2	2	1	1	1	2	23	1.9	15.9
D49	2	2	2	2	2	2	2	2	1	1	1	2	21	1.8	17.4
D50	2	1	1	2	2	2	2	2	1	1	1	2	19	1.6	19.2
D51	2	2	1	2	3	2	5	2	1	1	1	3	25	2.1	14.6
D52	2	2	1	2	1	2	2	2	1	1	1	4	21	1.8	17.4
D53	2	2	1	2	1	2	2	1	1	1	3	3	21	1.8	17.4
D54	2	2	1	2	1	2	2	1	1	1	1	2	18	1.5	20.3
D58	2	4	1	2	2	2	2	2	2	1	2	2	24	2.0	15.2
D61	2	2	1	3	1	2	2	1	1	1	1	2	19	1.6	19.2
D62	2	2	1	3	1	2	2	1	2	1	1	2	20	1.7	18.2
D63	2	3	1	3	1	2	2	2	1	1	1	3	22	1.8	16.6
D64	1	2	1	2	1	2	2	2	1	1	1	2	18	1.5	20.3
D65	1	2	1	2	1	2	2	2	1	1	1	2	18	1.5	20.3
D66	1	3	1	2	1	2	2	2	1	1	1	1	18	1.5	20.3
D67	1	1	2	3	4	4	2	2	1	1	1	2	24	2.0	15.2
D68	1	2	2	3	4	3	2	2	1	1	1	2	24	2.0	15.2
D69	1	2	1	2	3	3	2	2	1	1	1	2	21	1.8	17.4
D70	1	1	1	2	2	4	2	2	1	3	2	2	23	1.9	15.9
D71	1	2	1	3	2	3	3	2	1	1	2	4	25	2.1	14.6
D72	1	2	1	2	1	1	2	2	1	1	1	3	18	1.5	20.3
D73	1	1	1	2	1	1	1	0	2	1	1	2	14	1.2	26.1
D75	1	2	1	2	1	1	2	2	1	1	0	3	17	1.4	21.5
TOTAL	161	197	151	232	172	180	191	181	147	111	107	212	2042		
I /D/C	2.6	3.2	2.5	3.8	2.8	3.0	3.1	3.0	2.4	1.8	1.8	3.5			
UP	8	10	6	17	11	11	10	10	5	9	5	10	112	1.9	16.3
UDLL	24	29	24	33	27	25	21	25	20	14	12	30	284	2.0	15.7
LFC	10	13	12	21	13	10	13	12	10	6	8	13	141	2.0	15.8
LFLL	18	27	22	21	21	21	27	21	24	11	18	27	258	2.2	14.3
FHL	33	30	28	37	19	30	31	28	29	21	18	28	332	2.0	15.8
SLL	15	21	22	25	19	18	20	23	16	15	8	27	229	2.1	15.3
LDLL	53	67	37	78	62	65	69	62	43	35	38	77	686	1.7	17.9

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
UPPER PENNYPACK 5 NEWPC UNITS													
P01													0
P02													0
P03												1	1
P04													0
P05													0
UPPER DELAWARE LOW LEVEL 12 NEWPC UNITS													
D02													0
D03													0
D04													0
D05													0
D06													0
D07													0
D08													0
D09													0
D11													0
D12													0
D13													0
D15													0
LOWER FRANKFORD CREEK 6 NEWPC UNITS													
F13													0
F14													0
F21													0
F23													0
F24													0
F25													0
LOWER FRANKFORD LOW LEVEL 10 NEWPC UNITS													
F03													0
F04													0
F05													0
F06							1						1
F07													0
F08													0
F09													0
F10													0
F11													0
F12													0
FRANKFORD HIGH LEVEL 14 NEWPC UNITS													
T01													0
T03													0
T04													0
T05													0
T06													0
T07													0
T08													0
T09													0
T10													0
T11													0
T12													0
T13							1						1
T14													0
T15													0

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SOMERSET LOW LEVEL 9 NEWPC UNITS													
D17													0
D18													0
D19													0
D20													0
D21													0
D22													0
D23													0
D24													0
D25													0
LOWER DELAWARE LOW LEVEL 33 SEWPC UNITS													
D37													0
D38													0
D39													0
D40													0
D41													0
D42													0
D43													0
D44													0
D45													0
D46													0
D47													0
D48													0
D49													0
D50													0
D51													0
D52													0
D53													0
D54													0
D58													0
D61													0
D62													0
D63													0
D64													0
D65													0
D66													0
D67													0
D68													0
D69													0
D70													0
D71													0
D72													0
D73													0
D75													0
	0	0	0	0	0	0	2	0	0	0	0	1	TOTAL DISC 3

	NO OF DISCHARGES IN DISTRICT												TOTAL
UP	0	0	0	0	0	0	0	0	0	0	0	1	1
UDLL	0	0	0	0	0	0	0	0	0	0	0	0	0
LFC	0	0	0	0	0	0	0	0	0	0	0	0	0
LFLL	0	0	0	0	0	0	1	0	0	0	0	0	1
FHL	0	0	0	0	0	0	1	0	0	0	0	0	1
SLL	0	0	0	0	0	0	0	0	0	0	0	0	0
LDLL	0	0	0	0	0	0	0	0	0	0	0	0	0

CSO REGULATING CHAMBER MONTHLY BLOCKS CLEARED **NEWPC & SEWPC PLANT REGULATORS** **PAGE 5**

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
UPPER PENNYPACK 5 NEWPC UNITS													
P01							1						1
P02													0
P03					1							1	2
P04													0
P05													0
UPPER DELAWARE LOW LEVEL 12 NEWPC UNITS													
D02							1						1
D03	1			1			1						3
D04				1									1
D05													0
D06	1						1						2
D07													0
D08	1	1											2
D09													0
D11												1	1
D12							1						1
D13		1											1
D15	1	1		1					1				4
LOWER FRANKFORD CREEK 6 NEWPC UNITS													
F13													0
F14	1		1		1							1	4
F21													0
F23	1								1				2
F24		1											1
F25													0
LOWER FRANKFORD LOW LEVEL 10 NEWPC UNITS													
F03													0
F04													0
F05						1						2	3
F06			1				1						2
F07					1							1	2
F08		1											1
F09													0
F10	1											1	2
F11													0
F12							1						1
FRANKFORD HIGH LEVEL 14 NEWPC UNITS													
T01													0
T03													0
T04			1	1									2
T05													0
T06													0
T07													0
T08													0
T09													0
T10													0
T11													0
T12		1											1
T13		1	1		1	1	1						5
T14													0
T15													0

6.3 AVERAGE BLOCKAGES PER MONTH

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SOMERSET LOW LEVEL 9 NEWPC UNITS													
D17													0
D18													0
D19													0
D20													0
D21													0
D22													0
D23													0
D24													0
D25													0
LOWER DELAWARE LOW LEVEL 33 SEWPC UNITS													
D37					1	1							2
D38							1						1
D39													0
D40		1	1										2
D41			1										1
D42													0
D43													0
D44							1						1
D45													0
D46													0
D47	1												1
D48		2											2
D49													0
D50	1											1	2
D51					1		1						2
D52												1	1
D53											2		2
D54													0
D58												1	1
D61													0
D62													0
D63													0
D64													0
D65													0
D66										1			1
D67													0
D68					1								1
D69													0
D70													0
D71						1	1					1	3
D72													0
D73		1											1
D75													0
													TOTAL
	9	11	6	4	7	4	12	0	2	1	2	11	69

UP	0	0	0	0	1	0	1	0	0	0	0	1	3
UDLL	4	3	0	3	0	0	4	0	1	0	0	1	16
LFC	2	1	1	0	1	0	0	0	1	0	0	1	7
LFLL	1	1	1	0	1	1	2	0	0	0	0	4	11
FHL	0	2	2	1	1	1	1	0	0	0	0	0	8
SLL	0	0	0	0	0	0	0	0	0	0	0	0	0
LDLL	2	4	2	0	3	2	4	0	0	1	2	4	24

CSO REGULATING CHAMBER MONTHLY INSPECTION — **SWWPC PLANT REGULATORS** — **PAGE 6**

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	AVER	DTR
CENTRAL SCHUYLKILL EAST SIDE 18 SWWPC UNITS															
S05	2	2	2	2	3	3	2	2	2	2	1	2	25	2.1	14.6
S06	2	2	2	2	3	3	2	2	2	2	1	2	25	2.1	14.6
S07	2	1	2	2	3	3	2	2	2	2	1	2	24	2.0	15.2
S08	4	4	4	4	1	3	2	2	2	2	2	4	34	2.8	10.7
S09	0	1	2	2	1	0	2	2	2	2	1	1	16	1.3	22.8
S10	2	2	2	2	1	2	2	2	1	2	1	2	21	1.8	17.4
S12	3	3	2	3	2	2	2	3	2	2	2	4	30	2.5	12.2
S12A	3	1	2	3	3	2	2	1	1	1	1	1	21	1.8	17.4
S13	3	2	2	3	2	2	2	2	1	2	2	2	25	2.1	14.6
S15	2	2	2	3	2	1	3	2	1	2	2	2	24	2.0	15.2
S16	2	1	2	2	1	2	2	1	1	1	1	2	18	1.5	20.3
S17	2	1	2	2	1	2	2	1	1	1	1	2	18	1.5	20.3
S18	2	0	2	2	1	3	2	2	1	1	1	2	19	1.6	19.2
S19	3	1	2	3	2	2	2	2	1	1	2	2	23	1.9	15.9
S21	1	1	2	1	3	2	2	2	1	1	1	1	18	1.5	20.3
S23	2	2	2	1	3	2	2	3	1	1	1	1	21	1.8	17.4
S25	1	1	3	1	1	2	2	3	1	1	1	2	19	1.6	19.2
S26	1	1	2	1	1	2	2	2	1	1	1	1	16	1.3	22.8
LOWER SCHUYLKILL EAST SIDE 9 SWWPC UNITS															
S31	2	1	1	2	2	2	2	2	3	1	1	1	20	1.7	18.2
S35	2	1	1	2	1	1	2	3	3	1	1	2	20	1.7	18.2
S36	1	0	0	0	1	1	2	2	1	0	0	0	8	0.7	45.6
S36A	1	1	2	2	1	2	2	2	3	1	1	0	18	1.5	20.3
S37	0	0	1	0	1	1	1	1	1	0	0	0	6	0.5	60.8
S42	8	7	4	3	4	7	5	6	8	3	1	3	59	4.9	6.2
S42A	3	6	2	4	2	2	2	4	7	1	2	2	37	3.1	9.9
S44	0	0	0	0	1	1	1	1	0	0	0	0	4	0.3	91.2
S46	3	8	0	2	2	3	2	2	2	1	1	0	26	2.2	14.0
CENTRAL SCHUYLKILL WEST 9 SWWPC UNITS															
S01	1	2	6	2	2	2	2	2	2	1	2	2	26	2.2	14.0
S02	1	2	3	2	2	5	2	2	2	1	2	2	26	2.2	14.0
S03	1	2	2	3	2	2	2	2	3	1	2	2	24	2.0	15.2
S04	1	2	2	2	2	2	2	2	2	1	1	2	21	1.8	17.4
S11	1	1	1	2	2	1	2	2	2	1	1	2	18	1.5	20.3
S14	1	1	2	3	1	2	2	2	2	1	1	2	20	1.7	18.2
S20	2	1	2	4	1	2	2	2	2	1	0	2	21	1.8	17.4
S22	2	2	2	3	2	2	2	3	3	1	1	2	25	2.1	14.6
S24	2	2	2	3	2	2	2	3	3	1	1	2	25	2.1	14.6
SOUTHWEST MAIN GRAVITY 10 SWWPC UNITS															
S27	2	1	0	1	1	1	3	2	2	1	1	1	16	1.3	22.8
S28	2	1	1	1	1	2	3	2	2	1	1	1	18	1.5	20.3
S30	2	1	2	1	1	2	2	2	2	1	1	1	18	1.5	20.3
S34	1	1	1	1	2	1	2	2	2	1	2	1	17	1.4	21.5
S39	1	1	1	1	1	1	2	1	2	1	1	1	14	1.2	26.1
S40	1	1	1	1	2	1	2	1	2	0	1	0	13	1.1	28.1
S43	1	1	1	1	2	2	2	2	1	1	2	0	16	1.3	22.8
S47	1	2	1	1	3	2	2	2	1	1	1	0	17	1.4	21.5
S50	2	5	6	5	8	12	10	8	7	4	2	1	70	5.8	5.2
S51	1	1	3	2	5	4	2	2	4	1	1	1	27	2.3	13.5
LOWER SCHUYLKILL WEST SIDE 4 SWWPC UNITS															
S32	2	2	1	2	2	3	2	2	3	1	1	1	22	1.8	16.6
S33	2	1	2	2	3	5	2	2	3	1	1	1	25	2.1	14.6
S38	3	1	2	1	2	3	2	2	3	1	1	1	22	1.8	16.6
S45	3	2	1	2	2	2	2	2	2	1	1	1	21	1.8	17.4

8 TOTAL DISCHARGES IN SW DISTRICT — DTR = DAYS TO RETURN TO SITE
0.7 AVERAGE DISCHARGES PER MONTH — I/D/C = INSPECTIONS PER DAY PER CREW
19.7 AVER. DAYS BEFORE RETURNING TO SITE — I/D = INSPECTIONS PER DISCHARGE
1.7 AVER. INSPECTIONS PER DAY PER CREW

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	AVER	DTR
COBBS CREEK HIGH LEVEL 24 SWWPC UNITS															
C01	2	1	2	2	3	2	2	2	2	2	1	2	23	1.9	15.9
C02	4	1	2	2	3	2	2	2	2	2	1	2	25	2.1	14.6
C04	3	1	2	2	3	2	3	2	2	2	1	2	25	2.1	14.6
C04A	1	1	2	2	3	2	2	2	2	2	1	2	22	1.8	16.6
C05	1	1	2	2	3	1	2	2	2	2	1	2	21	1.8	17.4
C06	1	1	3	3	4	2	2	3	3	1	1	0	24	2.0	15.2
C07	3	1	4	3	5	2	2	3	1	4	1	3	32	2.7	11.4
C09	4	1	2	2	2	1	4	3	1	1	1	2	24	2.0	15.2
C10	2	1	4	2	2	1	2	2	1	1	1	2	21	1.8	17.4
C11	4	7	7	3	4	1	2	3	1	1	1	1	35	2.9	10.4
C12	2	1	3	2	2	1	2	2	1	1	1	1	19	1.6	19.2
C13	1	1	2	2	2	1	2	2	1	1	1	2	18	1.5	20.3
C14	2	2	2	3	2	3	2	2	1	2	1	1	23	1.9	15.9
C15	1	1	2	3	2	2	2	2	1	1	1	1	19	1.6	19.2
C16	1	1	2	3	2	3	2	2	1	1	1	1	20	1.7	18.2
C17	1	1	2	3	2	3	2	2	1	1	1	1	20	1.7	18.2
C18	1	1	3	2	3	3	3	2	1	1	1	1	22	1.8	16.6
C31	2	1	2	3	2	3	2	2	1	1	1	2	22	1.8	16.6
C32	1	1	2	3	2	2	3	2	1	1	1	2	21	1.8	17.4
C33	2	1	2	3	2	3	2	2	1	1	1	1	21	1.8	17.4
C34	2	1	2	3	2	2	2	2	1	1	1	1	20	1.7	18.2
C35	2	1	2	2	2	2	2	2	1	1	1	1	19	1.6	19.2
C36	2	1	2	2	2	2	3	2	1	1	0	1	19	1.6	19.2
C37	2	1	1	3	2	2	2	1	1	1	0	1	17	1.4	21.5
COBBS CREEK LOW LEVEL 12 SWWPC UNITS															
C19	1	1	2	2	2	3	2	2	1	1	1	1	19	1.6	19.2
C20	1	1	2	2	2	2	2	2	1	1	1	1	18	1.5	20.3
C21	3	2	2	2	2	1	2	2	1	1	1	1	20	1.7	18.2
C22	1	0	2	2	2	1	2	2	1	1	1	1	16	1.3	22.8
C23	1	1	2	2	2	4	2	2	1	1	1	1	20	1.7	18.2
C24	2	1	2	2	2	3	3	2	1	1	1	1	21	1.8	17.4
C25	1	2	2	3	3	6	2	2	2	1	1	2	27	2.3	13.5
C26	2	0	2	3	2	3	2	2	2	1	1	2	22	1.8	16.6
C27	2	0	2	2	1	2	2	2	2	1	1	2	19	1.6	19.2
C28A	1	0	2	2	1	2	3	2	2	1	1	1	18	1.5	20.3
C29	1	0	2	2	1	1	2	2	2	1	1	0	15	1.3	24.3
C30	1	0	2	2	1	1	1	2	2	1	1	0	14	1.2	26.1
TOTAL	157	127	178	186	182	196	191	186	158	105	92	120	1878		
I /D/C	1.7	1.4	2.0	2.0	2.0	2.1	2.1	2.0	1.7	1.2	1.0	1.3			
CSES	37	28	39	39	34	38	37	36	24	27	23	35	397	1.8	17.2
LSES	20	24	11	15	15	20	19	23	28	8	7	8	198	1.8	31.6
CSW	12	15	22	24	16	20	18	20	21	9	11	18	206	1.9	16.2
SWMG	14	15	17	15	26	28	30	24	25	12	13	7	226	1.9	20.2
LSW	10	6	6	7	9	13	8	8	11	4	4	4	90	1.9	16.3
CCHL	47	31	59	60	61	48	54	51	31	33	22	35	532	1.8	16.9
CCLL	17	8	24	26	21	29	25	24	18	12	12	13	229	1.6	19.7

CSO REGULATING CHAMBER DISCHARGE **SWWPC PLANT REGULATORS** **PAGE 7**

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
CENTRAL SCHUYLKILL EAST SIDE 18 SWWPC UNITS													
S05													0
S06													0
S07													0
S08	1												1
S09													0
S10													0
S12												1	1
S12A													0
S13													0
S15													0
S16													0
S17													0
S18													0
S19													0
S21													0
S23													0
S25												1	1
S26													0
LOWER SCHUYLKILL EAST SIDE 9 SWWPC UNITS													
S31													0
S35													0
S36													0
S36A													0
S37													0
S42													0
S42A													0
S44													0
S46													0
CENTRAL SCHUYLKILL WEST 9 SWWPC UNITS													
S01													0
S02													0
S03													0
S04													0
S11													0
S14													0
S20													0
S22													0
S24													0
SOUTHWEST MAIN GRAVITY 10 SWWPC UNITS													
S27													0
S28													0
S30													0
S34													0
S39													0
S40													0
S43													0
S47													0
S50													0
S51													0
LOWER SCHUYLKILL WEST SIDE 4 SWWPC UNITS													
S32													0
S33													0
S38													0
S45													0

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
COBBS CREEK HIGH LEVEL 24 SWWPC UNITS													
C01													0
C02													0
C04													0
C04A													0
C05													0
C06													0
C07										1			1
C09													0
C10													0
C11		3											3
C12													0
C13													0
C14													0
C15													0
C16													0
C17													0
C18													0
C31													0
C32													0
C33													0
C34													0
C35													0
C36													0
C37													0
COBBS CREEK LOW LEVEL 12 SWWPC UNITS													
C19													0
C20													0
C21													0
C22													0
C23													0
C24													0
C25													0
C26													0
C27													0
C28A													0
C29													0
C30													0
													TOTAL DISC
	1	3	0	0	0	0	0	0	0	1	0	2	7

	NO OF UNITS IN DISTRICT BLOCKED												TOTAL
CSE	2	1	5	0	4	4	0	1	0	0	2	5	24
LSE	1	2	1	0	1	1	0	0	0	0	0	0	6
CSW	0	0	0	0	0	1	0	0	0	0	0	2	3
SWG	0	1	0	0	3	4	0	0	0	0	1	0	9
LSW	0	1	0	0	0	0	0	0	0	0	0	0	1
CCHL	1	4	1	1	4	2	2	0	0	1	0	0	16
CCLL	2	1	0	2	0	2	0	0	0	0	1	0	8

	NO OF DISCHARGES IN DISTRICT												TOTAL
CSE	1	0	0	0	0	0	0	0	0	0	0	2	3
LSE	0	0	0	0	0	0	0	0	0	0	0	0	0
CSW	0	0	0	0	0	0	0	0	0	0	0	0	0
SWG	0	0	0	0	0	0	0	0	0	0	0	0	0
LSW	0	0	0	0	0	0	0	0	0	0	0	0	0
CCHL	0	3	0	0	0	0	0	0	0	1	0	0	4
CCLL	0	0	0	0	0	0	0	0	0	0	0	0	0

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
CENTRAL SCHUYLKILL EAST SIDE 18 SWWPC UNITS													
S05													0
S06						1							1
S07						1							1
S08	1	1	1								1	1	5
S09													0
S10													0
S12			1		2			1				2	6
S12A											1		1
S13	1												1
S15					1								1
S16													0
S17													0
S18													0
S19					1	1						1	3
S21													0
S23													0
S25			3			1						1	5
S26													0
LOWER SCHUYLKILL EAST SIDE 9 SWWPC UNITS													
S31													0
S35													0
S36													0
S36A													0
S37			1										1
S42	1				1								2
S42A		1											1
S44													0
S46		1				1							2
CENTRAL SCHUYLKILL WEST 9 SWWPC UNITS													
S01													0
S02												2	2
S03													0
S04													0
S11													0
S14													0
S20													0
S22						1							1
S24													0
SOUTHWEST MAIN GRAVITY 10 SWWPC UNITS													
S27													0
S28													0
S30													0
S34													0
S39													0
S40													0
S43													0
S47					1						1		2
S50		1			2	4							7
S51													0
LOWER SCHUYLKILL WEST SIDE 4 SWWPC UNITS													
S32													0
S33													0
S38		1											1
S45													0

6.1 AVERAGE BLOCKAGES PER MON

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
COBBS CREEK HIGH LEVEL 24 SWWPC UNITS													
C01			1										1
C02	1												1
C04													0
C04A													0
C05													0
C06				1									1
C07					1					1			2
C09						1							1
C10													0
C11		4			1								5
C12													0
C13					1								1
C14						1							1
C15													0
C16													0
C17													0
C18					1								1
C31							1						1
C32													0
C33													0
C34													0
C35													0
C36							1						1
C37													0
COBBS CREEK LOW LEVEL 12 SWWPC UNITS													
C19													0
C20						1							1
C21	1	1											2
C22													0
C23													0
C24	1			1									2
C25						1							1
C26				1									1
C27													0
C28A											1		1
C29													0
C30													0
													TOTAL
	6	10	7	3	12	14	2	1	0	1	4	7	67

CSE	2	1	5	0	4	4	0	1	0	0	2	5	24
LSE	1	2	1	0	1	1	0	0	0	0	0	0	6
CSW	0	0	0	0	0	1	0	0	0	0	0	2	3
SWG	0	1	0	0	3	4	0	0	0	0	1	0	9
LSW	0	1	0	0	0	0	0	0	0	0	0	0	1
CCHL	1	4	1	1	4	2	2	0	0	1	0	0	16
CCLL	2	1	0	2	0	2	0	0	0	0	1	0	8

RELIEF SEWER MONTHLY INSPECTION

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
THOMAS RUN RELIEF SEWER													
R01	1	1	1	2	2	2	1	2	2	1	1	2	18
R02	1	1	1	2	2	2	1	2	2	1	1	2	18
R03	1	1	1	2	2	2	1	2	2	1	1	2	18
R04	1	1	1	2	2	1	1	2	2	1	1	2	17
R05	1	1	1	2	1	1	1	2	3	1	1	2	17
R06	1	1	1	1	1	1	0	2	1	1	2	2	14
MAIN RELIEF SEWER													
R07	1	1	1	1	1	2	1	1	1	1	1	2	14
R08	1	1	1	1	2	2	1	1	2	1	1	2	16
R09	1	1	1	1	1	2	1	0	1	1	1	2	13
R10	1	1	1	1	1	2	1	0	1	1	1	2	13
R11	1	1	1	1	1	2	1	0	1	1	1	2	13
R11A	1	0	0	1	2	2	1	0	1	1	0	2	11
R12	1	0	1	1	2	2	1	1	1	1	1	2	14
WAKLING RELIEF SEWER													
R13	1	0	2	1	1	2	0	1	1	1	0	2	12
R14	1	0	1	1	1	2	0	1	1	1	0	2	11
ROCK RUN STORM FLOOD RELIEF SEWER													
R15	2	0	2	0	1	1	0	1	1	1	0	1	10
OREGON AVE RELIEF SEWER													
R16													0
R17													0
FRANKFORD HIGH LEVEL RELIEF SEWER													
R18	1	0	2	1	1	2	0	1	1	1	0	0	10
32ND ST RELIEF SEWER													
R19	0	0	1	0	1	1	0	1	2	1	0	2	9
MAIN STREET RELIEF SEWER													
R20	1	0	2	0	1	2	0	1	1	1	0	1	10
SOMERSET SYSTEM DIVERSION CHAMBER													
R21													0
TEMPORARY REGULATOR CHAMBER													
R22													
R23	0	0	1	0	1	2	0	1	1	0	0	1	7
ARCH ST RELIEF SEWER													
R24	1	0	0	2	2	3	2	2	2	2	1	0	17
16TH & SNYDER													
R25	1	0	0	0	2	1	2	1	2	1	1	0	11
GRANT & STATE RD. RELIEF													
R26	0	0	0	1	1	2	0	1	1	2	0	2	10
TOTAL	21	11	23	24	32	41	16	26	33	24	15	37	303
AVER	0.8	0.4	0.9	0.9	1.2	1.5	0.6	1.0	1.2	0.9	0.6	1.4	0.9

RELIEF SEWER MONTHLY DISCHARGE

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
THOMAS RUN RELIEF SEWER													
R01													0
R02													0
R03													0
R04													0
R05													0
R06													0
MAIN RELIEF SEWER													
R07													0
R08													0
R09													0
R10													0
R11													0
R11A													0
R12													0
WAKLING RELIEF SEWER													
R13													0
R14													0
ROCK RUN STORM FLOOD RELIEF SEWER													
R15													0
OREGON AVE RELIEF SEWER													
R16													0
R17													0
FRANKFORD HIGH LEVEL RELIEF SEWER													
R18													0
32ND ST RELIEF SEWER													
R19													0
MAIN STREET RELIEF SEWER													
R20													0
SOMERSET SYSTEM DIVERSION CHAMBER													
R21													0
TEMPORARY REGULATOR CHAMBER													
R22													0
R23													0
ARCH ST RELIEF SEWER													
R24													0
16TH & SNYDER													
R25													0
GRANT & STATE RD. RELIEF													
R26													0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
UNITS	0	0	0	0	0	0	0	0	0	0	0	0	

RELIEF SEWER MONTHLY BLOCKS CLEARED

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
THOMAS RUN RELIEF SEWER													
R01													0
R02													0
R03													0
R04													0
R05													0
R06													0
MAIN RELIEF SEWER													
R07													0
R08													0
R09													0
R10													0
R11													0
R11A													0
R12													0
WAKLING RELIEF SEWER													
R13													0
R14													0
ROCK RUN STORM FLOOD RELIEF SEWER													
R15													0
OREGON AVE RELIEF SEWER													
R16													0
R17													0
FRANKFORD HIGH LEVEL RELIEF SEWER													
R18													0
32ND ST RELIEF SEWER													
R19													0
MAIN STREET RELIEF SEWER													
R20													0
SOMERSET SYSTEM DIVERSION CHAMBER													
R21													0
TEMPORARY REGULATOR CHAMBER													
R22													0
R23													0
ARCH ST RELIEF SEWER													
R24													0
16TH & SNYDER													
R25													0
GRANT & STATE RD. RELIEF													
R26													0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
AVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

MISCELLANEOUS SITE INSPECTIONS

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SANDY RUN CREEK DIVERSION REGULATOR													
P090-02-PFD-01	3	8	3	6	12	19	2	5	9	7	4	6	84
PLYMOUTH ST. WEST OF PITTVILLE													
T088-01-CFD-01	2	4	3	2	5	5	1	2	4	2	2	3	35
PITTVILLE ST. SOUTH OF PLYMOUTH ST.													
T088-01-CFD-02	2	3	3	2	5	5	2	3	4	2	2	3	36
ELSTON ST. E. OF BOUVIER ST.													
T088-01-CFD-03	1	3	2	2	5	3	2	3	4	2	1	2	30
ASHLEY ST. W. OF BOUVIER ST.													
T088-01-CFD-04	1	1	2	1	2	3	1	4	4	2	1	1	23
CHELTENHAM AVE. E. OF 19TH ST.													
T088-01-CFD-05	1	1	2	1	2	2	2	3	3	2	1	0	20
VERBENA ST. S. OF CHELTENHAM AVE.													
T088-01-CFD-06	1	1	2	1	2	2	2	3	2	1	1	1	19
JANNETTE ST. WEST OF MONASTERY AVE.													
W060-01-MFD-01	1	1	2	3	2	2	1	2	3	1	0	3	21
GREEN LANE NORTH OF LAWNTON ST.													
W060-01-MFD-02	1	1	2	3	2	2	1	2	3	1	0	3	21
FRANKLIN & HASBROOK													
T089-04-CFD-01	5	8	3	6	6	10	1	5	12	9	4	6	75
CHELTENHAM E. OF 7 TH ST.													
T088-01-CFD-07	5	8	3	3	6	9	2	5	10	7	4	6	68
7 TH ST. S. OF CHELTENHAM													
T088-01-CFD-08	5	8	3	3	5	8	2	5	9	7	4	6	65
Totals	28	47	30	33	54	70	19	42	67	43	24	40	497

MISCELLANEOUS SITE DISCHARGES

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SANDY RUN CREEK DIVERSION REGULATOR													
P090-02-PFD-01					1								1
PLYMOUTH ST. WEST OF PITTVILLE													
T088-01-CFD-01													0
PITTVILLE ST. SOUTH OF PLYMOUTH ST.													
T088-01-CFD-02													0
ELSTON ST. E. OF BOUVIER ST.													
T088-01-CFD-03													0
ASHLEY ST. W. OF BOUVIER ST.													
T088-01-CFD-04													0
CHELTENHAM AVE. E. OF 19TH ST.													
T088-01-CFD-05													0
VERBENA ST. S. OF CHELTENHAM AVE.													
T088-01-CFD-06													0
JANNETTE ST. WEST OF MONASTERY AVE.													
W060-01-MFD-01													0
GREEN LANE NORTH OF LAWNTON ST.													
W060-01-MFD-02													0
FRANKLIN & HASBROOK													
T089-04-CFD-01										1			1
CHELTENHAM E. OF 7 TH ST.													
T088-01-CFD-07													0
7 TH ST. S. OF CHELTENHAM													
T088-01-CFD-08													0
Totals	0	0	0	0	1	0	0	0	0	1	0	0	2

MISCELLANEOUS SITE BLOCKAGES CLEARED

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SANDY RUN CREEK DIVERSION REGULATOR													
P090-02-PFD-01		1			1								2
PLYMOUTH ST. WEST OF PITTVILLE													
T088-01-CFD-01		1											1
PITTVILLE ST. SOUTH OF PLYMOUTH ST.													
T088-01-CFD-02		1	1										2
ELSTON ST. E. OF BOUVIER ST.													
T088-01-CFD-03													0
ASHLEY ST. W. OF BOUVIER ST.													
T088-01-CFD-04													0
CHELTENHAM AVE. E. OF 19TH ST.													
T088-01-CFD-05													0
VERBENA ST. S. OF CHELTENHAM AVE.													
T088-01-CFD-06													0
JANNETTE ST. WEST OF MONASTERY AVE.													
W060-01-MFD-01													0
GREEN LANE NORTH OF LAWNTON ST.													
W060-01-MFD-02													0
FRANKLIN & HASBROOK													
T089-04-CFD-01	1					4				2	1	2	10
CHELTENHAM E. OF 7 TH ST.													
T088-01-CFD-07	1	3		1	2	1						2	10
7 TH ST. S. OF CHELTENHAM													
T088-01-CFD-08	1	1			1							1	4
Totals	3	7	1	1	4	5	0	0	0	2	1	5	29

Chapter 94 Year End Report- January 2020 through December 2020

SOMERSET GRIT D-25 CHAMBER & DWO CLEANINGS

DATE	TONS
6/2/2020	10.87
6/3/2020	5.84
6/4/2020	4.77
6/5/2020	4.46
6/6/2020	4.6
6/15/2020	5.84
6/16/2020	3.22
6/17/2020	2.14
6/29/2020	3.51
6/30/2020	2.44

CSPS SIPHON GRIT POCKET CLEANINGS

DATE	CU. YARDS

Due to COVID Pandemic, grit cleaning was not done due to vendor crane availability

CSO B&B REGULATOR MAINTENANCE

DATE	SITE
2/29/2020	D-4
2/29/2020	D-37
2/29/2020	D-38
2/29/2020	S-22
2/29/2020	S-24
2/29/2020	S-23
2/29/2020	S-25
7/14/2020	S-38
8/24/2020	D-72
8/24/2020	D-70
8/24/2020	D-68
8/24/2020	D-64
8/24/2020	D-63
9/18/2020	S-50
9/18/2020	D-37
9/18/2020	D-38
9/24/2020	S-50
9/24/2020	D-39
11/21/2020	D-39
11/21/2020	D-47
11/21/2020	D-48
11/28/2020	D-49
11/28/2020	D-50
11/28/2020	D-51
11/28/2020	S-05
11/28/2020	S-06
11/28/2020	S-07
12/5/2020	D-64
12/5/2020	D-65
12/5/2020	D-66
12/5/2020	S-08
12/5/2020	S-16
12/5/2020	S-18
12/19/2020	D-67
12/19/2020	D-70
12/19/2020	D-71
12/19/2020	S-14
12/19/2020	S-22
12/19/2020	S-24
12/19/2020	S-43
12/19/2020	S-47
12/19/2020	S-50

CSO TIDE GATE MAINTENANCE

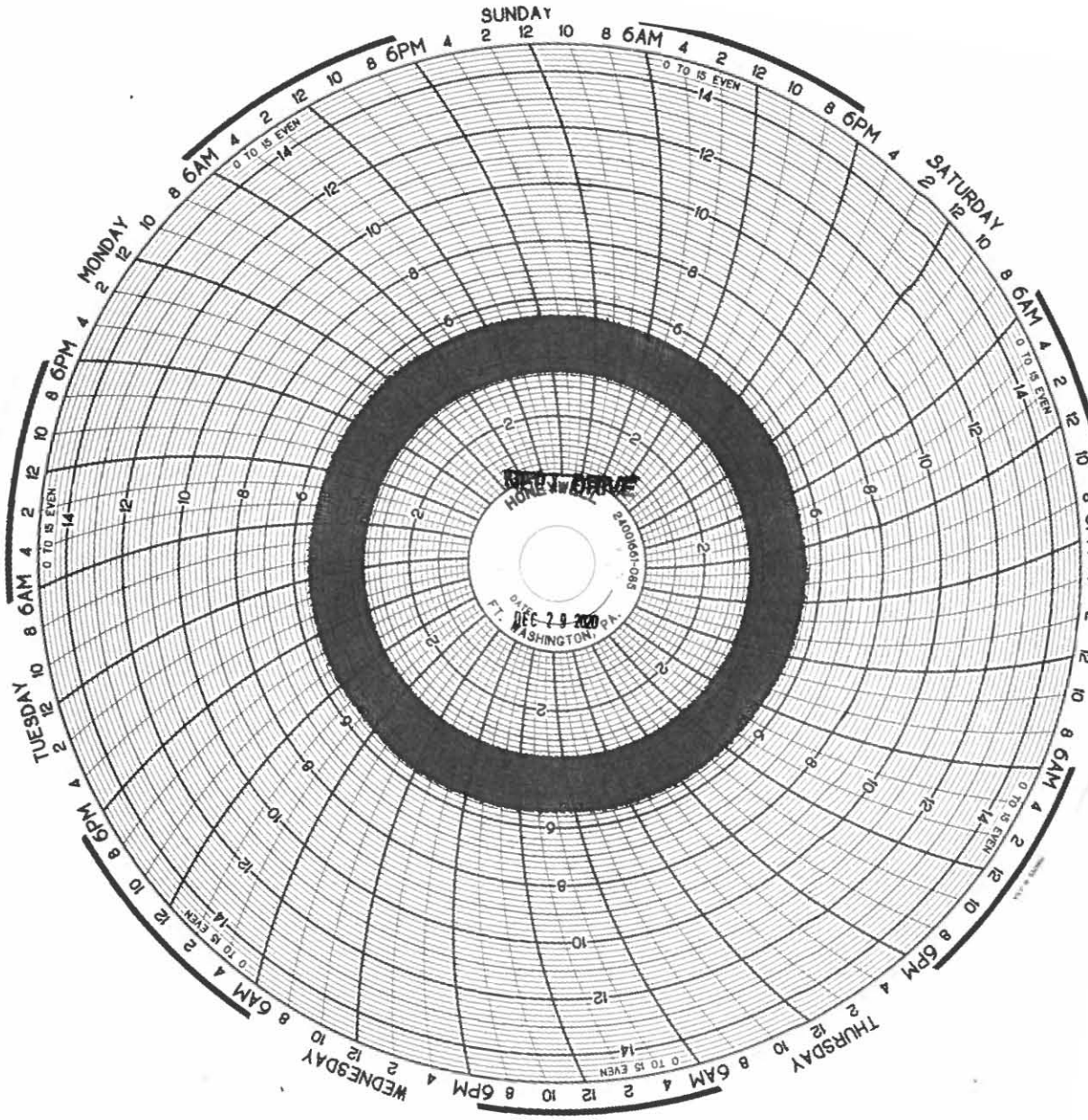
DATE	SITE	DATE	SITE	DATE	SITE
1/3/2020	D-5	5/28/2020	D-9	10/19/2020	D-11
1/9/2020	D-7	5/29/2020	D-2	10/22/2020	F-25
1/13/2020	Rock Run	6/5/2020	Rock Run	10/26/2020	Rock Run
1/13/2020	T-14	6/8/2020	Fish Ladder	11/4/2020	T-14
1/16/2020	D-15	6/9/2020	T-14	11/5/2020	D-11
1/17/2020	D-2	6/15/2020	D-2	11/5/2020	D-15
1/17/2020	D-3	6/15/2020	D-3	11/5/2020	Rock Run
1/17/2020	D-5	6/15/2020	D-11	11/6/2020	D-2
1/17/2020	D-9	6/17/2020	D-5	11/6/2020	D-3
1/22/2020	D-15	6/17/2020	D-9	11/9/2020	D-5
1/22/2020	D-11	6/18/2020	F-25	11/9/2020	D-9
1/31/2020	D-5	6/18/2020	D-15	11/18/2020	D-7
2/10/2020	Rock Run	7/1/2020	Fish Ladder	11/18/2020	F-25
2/10/2020	T-14	7/2/2020	D-5	12/4/2020	D-7
2/11/2020	S-50	7/2/2020	D-7	12/8/2020	D-7
2/12/2020	S-50	7/2/2020	Rock Run	12/9/2020	Rock Run
2/18/2020	D-15	7/8/2020	D-2	12/10/2020	F-25
2/19/2020	D-2	7/8/2020	D-3	12/10/2020	D-9
2/19/2020	D-3	7/8/2020	Venice	12/11/2020	D-11
2/19/2020	D-11	7/9/2020	D-9	12/14/2020	D-2
2/19/2020	F-25	7/9/2020	D-11	12/14/2020	D-3
2/21/2020	D-7	7/9/2020	D-15	12/21/2020	D-5
2/21/2020	D-9	7/10/2020	F-25	12/23/2020	T-14
2/24/2020	D-5	7/13/2020	T-14	12/29/2020	D-15
2/29/2020	D-37	8/11/2020	D-11		
3/11/2020	Fish Ladder	8/13/2020	D-2		
3/11/2020	Rock Run	8/13/2020	D-3		
3/12/2020	T-14	8/13/2020	D-7		
3/12/2020	D-2	8/13/2020	D-9		
3/12/2020	D-3	8/14/2020	D-15		
3/12/2020	D-5	8/14/2020	F-25		
3/12/2020	D-7	8/14/2020	D-5		
3/13/2020	D-9	8/17/2020	Fish Ladder		
3/13/2020	D-11	8/20/2020	Rock Run		
3/13/2020	F-25	8/20/2020	T-14		
3/13/2020	D-15	9/2/2020	D-2		
3/13/2020	Venice	9/2/2020	D-11		
3/18/2020	Fish Ladder	9/3/2020	D-15		
4/2/2020	Rock Run	9/4/2020	T-14		
4/6/2020	T-14	9/9/2020	F-25		
4/7/2020	D-5	9/9/2020	D-25		
4/7/2020	D-7	9/10/2020	Fish Ladder		
4/9/2020	D-15	9/11/2020	Rock Run		
4/9/2020	F-25	9/16/2020	D-3		
4/13/2020	D-2	9/16/2020	D-5		
4/20/2020	Fish Ladder	9/17/2020	D-7		
4/27/2020	D-3	9/17/2020	D-9		
4/27/2020	D-9	9/22/2020	D-24		
4/28/2020	D-11	10/5/2020	Fish Ladder		
5/8/2020	T-14	10/7/2020	T-14		
5/11/2020	F-25	10/7/2020	D-15		
5/18/2020	Fish Ladder	10/14/2020	D-2		
5/21/2020	D-11	10/14/2020	D-3		
5/21/2020	D-15	10/15/2020	D-5		
5/28/2020	D-3	10/15/2020	D-7		
5/28/2020	D-5	10/19/2020	D-9		

COMPUTER CONTROL CHAMBER PREVENTATIVE MAINTENANCE

DATE	SITE	DATE	SITE	DATE	SITE
1/8/2020	State Road	5/18/2020	Fish Ladder	9/16/2020	D-3
1/13/2020	Rock Run	5/21/2020	D-11	9/16/2020	D-5
1/13/2020	T-14	5/21/2020	D-15	9/17/2020	D-7
1/16/2020	D-15	5/26/2020	D-7	9/17/2020	D-9
1/17/2020	D-2	5/28/2020	D-3	10/5/2020	Fish Ladder
1/17/2020	D-3	5/28/2020	D-5	10/7/2020	T-14
1/17/2020	D-5	5/28/2020	D-9	10/7/2020	D-15
1/17/2020	D-9	5/29/2020	D-2	10/14/2020	D-2
1/22/2020	D-15	6/5/2020	D-7	10/14/2020	D-3
1/22/2020	D-11	6/5/2020	Rock Run	10/15/2020	D-5
1/22/2020	D-7	6/8/2020	Fish Ladder	10/15/2020	D-7
1/23/2020	Venice	6/8/2020	Venice	10/16/2020	Venice
2/10/2020	T-14	6/9/2020	T-14	10/19/2020	D-9
2/10/2020	Rock Run	6/15/2020	D-2	10/19/2020	D-11
2/18/2020	D-15	6/15/2020	D-3	10/22/2020	F-25
2/19/2020	D-2	6/15/2020	D-11	10/26/2020	Rock Run
2/19/2020	D-3	6/17/2020	D-5	10/28/2020	State Road
2/19/2020	D-11	6/17/2020	D-9	11/4/2020	T-14
2/19/2020	F-25	6/17/2020	State Road	11/5/2020	D-11
2/20/2020	State Road	6/18/2020	F-25	11/5/2020	D-15
2/21/2020	D-7	6/18/2020	D-15	11/5/2020	Rock Run
2/21/2020	D-9	7/1/2020	Fish Ladder	11/6/2020	D-2
2/24/2020	Venice	7/2/2020	D-5	11/6/2020	D-3
2/24/2020	D-5	7/2/2020	D-7	11/9/2020	D-5
3/11/2020	Fish Ladder	7/2/2020	Rock Run	11/9/2020	D-9
3/11/2020	Rock Run	7/8/2020	D-2	11/16/2020	Venice
3/11/2020	T-14	7/8/2020	D-3	11/18/2020	State Road
3/12/2020	D-2	7/8/2020	Venice	11/18/2020	D-7
3/12/2020	D-3	7/9/2020	D-9	11/18/2020	F-25
3/12/2020	D-5	7/9/2020	D-11	12/8/2020	D-7
3/12/2020	D-7	7/9/2020	D-15	12/9/2020	Rock Run
3/13/2020	D-9	7/10/2020	F-25	12/10/2020	F-25
3/13/2020	D-11	7/13/2020	T-14	12/10/2020	D-9
3/13/2020	F-25	7/22/2020	State Road	12/11/2020	D-11
3/13/2020	D-15	8/7/2020	Venice	12/14/2020	D-2
3/13/2020	Venice	8/11/2020	D-11	12/14/2020	D-3
3/16/2020	State Road	8/13/2020	D-2	12/21/2020	D-5
3/18/2020	Fish Ladder	8/13/2020	D-3	12/23/2020	Venice
4/2/2020	Rock Run	8/13/2020	D-7	12/23/2020	T-14
4/3/2020	State Road	8/13/2020	D-9	12/24/2020	State Road
4/6/2020	T-14	8/14/2020	D-15	12/29/2020	D-15
4/7/2020	D-5	8/14/2020	F-25		
4/7/2020	D-7	8/14/2020	D-5		
4/9/2020	D-15	8/17/2020	Fish Ladder		
4/9/2020	F-25	8/20/2020	Rock Run		
4/13/2020	D-2	8/20/2020	T-14		
4/15/2020	Venice	8/21/2020	State Road		
4/20/2020	Fish Ladder	9/2/2020	D-2		
4/27/2020	D-3	9/2/2020	D-11		
4/27/2020	D-9	9/3/2020	State Road		
4/28/2020	D-11	9/3/2020	D-15		
5/6/2020	Rock Run	9/4/2020	T-14		
5/7/2020	State Road	9/9/2020	F-25		
5/8/2020	T-14	9/10/2020	Fish Ladder		
5/11/2020	F-25	9/11/2020	Rock Run		
5/13/2020	Venice	9/16/2020	Venice		

CSO OUTFALL - DEBRIS GRILL MAINTENANCE

DATE	SITE
1/14/2020	C-4
1/15/2020	C-4
1/28/2020	Linden Outfall
1/28/2020	D-2
1/28/2020	D-3
3/26/2020	D-2
3/26/2020	D-3
3/26/2020	D-11
3/25/2020	D-63
6/16/2020	Linden Outfall
6/18/2020	D-3
6/18/2020	D-5
6/18/2020	D-11
6/18/2020	R-13/14
6/18/2020	D-39
6/18/2020	D-45
6/18/2020	D-46
6/18/2020	D-67
6/22/2020	D-7
6/22/2020	D-2
6/23/2020	D-9
6/23/2020	D-61
6/23/2020	D-62
6/23/2020	D-63
6/23/2020	D-64
6/23/2020	D-65
6/23/2020	D-66
6/23/2020	D-69
6/23/2020	D-70
7/14/2020	D-25
8/21/2020	R-13/14
8/26/2020	C-11
8/28/2020	C-11
9/21/2020	D-61
9/21/2020	D-62
9/21/2020	D-63
9/21/2020	D-64
9/21/2020	D-65
9/22/2020	Sandy Run
9/24/2020	D-11
9/24/2020	R-13/14
9/24/2020	Linden Outfa
9/24/2020	D-25
9/24/2020	D-66
9/24/2020	D-69
9/24/2020	D-70
9/30//2020	Sandy Run
10/23//2020	T-12
10/24//2020	T-13
11/6//2020	T-13
11/9//2020	T-13
12/3/2020	F-25
12/10/2020	Linden Outfa
12/10/2020	D-2
12/10/2020	D-3
12/10/2020	D-5
12/10/2020	D-7
12/10/2020	D-9
12/10/2020	D-11
12/10/2020	D-25
12/10/2020	D-39
12/10/2020	D-45
12/10/2020	D-46
12/10/2020	D-68


SUNDAY
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
SATURDAY
6AM
6PM
0 TO 15 EVEN
HONEYWELL
DATE
FT. WASHINGTON, PA.

Station PM Sheet **Station** NEILL DRIVE **sign book? Y/N?** NO **Date** 12/16/2020

Time in- 10:15 Time out- 2:40 Mech 1 ABALO
Pumps I S 1, 2 3 Pumps OOS? NONE Mech 2 BROWN

Pump Type	Submersible		Centrifugal		Other		Checked?
Pump Room	1	2	3	4	5	6	
Greased pump, ck oil	—	—	—				
Greased Motor	—	—	—				
Noise,Heat,Vibr? Y/n	NO	NO	NO				
Pump Pressure?	55 PSI	N/A	90 PSI				
Packing- repack/ adj	—	—	—				
seal water	—	—	—				
Discharge/ Ck valve	—	—	—				
Suction valve	ok	ok	ok				
Rotovalve	ok	ok	ok				
Piping	ok	ok	ok				
Ventilator- Int	Lube —		Belt —		Clean Screen(s) —		
Ventilator- Disc.	Lube —		Belt —		Clean Screen(s) —		
Hatch / Door/ Locks	Clean trough —		Lock-PM —		Hinges —		
Ladder/stairs/ rails	Floor-clean YES		windows —		trash, debris —		
sump pumps	Piping, valves ok		sump clean? Y/N YES				
Wet Well							
Ventilator- Int	Lube YES		Belt —		Clean Screen(s) —		
Ventilator- Disc.	Lube —		Belt —		Clean Screen(s) —		
Hatch / Door/ Locks	Clean trough —		Lock-PM —		Hinges —		
Ladder/stairs/ rails	Floor-clean YES		windows —		trash, debris —		
Dimmunuter	—						
Screens- condition	Nrth/ primary			South		Vactor needed?	
Rake drive: Chk, Lube	Nrth/ primary			South		grit rmval nded?	
Cables- lube, adj	Nrth/ primary			South		Vermin?	
Brakes- chk, adj	Nrth/ primary			South			
Tracks- lube	Nrth/ primary			South			
Control Room							
Ventilator- Int	Lube —		Belt —		Clean Screen(s)		
Ventilator- Disc.	Lube —		Belt —		Clean Screen(s)		
Hatch / Door/ Locks	Clean trough —		Lock-PM —		Hinges —		
Ladder/stairs/ rails	Floor-clean —		windows —		trash, debris —		
sump pumps	Piping, valves —		sump clean? Y/N —				
Chart recorder	OK? Any unusual situations?		YES / OK				
Generator							
Test run	fuel —	oil —	coolant —	belts —	other —		
Building/ grounds							
	Clean floors, windows and surfaces as applicable, pick up trash, in and around station						
Hypo Pumps	calibration #1 —			#2 —			
tank, valves, piping	—						

All work listed above was done and all list items were checked as needed to complete this PM

Form completed by ABALO

WO # 27957941

2020

MONTHLY FLOW CONTROL UNIT ELECTRICAL STATION PM

TIME 11 AM WEATHER CLEAR

STATION NEILL DR NAME LUDWIG/DIUP DATE 12-15-20

EQUIPMENT	T-1	T-2	T-3	Hours	Comments
PUMP #1	161.8	161.9	162.7	19257.8	
PUMP #2	165.1	163.2	165.2	20376.6	
PUMP #3	154.3	161.1	163.3	20339.1	
SUMP #1	11.1				
SUMP #2	11.0				
PUMP RM INTAKE	2.5	2.7	2.7		
CONTROL RM EXHAUST	1.6	1.8	1.7		
WET WELL INTAKE	4.1	4.0	4.3		
LIGHTS	CONTROL OK	PUMP OK	TRANS OK		
HEATER TRANS RM	11.0	11.1	11.1		
HEATER CONTROL RM	11.2	10.9	10.7		
TRANS RM EXHAUST	0.8	0.7	0.8		THERMO @ 90°

TAKE VOLTAGE READINGS	A » B	B » C	A » C
	474	475	477

LOCATION MCC #1

A » N	B » N	C » N
272	274	275

DISTRIBUTION			STATUS
	PRIMARY	Line #1073	CLOSE
	SECONDARY	Line #2318	OPEN
	TRANSFER SWITCH STATUS		READY
	TRANSFORMER COOLING FAN		OFF

TRANSFORMER WINDING TEMPS.

A Ø	72
B Ø	79
C Ø	32

Battery Charger AC Status ON DC Volts 135 DC Amps. 2.5

COMMENTS:

STATION: **NEILL DRIVE** DATE: 12-11-20

TECHNICIAN: SR START TIME: 0930 FINISH TIME: 1145

Upon Arrival: CHART 4.5 VERBATIM 4.84 PCU 4.4

ProcessMeter	0% **4ma**	25% **8ma**	50% **12ma**	75% **16ma**	100% **20ma**
TCU Level	0.0	3.6	7.0	11.1	14.8
Chart LEVEL	0.0	3.7	7.5	11.2	15.4
Verbatim Level	0.0	3.73	7.48	11.22	14.96
Isolator milliamps	7.85	7.87	11.84	15.83	19.84

VERBATIM ALARM TESTING

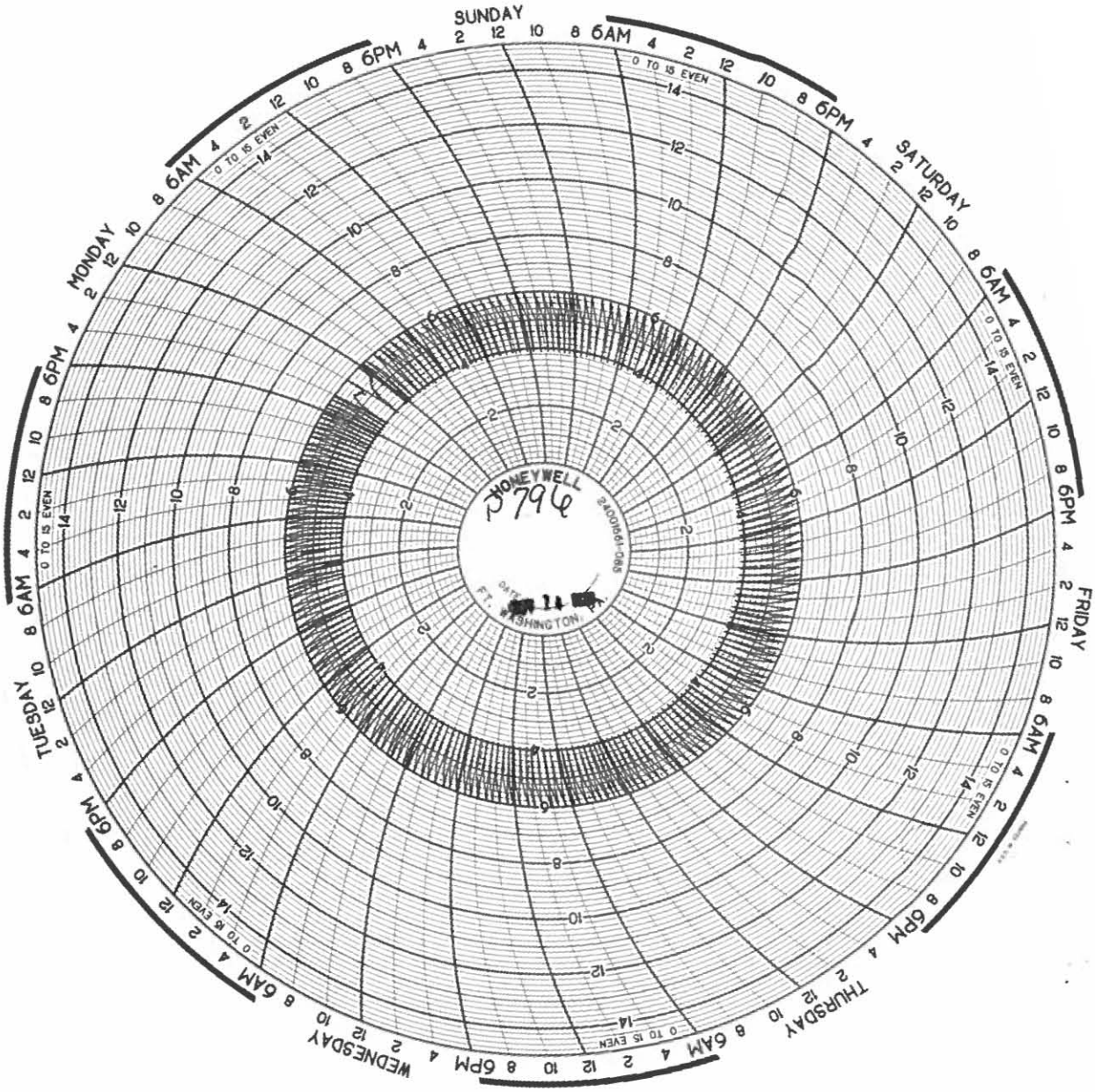
CH #	NORMAL CONDITION	AS FOUND (N/O,N/C)	ALARM TEST RESULTS
CH.4	N/O	n/o	OK
CH. 5	N/O	n/o	OK
CH.6	N/O	n/o	OK
CH. 7	N/O	n/o	OK
CH. 8	N/C	n/c	OK
CH. 10	N/C	n/c	STATUS
CH. 11	N/O	n/o	OK
CH. 12	N/O	n/o	OK
CH. 13	N/O	n/o	STATUS
CH. 14	N/C	n/c	STATUS
CH. 15	N/C	n/c	OK
CH. 16	N/C	n/c	OK
CH. 17			

Test Backup Pump Teardrop System

Teardrop PUMP On Level: —

Teardrop PUMP Off Level: —

POWER SUPPLY VOLTAGE 24.43 Vdc


SUNDAY
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
SATURDAY
6AM
6PM
0 TO 15 EVEN
HONEYWELL
5796
FT. WASHINGTON

Station PM Sheet Station 796 sign book? Y/N? Date 11-23-20 / 11-24-20

Time in- 7:30 Time out- 4:00 Mech 1 Greg Brown
Pumps I S 3 Pumps OOS? 0 Mech 2 Jaso Savenald

Pump Type	Submersible		Centrifugal		Other		Checked?
Pump Room	1	2	3	4	5	6	
Greased pump, ck oil	✓	✓	✓				✓
Greased Motor							✓
Noise,Heat,Vibr? Y/n	No	No	No				✓
Pump Pressure?	NA	NA	NA				✓
Packing- repack/ adj	NA	NA	NA				✓
seal water							✓
Discharge/ Ck valve	✓	✓	✓				✓
Suction valve	✓	✓	✓				✓
Rotovalve	✓	✓	✓				✓
Piping	✓	✓	✓				✓
Ventilator- Int ✓	Lube ✓		Belt	✓	Clean Screen(s)		✓
Ventilator- Disc.	Lube		Belt		Clean Screen(s)		✓
Hatch / Door/ Locks ✓	Clean trough		Lock-PM		Hinges		✓
Ladder/stairs/ rails ✓	Floor-clean ✓		windows		trash, debris		✓
sump pumps ✓	Piping, valves		sump clean? Y/N				✓
Wet Well							
Ventilator- Int ✓	Lube ✓		Belt	✓	Clean Screen(s)		✓
Ventilator- Disc. ✓	Lube		Belt		Clean Screen(s)		✓
Hatch / Door/ Locks ✓	Clean trough		Lock-PM		Hinges		✓
Ladder/stairs/ rails ✓	Floor-clean ✓		windows	✓	trash, debris	✓	✓
Dimmunuter ✓							
Screens- condition	Nrth/ primary ✓		South		Vactor needed?		
Rake drive: Chk, Lube	Nrth/ primary —		South		grit rmval nded?		
Cables- lube, adj	Nrth/ primary		South		Vermin?		
Brakes- chk, adj	Nrth/ primary		South				
Tracks- lube	Nrth/ primary		South				
Control Room							
Ventilator- Int	Lube ✓		Belt		Clean Screen(s)		✓
Ventilator- Disc.	Lube		Belt		Clean Screen(s)		
Hatch / Door/ Locks	Clean trough ✓		Lock-PM		Hinges		✓
Ladder/stairs/ rails	Floor-clean ✓		windows	✓	trash, debris		
sump pumps	Piping, valves		sump clean? Y/N				
Chart recorder	OK? Any unusual situations?						
Generator							
Test run	fuel 100%	oil ✓	coolant ✓	belts ✓	other		
Building/ grounds							
	Clean floors, windows and surfaces as applicable, pick up trash, in and around station						✓
~~Hypo~~ Pumps	calibration #1				#2		
tank, valves, piping							

All work listed above was done and all list items were checked as needed to complete this PM

GL

2019

MONTHLY FLOW CONTROL UNIT ELECTRICAL STATION PM

TIME 1PM WEATHER COOL, CLOUDY

STATION P-796 NAME LUDWIG/DIGP DATE 11/17/20

EQUIPMENT	T-1	T-2	T-3	Hours	Comments
PUMP #1	35.5	35.2	36.2	12129.4	
PUMP #2	35.0	33.9	36.2	13252.5	
PUMP #3	31.0	30.1	29.8	14043.4	
SUMP #1	GOOD				
SUMP #2	NOT	WORKING			
PUMP RM EXHAUST	1.4	1.3	1.3		
WET WELL EXHAUST	3.6	3.4			
WET WELL INTAKE	3.6	3.6			
LIGHTS	CONTROL GOOD	PUMP GOOD	WELL GOOD		
HEATER	9.0	8.8	8.9		
TVSS	?				

TAKE VOLTAGE READINGS	A » B	B » C	A » C
	483	482	484

LOCATION MCC #3

A » N	B » N	C » N
279	277	277

GENERATOR				
	BATTERY CHARGER CONDITION	GOOD	FUEL	FULL
	CHARGER OUTPUT VOLTS	26.52	OIL	FULL
	ALTERNATOR VOLTS	28.73	COOLANT	FULL
	GENERATOR OUTPUT VOLTS	480	HOURS	1379.0 1379.1

COMMENTS:

ONE SUMP PUMP NOT WORKING

STATION: P796 DATE: 11-4-20

TECHNICIAN: SC/RM START TIME: 1230 FINISH TIME: 1430

Upon Arrival: CHART 5.5 VERBATIM 5.53 PCU 5.6

ProcessMeter	0% 4ma	25% 8ma	50% 12ma	75% 16ma	100% 20ma
TCU Level	0.04	3.7	7.5	11.3	14.9
Chart LEVEL	0.04	3.7	7.5	11.2	15.0
Verbatim Level	0.000	3.75	7.50	11.25	15.00
Isolator Milliamp	4.01	7.98	11.95	15.94	19.93

VERBATIM ALARM TESTING

CH #	NORMAL CONDITION	AS FOUND (N/O,N/C)	ALARM TEST RESULTS
CH. 7			
CH. 8	N/C	N/C	OK
CH. 9	N/C	N/C	OK
CH. 10	N/O	N/O	STATUS
CH. 11	N/O	N/O	OK
CH. 12	N/O	N/O	OK
CH. 13			
CH. 14			
CH. 15	N/C	N/C	OK
CH. 16	STATUS	NO ALARM	STATUS
CH. 17			

Test Backup Pump Teardrop System

Teardrop PUMP On Level: 8.2

Teardrop PUMP Off Level: 4.3

POWER SUPPLY VOLTAGE 24.27 Vdc

Work Order No: 33317

CSO-I Field Service Report

MBE-5	5050 Grant Ave. Grant Ave. & James St.	19114	RTU# 1293186	Modem#	IP Address 166.241.237.078
Part Of:	Tidal / Solar / WWP		District Bensalem	System	Plat 102 / Computer Room 685-2031/2041
			Type Township	Equipment Sigma 980	Max 9 / Pipe Diam 24"

1	2	3	4	5 Level	6 Velocity	7 Flow
8	9	10	11	12	13	14

Description of Work | **Type Work:** P.M. | PM Last Done: 1/13/2021

PM

Assigned	Date	Arrived	Departed	
Godwin	2.9.2021	14:40	12:10	☑ Job Completed ☑ Site Operational

Techs Assisting: BG ☐ LF ☐ CSm ☐ HJ ☐ YM ☐ RJ ☐ ES ☐ SS ☑ LG ☑ RC ☐ PS ☐ EFg ☐ RB

☑ cleared grit from flume ~~6~~ "

Parameters

Pipe Size : 24"

Max Flow : 9 MGD

	Psychically Measured	From Sigma Meter	Sigma After Cleaning	Real Time
Level	3.75	3.6	3.6	_____
Calculate Flow / Flow	1.2	1.10	1.0	_____
Velocity	4.58	5.6	5.64	_____
Time	1140	1132	1142	_____

Post Cal. (if needed) : _____ Level _____ Flow _____ Inches Level Adjusted To

Comments

dessicant condition = 95 % good (blue)

Other Open Field Reports

Work Order No: 33317	Site Id: MBE5	Pipe Diameter (in): 24	Date: 2-9-2021

1. As Found Meter

Time: 11:33

Level (in): 3.6

Flow (MGD): 1.10

V_{avg} (fps): 5.6

Desiccant (%): 95

○ Replaced

2. As Found Physical

Time: 1140

Level (in): 3.75

Top Down ○ Bottom Up ✓

V_{avg} (fps): 4.58

3. Cleaning

Grit Depth Estimate (in): 0

Grit Cleared:

○ Light ○ Medium ○ Heavy

4. Post Cleaning Meter

Time: 1142

Level (in): 3.8

Flow (MGD): 1.0

V_{avg} (fps): 5.64

Adjustment Needed? Yes ○ No ✓

If No Adjustment Skip 5&6

5. Adjustment

Time: _____

Level Adjusted

From: _____

To: _____

6. Post Adjustment Check

Time: _____

Meter Level (in): _____

Physical Level (in): _____

7. Additional Actions

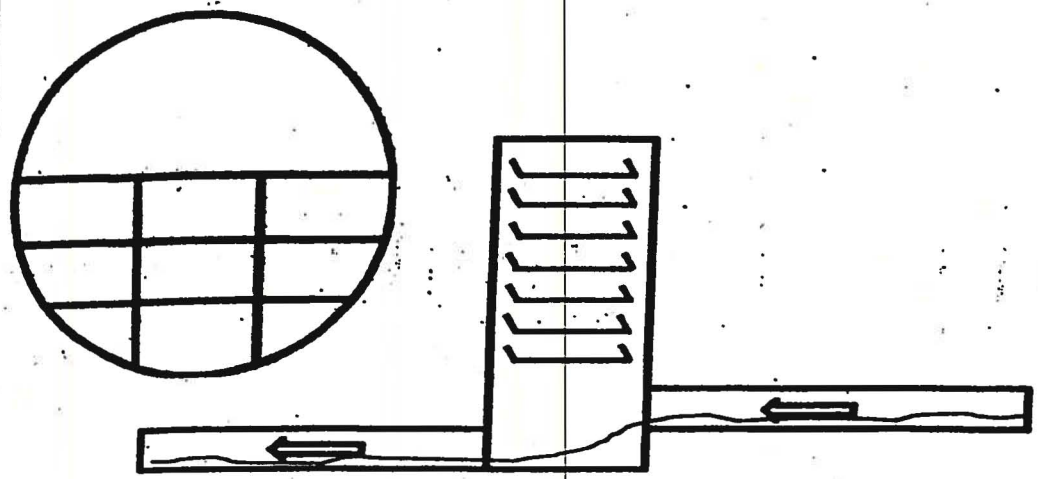
Sensor Calibration ○ Meter Reprogram ○

A/V Sensor Replacement ○ Other ○

Wafer Sensor Replacement ○

Ultrasonic Sensor Replacement ○

8. Sensor Diagram: Indicate sensor location



9. Comments

Work Order No: 33151

CSO-I Field Service Report

6 **S-18**	Pine St. W of Taney St.	19146	RTU# 132499	Modem#		IP Address 166.241.237.065
Part Of:	Tidal / Solar / WWP		District Southwest	System CSES	Plat 25	Computer Room 685-2031/2041
			Type Monitored	Equipment Ametek	Max	Pipe Diam 7' 6"x6
			OFFSETS: swl: 0.5";			

1 TRL	2 SWL	3	4	5	6	7
8	9	10	11	12	13	14

Description of Work

Type Work: P.M.

PM Last Done: 3/13/2020

PM

Assigned	Date	Arrived	Departed	
ES.	1-5-21	9:10	9:30	☑ *Job Completed*
				☑ *Site Operational*

Techs Assisting: BG ☐ LF ☑ CSm ☐ HJ ☑ YM ☐ RJ ☑ ES ☐ SS ☐ LG ☐ RC ☑ RS ☐ EFg ☐

Work Performed

	Inches (measured)	Inches (real-time)	mA	Time	Sensor Serial #
TRL	5"	5.5	4.52	9:20	
SWL	54"	53.1	10.48	9:20	
DWL					
INL					

Comments

Other Open Field Reports

Work Order No: 33275

CSO-I Field Service Report

RG-27	Northeast Airport	RTU# 25180183	Modem#	IP Address
Part Of:	Tidal / Solar / WWP	District	System / Plat	Computer Room 685-2031/2041

john brewer, asst. sup't: 215-937-7968

Type	Equipment	Max	Pipe Diam
Rain Monitor	Rain Bucket	0	

1 Tips	2	3	4	5	6	7
8	9	10	11	12	13	14

Description of Work | **Type Work:** P.M. | PM Last Done: 1/22/2020

PM

Assigned	Date	Arrived	Departed	
ES	1-29-21	~~10:30~~	~~12:30~~	☑ Job Completed ☐ Site Operational

Techs Assisting: BG ☐ LF ☐ CSm ☐ HJ ☐ YM ☐ RJ ☑ ES ☐ SS ☐ LG ☐ RC ☐ PS ☐ EFg ☐

Work Performed

Number of Tips: 35

Tipping Duration: 25 mins.

Comments

Other Open Field Reports	

Z540.1

FLUKE®

Certificate of Calibration

Beaverton Service Center

Certificate Number:	BVL644443		
Data Type:	Found-Left	**Calibration Date:**	28-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	28-Jul-2020
Model:	87	**Temperature:**	21.2 °C
Serial Number:	60730324	**Humidity:**	62.3 %
Description:	Multimeter		
Procedure:	Fluke 87 ACAL/ZCAL Ver /5520	**Revision:**	1.0
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003675

This calibration is traceable to the International System of Units (SI), through National Metrology Institutes (NIST, PTB, NRC, NPL, etc.), ratiometric techniques, or natural physical constants. This certificate applies only to the item identified and shall not be reproduced other than in full, without the specific written approval by Fluke Corporation. Calibration certificates without signature are not valid. The calibration has been completed in accordance with Fluke Electronics Corporation Quality System Document 111.0 Revision 124 and/or Fluke 17025 Quality Manual QSD 111.41 Revision 007.

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- Found-Left Calibration data collected without any adjustment and / or repair performed.

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Results are reviewed to establish where any measurement results exceeded the manufacturer's specifications.

Measurement results greater than limits of error are indicated by '!'.

Z540-1:1994 FLUKE

Cert # : BVL644443
Cal Date: 28-Jul-2020

S/N : 60730324

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Cert # : BVL644443
Date: 7/28/2020

PATRICIA LYNCH
Issued By

Certificate Number: BVL644443 **Date of Calibration:** 28-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
16534	Fluke 5522A Calibrator	11-Nov-2019	11-Nov-2020

Z540.1

FLUKE®

Certificate of Calibration

Beaverton Service Center

Certificate Number:	BVL644537		
Data Type:	Found-Left	**Calibration Date:**	28-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	28-Jul-2020
Model:	177	**Temperature:**	21.1 °C
Serial Number:	10500313	**Humidity:**	60.8 %
Description:	Multimeter		
Procedure:	Fluke 177: (1 year) ZCAL/ACAL VER/5520A	**Revision:**	20190423
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003675

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Z540-1:1994 FLUKE®

Cert # : BVL644537
Cal Date: 28-Jul-2020

S/N : 10500313

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Cert # : BVL644537
Date: 7/28/2020

PATRICIA LYNCH
Issued By

Certificate Number: BVL644537 **Date of Calibration:** 28-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
16534	Fluke 5522A Calibrator	11-Nov-2019	11-Nov-2020

Z540.1

FLUKE®

Certificate of Calibration

Beaverton Service Center

Certificate Number:	BVL644823		
Data Type:	Found-Left	**Calibration Date:**	29-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	29-Jul-2020
Model:	375	**Temperature:**	21.2 °C
Serial Number:	31750085WS	**Humidity:**	48.3 %
Description:	Clamp Meter		

Procedure:	Fluke 375 Clamp Meter:(1 year)ZCAL /5520/COIL	**Revision:**	2.2

Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003675

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Z540-1:1994 FLUKE®

Cert # : BVL644823
Cal Date: 29-Jul-2020

S/N : 31750085WS
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Cert # : BVL644823
Date: 7/29/2020

STEVEN BUHLER
Issued By

Certificate Number: BVL644823 **Date of Calibration:** 29-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
18023	Fluke 5500A/COIL 50 Turn Coil	13-Jun-2018	13-Jun-2023
15615	Fluke 5522A Calibrator	14-Jan-2020	14-Oct-2020

Z540.1

FLUKE®

Certificate of Calibration

Beaverton Service Center

Certificate Number:	BVL645073		
Data Type:	Found-Left	**Calibration Date:**	30-Jul-2020
Result Summary:	In Tolerance	**Calibration Due:**	30-Jul-2020
Manufacturer:	Fluke	**Certificate Date:**	30-Jul-2020
Model:	376 FC	**Temperature:**	21.2 °C
Serial Number:	47235195SV	**Humidity:**	51.5 %
Description:	TRMS Clamp Meter		
Procedure:	Fluke 376FC: ZCAL/5520A	**Revision:**	20170927
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	54102	**RMA:**	32003675

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Z540-1:1994 FLUKE®

Cert # : BVL645073
Cal Date: 30-Jul-2020
Due Date: 30-Jul-2020
S/N : 47235195SV
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Cert # : BVL645073
Date: 30-Jul-2020
Due: 30-Jul-2020
www.fluke.com

STEVEN BUHLER
Issued By

Certificate Number: BVL645073 **Date of Calibration:** 30-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
18023	Fluke 5500A/COIL 50 Turn Coil	13-Jun-2018	13-Jun-2023
15615	Fluke 5522A Calibrator	14-Jan-2020	14-Oct-2020

Z540.1

FLUKE.

Certificate of Calibration

Everett Service Center

Certificate Number:	EVL642935		
Data Type:	As-Found	**Calibration Date:**	21-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	21-Jul-2020
Model:	713 100G	**Temperature:**	24.6 °C
Serial Number:	6955042	**Humidity:**	30.3 %
Description:	Pressure Calibrator		
Procedure:	Fluke 713: (1 year) ZCAL VER /7250xi/5500A	**Revision:**	1.2
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003674

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Measurement results greater than limits of error are indicated by '!'.

BRAD STEWART
Issued By

Certificate Number: EVL642959 **Date of Calibration:** 21-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
13605	Fluke 5500A Calibrator	04-Feb-2020	04-Aug-2020
18543	Fluke 7250XI Pressure Controller / Calibrator	11-May-2020	11-Aug-2020

Z540.1

FLUKE®

Certificate of Calibration

Everett Service Center

Certificate Number:	EVL642959		
Data Type:	As-Left	**Calibration Date:**	21-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	21-Jul-2020
Model:	713 100G	**Temperature:**	24.5 °C
Serial Number:	6955042	**Humidity:**	29.5 %
Description:	Pressure Calibrator		
Procedure:	Fluke 713: (1 year) ZCAL VER /7250xi/5500A	**Revision:**	1.2
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003674

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Z540-1:1994 FLUKE

Cert # : EVL642959
Cal Date: 21-Jul-2020

S/N : 6955042
www.fluke.com

www.fluke.com

Cert # : EVL642959
Date: 7/21/2020

BRAD STEWART
Issued By

Z540.1

FLUKE®

Certificate of Calibration

Everett Service Center

Certificate Number:	EVL642959		
Data Type:	As-Left	**Calibration Date:**	21-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	21-Jul-2020
Model:	713 100G	**Temperature:**	24.5 °C
Serial Number:	6955042	**Humidity:**	29.5 %
Description:	Pressure Calibrator		
Procedure:	Fluke 713: (1 year) ZCAL VER /7250xi/5500A	**Revision:**	1.2
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003674

This calibration is traceable to the International System of Units (SI), through National Metrology Institutes (NIST, PTB, NRC, NPL, etc.), ratiometric techniques, or natural physical constants. This certificate applies only to the item identified and shall not be reproduced other than in full, without the specific written approval by Fluke Corporation. Calibration certificates without signature are not valid. The calibration has been completed in accordance with Fluke Electronics Corporation Quality System Document 111.0 Revision 124 and/or Fluke 17025 Quality Manual QSD 111.41 Revision 007.

The Data Type found in this certificate must be interpreted as:

- As - Found Calibration data collected before the unit is adjusted and / or repaired.
- As - Left Calibration data collected after the unit has been adjusted and / or repaired.
- Found-Left Calibration data collected without any adjustment and / or repair performed.

This calibration conforms to the requirements of ANSI/NCSL Z540-1-1994 (R2002).

In the attached measurement results, deviation may be expressed with units, Measured Value (MV) - Nominal Value (NV) or as a proportion of the nominal value ((MV-NV)/NV), expressed without units with a scalar multiplier such as % (0.01), or as a ratio of the units (mA/A, µV/V, etc.) Descriptions such as µA/A, µV/V, and others, where used to annotate results or column headings are the preferred replacements for what was historically labeled as "ppm" or parts-per-million and described the results in that column, unless otherwise noted by units symbols.

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Where applicable, the Test Uncertainty Ratio (TUR) is provided in the following pages. Unless otherwise stated, the TUR for a given measurement result is 4:1 or greater.

Results are reviewed to establish where any measurement results exceeded the manufacturer's specifications.

Measurement results greater than limits of error are indicated by '!'.

Z540-1:1994 FLUKE

Cert # : EVL642959
Cal Date: 21-Jul-2020

S/N : 6955042

www.fluke.com

www.fluke.com

Cert # : EVL642959
Date: 7/21/2020

BRAD STEWART
Issued By

Fluke Corporation	Telephone	Facsimile	Internet	Revision 2.18
1420 75th St SW, Everett WA 98203 USA	888.993.5853	425.446.6390	www.fluke.com	

Z540.1

FLUKE.

Certificate of Calibration

Everett Service Center

Certificate Number:	EVL642935		
Data Type:	As-Found	**Calibration Date:**	21-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	21-Jul-2020
Model:	713 100G	**Temperature:**	24.6 °C
Serial Number:	6955042	**Humidity:**	30.3 %
Description:	Pressure Calibrator		
Procedure:	Fluke 713: (1 year) ZCAL VER /7250xi/5500A	**Revision:**	1.2
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003674

This calibration is traceable to the International System of Units (SI), through National Metrology Institutes (NIST, PTB, NRC, NPL, etc.), ratiometric techniques, or natural physical constants. This certificate applies only to the item identified and shall not be reproduced other than in full, without the specific written approval by Fluke Corporation. Calibration certificates without signature are not valid. The calibration has been completed in accordance with Fluke Electronics Corporation Quality System Document 111.0 Revision 124 and/or Fluke 17025 Quality Manual QSD 111.41 Revision 007.

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- As - Found Calibration data collected before the unit is adjusted and / or repaired.
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Measurement results greater than limits of error are indicated by '!'.

BRAD STEWART
Issued By

Z540.1

FLUKE®

Certificate of Calibration

Beaverton Service Center

Certificate Number:	BVL644533		
Data Type:	Found-Left	**Calibration Date:**	28-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	28-Jul-2020
Model:	771	**Temperature:**	21.1 °C
Serial Number:	17280063	**Humidity:**	60.8 %
Description:	Clamp Meter		
Procedure:	Fluke 771:(1 year) ZCAL VER/ 5520	**Revision:**	1.1
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003675

This calibration is traceable to the International System of Units (SI), through National Metrology Institutes (NIST, PTB, NRC, NPL, etc.), ratiometric techniques, or natural physical constants. This certificate applies only to the item identified and shall not be reproduced other than in full, without the specific written approval by Fluke Corporation. Calibration certificates without signature are not valid. The calibration has been completed in accordance with Fluke Electronics Corporation Quality System Document 111.0 Revision 124 and/or Fluke 17025 Quality Manual QSD 111.41 Revision 007.

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This calibration conforms to the requirements of ANSI/NCSL Z540-1-1994 (R2002).

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Measurement results greater than limits of error are indicated by '!'.

Z540-1:1994 FLUKE®

Cert # : BVL644533
Cal Date: 28-Jul-2020

S/N : 17280063
www.fluke.com

www.fluke.com

Cert # : BVL644533
Date: 7/28/2020

MICHAEL GRIFFITHS
Issued By

Certificate Number: BVL644533 **Date of Calibration:** 28-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
15615	Fluke 5522A Calibrator	14-Jan-2020	14-Oct-2020

Z540.1

FLUKE.

Certificate of Calibration

Everett Service Center

Certificate Number:	EVL642886		
Data Type:	As-Found	**Calibration Date:**	21-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	21-Jul-2020
Model:	810	**Temperature:**	23.0 °C
Serial Number:	1273008	**Humidity:**	40.0 %
Description:	Vibration Tester		
Procedure:	Fluke 810 CAL VER 5520A	**Revision:**	20191017
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003674

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Measurement results greater than limits of error are indicated by '!'.

Comments:

OUTDATED FIRMWARE OF 3.0.0

VIRGINIA KAMINSKI
Issued By

Certificate Number: EVL642886 **Date of Calibration:** 21-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
13603	Fluke 5520A Calibrator	30-Jan-2020	30-Jan-2021

Z540.1

FLUKE®

Certificate of Calibration

Everett Service Center

Certificate Number:	EVL642887		
Data Type:	As-Left	**Calibration Date:**	21-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	21-Jul-2020
Model:	810	**Temperature:**	23.0 °C
Serial Number:	1273008	**Humidity:**	40.0 %
Description:	Vibration Tester		
Procedure:	Fluke 810 CAL VER 5520A	**Revision:**	20191017
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003674

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Comments:

UPDATED FIRMWARE TO 3.5.0

Z540-1:1994 FLUKE®

Cert # : EVL642887
Cal Date: 21-Jul-2020

S/N : 1273008
www.fluke.com

www.fluke.com

Cert # : EVL642887
Date: 7/21/2020

VIRGINIA KAMINSKI
Issued By

Certificate Number: EVL642887 **Date of Calibration:** 21-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
13603	Fluke 5520A Calibrator	30-Jan-2020	30-Jan-2021

Z540.1

FLUKE.

Certificate of Calibration

Everett Service Center

Certificate Number:	EVL643168		
Data Type:	As-Found	**Calibration Date:**	22-Jul-2020
Result Summary:	Out of Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	22-Jul-2020
Model:	T5-600	**Temperature:**	22.2 °C
Serial Number:	25801382	**Humidity:**	41.2 %
Description:	Electrical Tester		
Procedure:	Fluke T5-600: (1 year) CAL VER	**Revision:**	2.1
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003674

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Measurement results greater than limits of error are indicated by '!'.

ROBERT LEVER
Issued By

Certificate Number: EVL643168 **Date of Calibration:** 22-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
10419	Fluke 5520A Calibrator	18-Sep-2019	18-Sep-2020
J704	Fluke T5-TEST COIL Test Fixture	01-Jun-2016	01-Jun-2021

Z540.1

FLUKE®

Certificate of Calibration

Everett Service Center

Certificate Number:	EVL643312		
Data Type:	As-Left	**Calibration Date:**	22-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	22-Jul-2020
Model:	T5-600	**Temperature:**	22.4 °C
Serial Number:	25801382	**Humidity:**	43.2 %
Description:	Electrical Tester		
Procedure:	Fluke T5-600: (1 year) CAL VER	**Revision:**	2.1
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003674

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Comments:

NEW CABLE ASSEMBLY

Z540-1:1994 FLUKE.

Cert # : EVL643312
Cal Date: 22-Jul-2020

S/N : 25801382
www.fluke.com

www.fluke.com

Cert # : EVL643312
Date: 7/22/2020

ROBERT LEVER
Issued By

Certificate Number: EVL643312 **Date of Calibration:** 22-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
14827	Fluke 5520A Calibrator	30-Jul-2019	30-Jul-2020
10102	Fluke T5-TEST COIL Test Fixture	10-Aug-2017	10-Aug-2022

Z540.1

FLUKE.

Certificate of Calibration

Everett Service Center

Certificate Number:	EVL643182		
Data Type:	As-Found	**Calibration Date:**	22-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	22-Jul-2020
Model:	T5-1000	**Temperature:**	22.0 °C
Serial Number:	21460718	**Humidity:**	41.0 %
Description:	Electrical Tester		
Procedure:	Fluke T5-1000: (1 year) CAL VER	**Revision:**	2.1
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003674

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Measurement results greater than limits of error are indicated by 'I'.

ROBERT LEVER
Issued By

FLUKE.

Certificate Number: EVL643182 **Date of Calibration:** 22-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
10419	Fluke 5520A Calibrator	18-Sep-2019	18-Sep-2020
J704	Fluke T5-TEST COIL Test Fixture	01-Jun-2016	01-Jun-2021

Z540.1

FLUKE®

Certificate of Calibration

Everett Service Center

Certificate Number:	EVL643373		
Data Type:	As-Left	**Calibration Date:**	22-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	22-Jul-2020
Model:	T5-1000	**Temperature:**	21.6 °C
Serial Number:	21460718	**Humidity:**	38.9 %
Description:	Electrical Tester		
Procedure:	Fluke T5-1000: (1 year) CAL VER	**Revision:**	2.1
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003674

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Measurement results greater than limits of error are indicated by '!'.

Z540-1:1994 FLUKE.

Cert # : EVL643373
Cal Date: 22-Jul-2020

S/N : 21460718

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Cert # : EVL643373
Date: 7/22/2020

EARL VANN
Issued By

Certificate Number: EVL643373 **Date of Calibration:** 22-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
14827	Fluke 5520A Calibrator	30-Jul-2019	30-Jul-2020
10102	Fluke T5-TEST COIL Test Fixture	10-Aug-2017	10-Aug-2022

Z540.1

FLUKE.

Certificate of Calibration

Everett Service Center

Certificate Number: EVL643462

Data Type:	As-Found	**Calibration Date:**	23-Jul-2020
Result Summary:	Operational Failure		
Manufacturer:	Fluke	**Certificate Date:**	23-Jul-2020
Model:	T6-1000	**Temperature:**	24.5 °C
Serial Number:	47590173	**Humidity:**	34.3 %
Description:	Electrical Tester		

Procedure:	Fluke T6-600/1000: (1 year) ZCAL VER 5520A	**Revision:**	1.1
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003674

This calibration is traceable to the International System of Units (SI), through National Metrology Institutes (NIST, PTB, NRC, NPL, etc.), ratiometric techniques, or natural physical constants. This certificate applies only to the item identified and shall not be reproduced other than in full, without the specific written approval by Fluke Corporation. Calibration certificates without signature are not valid. The calibration has been completed in accordance with Fluke Electronics Corporation Quality System Document 111.0 Revision 124 and/or Fluke 17025 Quality Manual QSD 111.41 Revision 007.

The Data Type found in this certificate must be interpreted as:

- As - Found Calibration data collected before the unit is adjusted and / or repaired.
- As - Left Calibration data collected after the unit has been adjusted and / or repaired.
- Found-Left Calibration data collected without any adjustment and / or repair performed.

This calibration conforms to the requirements of ANSI/NCSL Z540-1-1994 (R2002).

In the attached measurement results, deviation may be expressed with units, Measured Value (MV) - Nominal Value (NV) or as a proportion of the nominal value ((MV-NV)/NV), expressed without units with a scalar multiplier such as % (0.01), or as a ratio of the units (mA/A, µV/V, etc.) Descriptions such as µA/A, µV/V, and others, where used to annotate results or column headings are the preferred replacements for what was historically labeled as "ppm" or parts-per-million and described the results in that column, unless otherwise noted by units symbols.

Where applicable, the expanded uncertainty of measurement at the time of test is given in the following pages. They are calculated in accordance with the method described in the ISO Guide to the Expression of Uncertainty in Measurement (GUM). The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k, such that the confidence level approximates 95%.

Where applicable, the Test Uncertainty Ratio (TUR) is provided in the following pages. Unless otherwise stated, the TUR for a given measurement result is 4:1 or greater.

Results are reviewed to establish where any measurement results exceeded the manufacturer's specifications.

Measurement results greater than limits of error are indicated by 'I'.

Comments:

UNIT CANNOT BE POWERED ON

Thien Bao Trinh

THIEN TRINH
Issued By

Standards Used

Asset	Description	Cal-Date	Cal-Due
15268	Fluke 5520A Calibrator	13-Mar-2020	13-Dec-2020
16405	Fluke 8846A Precision Multimeter	28-Jan-2020	28-Jan-2021

Certificate Number: EVL643462 **Date of Calibration:** 23-Jul-2020

Calibration Data

Parameter	Nominal Value	Measurement Result	Limits of Error Lower Limit	Limits of Error Upper Limit	Test Uncertainty Ratio (TUR)
BATTERY DOOR CIRCUIT					
Ground Contact @ 60Hz		Pass			
Ground Contact @ 1kHz		Pass			
LOW BATTERY INDICATOR					

Z540.1

FLUKE®

Certificate of Calibration

Everett Service Center

Certificate Number:	EVL644123		
Data Type:	Found-Left	**Calibration Date:**	27-Jul-2020
Result Summary:	In Tolerance		
Manufacturer:	Fluke	**Certificate Date:**	27-Jul-2020
Model:	T6-1000	**Temperature:**	23.9 °C
Serial Number:	49540008	**Humidity:**	35.1 %
Description:	Electrical Tester		
Procedure:	Fluke T6-600/1000: (1 year) ZCAL VER 5520A	**Revision:**	1.1
Customer:	PHILADELPHIA WATER DEPARTMENT		
City:	PHILADELPHIA	**Country:**	US
State:	PA		
Purchase Order:	854102	**RMA:**	32003674

This calibration is traceable to the International System of Units (SI), through National Metrology Institutes (NIST, PTB, NRC, NPL, etc.), ratiometric techniques, or natural physical constants. This certificate applies only to the item identified and shall not be reproduced other than in full, without the specific written approval by Fluke Corporation. Calibration certificates without signature are not valid. The calibration has been completed in accordance with Fluke Electronics Corporation Quality System Document 111.0 Revision 124 and/or Fluke 17025 Quality Manual QSD 111.41 Revision 007.

The Data Type found in this certificate must be interpreted as:

- As - Found Calibration data collected before the unit is adjusted and / or repaired.
- As - Left Calibration data collected after the unit has been adjusted and / or repaired.
- Found-Left Calibration data collected without any adjustment and / or repair performed.

This calibration conforms to the requirements of ANSI/NCSL Z540-1-1994 (R2002).

In the attached measurement results, deviation may be expressed with units, Measured Value (MV) - Nominal Value (NV) or as a proportion of the nominal value ((MV-NV)/NV), expressed without units with a scalar multiplier such as % (0.01), or as a ratio of the units (mA/A, µV/V, etc.) Descriptions such as µA/A, µV/V, and others, where used to annotate results or column headings are the preferred replacements for what was historically labeled as "ppm" or parts-per-million and described the results in that column, unless otherwise noted by units symbols.

Where applicable, the expanded uncertainty of measurement at the time of test is given in the following pages. They are calculated in accordance with the method described in the ISO Guide to the Expression of Uncertainty in Measurement (GUM). The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k, such that the confidence level approximates 95%.

Where applicable, the Test Uncertainty Ratio (TUR) is provided in the following pages. Unless otherwise stated, the TUR for a given measurement result is 4:1 or greater.

Results are reviewed to establish where any measurement results exceeded the manufacturer's specifications.

Measurement results greater than limits of error are indicated by '!'.

Z540-1:1994 FLUKE.

Cert # : EVL644123
Cal Date: 27-Jul-2020

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Cert # : EVL644123
Date: 7/27/2020

Thien Bao Trinh
THIEN TRINH
Issued By

Certificate Number: EVL644123 **Date of Calibration:** 27-Jul-2020

Standards Used

Asset	Description	Cal-Date	Cal-Due
15268	Fluke 5520A Calibrator	13-Mar-2020	13-Dec-2020
16405	Fluke 8846A Precision Multimeter	28-Jan-2020	28-Jan-2021

Section A.7.1

Sanitary Sewage Pump Station Evaluation Summary

PWD owns and operates thirteen (13) sanitary sewer pump stations that convey sewage from low lying areas into gravity sewers for collection and treatment at one of three (3) water pollution control plants. The summary results of the pumping station firm capacity evaluations performed for calendar year 2020 are summarized in tables A.7.1.1 and A.7.1.2. Complete details for each of the pump station's firm capacity analysis are included in each of the individual Treatment Plant's MWLM Reports.

PWD's pump station control philosophy is to alternate all available pumps into the lead start sequence and to operate the lag pumps at the lowest possible range to help prevent septic conditions, solids accumulation and to allow for maximum storage above the control range in the event of a pump failure. This last condition gives the Department additional time to respond to any problems before reaching the discharge level. With this control scenario in place it is inevitable that lag pump(s) will turn on for short periods even though the lead pump would handle the inflow if allowed to utilize the full well storage capacity and head.

In discussions with Pennsylvania DEP in 2009, PWD agreed to evaluate each pump station by developing pump station system curves based on observed conditions. With these curves, actual station capacity (excluding the capacity of the backup pump) can be determined, during peak flow conditions. Electronic monitors record pump on/off signals and wet well levels which are used as the primary data sources for this method. A manufacturer's pump curve and the wet well geometry are also used in the calculations.

Rehabilitations involving pump, valve and piping replacements were completed at Belfry Drive, PNBC 603 and PNBC 648 pump stations during 2020. While undergoing rehabilitation, these stations were on bypass pumping and PWD was unable to monitor inflows.

Pump station capacity (n-1) was greater than the ***average*** of the top 5 wet weather hourly inflows, for all residential sanitary stations in 2020. At three of these stations: Lockart Street, Ford Road, & Neill Drive, the maximum wet weather hourly inflow exceeded station capacity (n-1) during tropical storm Isaias. This was an extreme wet weather event which had a return period of over 100 years for certain regions of the city. Detailed descriptions of pump station operations during this event are located in sections: A.7.2.2 Lockart Street Pump Station, A.7.4.2 Ford Road Pump Station and A.7.4.4 Neill Drive Pump Station.

The 2-year projected flows for all nine (9) residential sanitary sewage pump stations are not significantly changed from the current average annual and peak flow estimates.

Four (4) stations located in non-residential areas have rapidly varying inflow rates due to the industrial/commercial nature of the upstream contributors. This factor prevented PWD from being able to produce an accurate system operating curve for these stations. For these stations in 2020, peak operating wet well levels were recorded and compared to overflow elevations. Table A.7.1.2 summarizes the non-residential pump station performance during 2020.

Table A.7.1.1 Residential Pump Station Capacity Analysis 2020

				Present Flows			Projected Flows	
Pump Station Name	**Number of Pumps**	**Water Pollution Control Plant**	**Hydraulic Design Capacity (*excluding capacity of backup pump*) (gpm)**	**Annual Average Inflow (gpm)**	**Peak * Hourly Inflow (gpm)**	**Peaking Factor**	**2-Year Projected Average Annual Inflow (gpm)**	**2-Year Projected Peak Hourly Inflow (gpm)**
Bank Street	2	SE	195	4	135	34	4	135
Belfry Drive	2	SW	320	10	75	8	10	75
Ford Road	2	SW	970	200	875	4	200	875
Linden Avenue	2	NE	2635	90	800	9	90	800
Lockart Street	2	NE	925	144	880	6	144	880
Milnor Street	3	NE	1385	9	575	64	9	575
Neill Drive	3	SW	3465	547	2660	5	547	2660
Rennard Street	2	NE	565	35	205	6	35	205
Spring Lane	2	SW	135	11	35	3	11	35

** Peak Hourly Inflow is the average peak hourly inflow for the five (5) events with the largest peak hourly inflow rates during 2020*

Table A.7.1.2 Non-residential Pump Station Capacity Analysis 2020

Pump Station Name	Number of Pumps	Water Pollution Control Plant	Number of Events with All Pumps Running +	Peak Wet-Well Level All Pumps Running (inches)	Date of Peak Wet-Well Level with All Pumps Running	Reserve Pump Activation Level (inches)	Wet-Well Overflow Level (inches)
PNBC 796	2	SE	**2**	102	8/4/2020 (Hurricane Isaias)	84	177
PNBC 648	2	SE	**0**	NA	NA	80	312
PNBC 603	3*	SE	**0**	NA	NA	97	192
Hog Island	2	SW	**0**	NA	NA	66	168

+ *Number of events with all pumps running due to inflows exceeding the capacity of the station with one pump out of service while operating in the normal wet well operating level range*

**There are 4 total pumps at PNBC 603 but only 3 will run simultaneously during normal operation as one is an alternate*

A.7.2.1 Linden Avenue Pump Station

Pump Station Information	
Pump Station Name:	Linden Ave Pump Station
Pump Station Number:	PS-07
Contributing Area:	52 Acres
Time Frame Data Used for Analysis:	January 1, 2020 to December 31, 2020
Treatment Plant	NE WPCP
Raingage:	RG-04
Average Daily Dry Weather Flow:	90 gpm
Number of Pumps:	2
Firm Pump Station Capacity*:	2,635 gpm

*Firm capacity is the maximum discharge at overflow level with one pump out of service

Pump Station Summary

Located in the Northeast section of the city on Linden Avenue, this below grade lift station handles the domestic wastewater from a residential area of approximately 52 acres (see Figure A.7.2.1.1). The pumps are controlled by the wet well water levels shown in Table A.7.2.1.1. The overflow elevation is based on the rim elevation of the manhole located over the pump station wet well.

Figure A.7.2.1.1 Linden Avenue Pump Station Service Area

Table A.7.2.1.1 Linden Avenue Pump Station Pump Control Levels

Alarm Low Level (ft)	All Pumps Off (ft)	1st Pump On (ft)	2nd Pump On (ft)	3rd Pump On (ft)	Alarm High Level (ft)	Overflow Level (ft)
1.5	2.64	4.64	5.64	N/A	6	32

Pump Station Performance

Pump station system curves and pump performance curves are used to estimate the relationship between the wet well level and station discharge capacity as are shown in the operating curves in Figures A.7.2.1.2 and A.7.2.1.3. These curves have been updated with current data for 2020 The relationships show that as the number of pumps in operation is increased from one to two pumps the total capacity of the pump station does not double from the capacity of only one pump. This is caused by the increase in dynamic head losses within the force main with increasing discharge rate. With one pump out of service the pump station operating curve in Figure A.7.2.1.2 shows that the maximum discharge is approximately 2,635 gpm when the wet well is at the overflow level. This is the firm capacity of the pump station. When two pumps are running at this station Figure A.7.2.1.3 shows that the maximum total discharge of those two pumps combined is approximately 4,530 gpm when the wet well is at the overflow level.

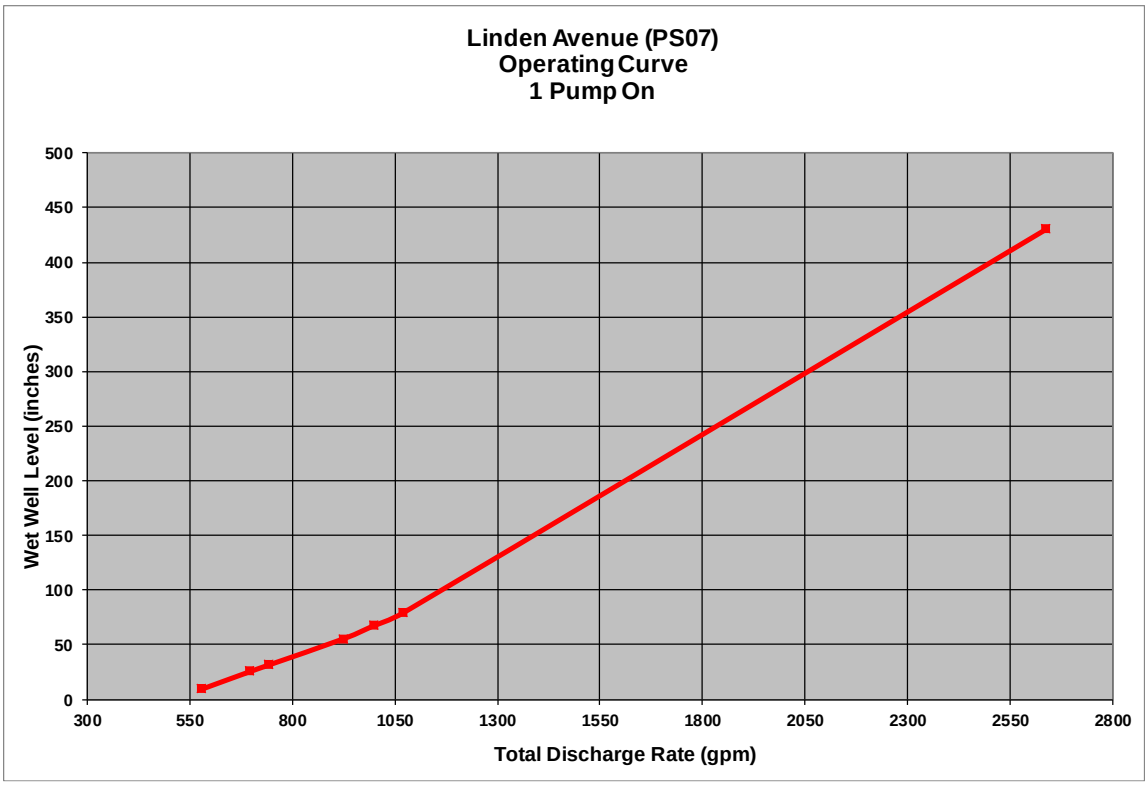


Figure A.7.2.1.2 Linden Avenue Pump Station Operating Curve with One Pump On

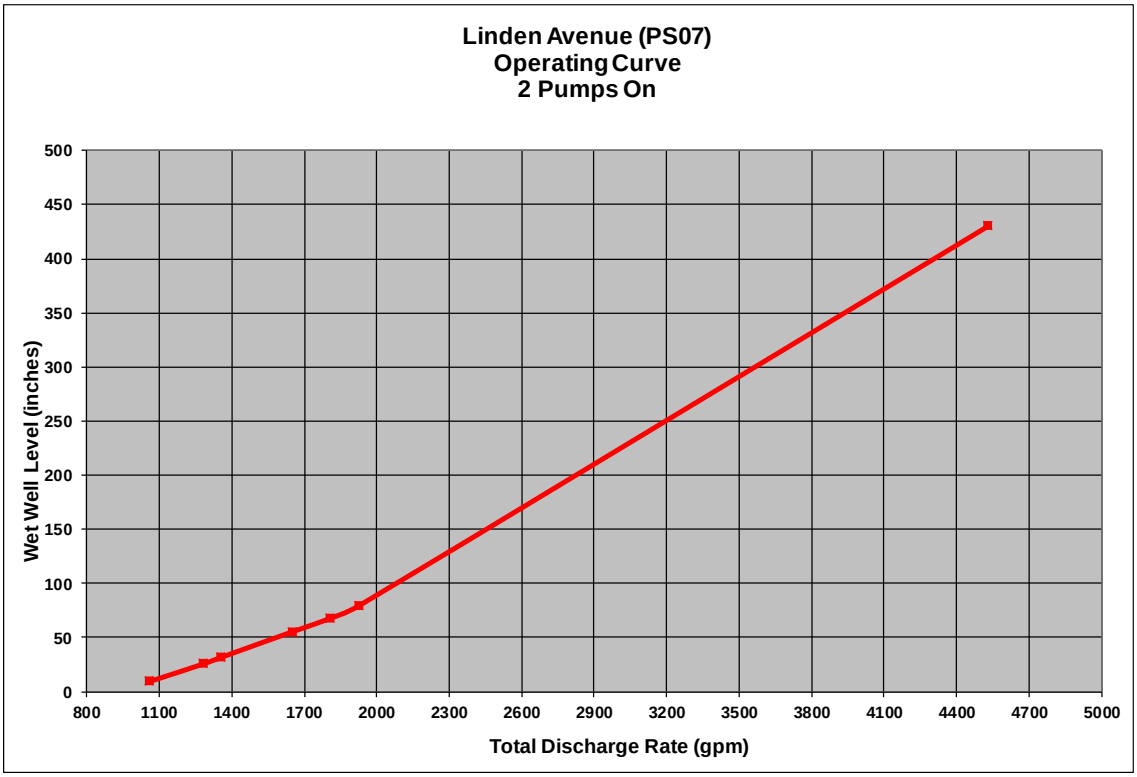


Figure A.7.2.1.3 Linden Avenue Pump Station Operating Curve with Two Pumps On

Wet-Weather Inflows

Flow separation and rainfall dependent inflow and infiltration (RDII) analyses have been performed using EPA SSOAP application software. The five events for calendar year 2020 with the largest peak hourly inflow rates are identified and summarized in Table A.7.2.2.

Table A.7.2.1.2 Linden Avenue Pump Station Peak Wet-Weather Inflow Summary

Year	Start Date	End Date	RG-04 Total Rainfall (inches)	RG-04 Peak Rainfall (inches/15-min)	Peak Hourly Inflow (gpm)
2020	7/10/20 8:00	7/10/20 21:15	3.09	0.46	1065
2020	7/6/20 10:45	7/6/20 19:30	2.76	0.71	890
2020	12/24/20 19:00	12/25/20 17:30	1.16	0.17	795
2020	1/25/20 7:00	1/25/20 20:45	1.88	0.20	685
2020	7/24/20 12:45	7/24/20 19:15	0.98	0.51	575
Average Top-5 Annual Event Peak Inflow Rates					**800**

Conclusions

The firm capacity of this pump station, estimated at 2,635 gpm, is determined to be sufficient to handle all peak wet-weather inflows observed during 2020 with one pump out of service.

A.7.2.2 Lockart Street Pump Station

Pump Station Information	
Pump Station Name:	Lockart Street Pump Station
Pump Station Number:	PS-08
Contributing Area:	56 Acres
Time Frame Data Used for Analysis:	January 01, 2020 to December 31, 2020
Treatment Plant	NE WPCP
Rain Gauge:	RG-24
Average Daily Dry Weather Flow:	144 gpm
Number of Pumps:	2
Firm Pump Station Capacity*:	923 gpm

*Firm capacity is the maximum discharge at overflow level with one pump out of service

Pump Station Summary

Located in the Somerton section of the city on Lockart Street, this below grade lift station handles domestic wastewater from a residential area of approximately 56 acres (see Figure A.7.2.2.1). The pumps are controlled by the wet well water levels shown in Table A.7.2.2.1. The overflow point at Lockart Station is sanitary manhole P116-02-S0080, which is the lowest lying manhole in the shed.

Figure A.7.2.2.1 Contributing Area for the Lockart Street Pump Station

Table A.7.2.2.1 Lockart Street Pump Station Control Levels

Alarm Low Level (ft)	All Pumps Off (ft)	1st Pump On (ft)	2nd Pump On (ft)	3rd Pump On (ft)	Alarm High Level (ft)	Overflow Level (ft)
2.0	3.5	6 .5	7.5	N/A	8.0	23.10

Pump Station Performance

Pump station system curves and pump performance curves are used to estimate the relationship between the wet well level and station discharge capacity as are shown in the operating curves in Figures A.7.2.2.2 and A.7.2.2.3. The relationships show that as the number of pumps in operation is increased from one to two pumps the total capacity of the pump station does not double from the capacity of only one pump. This is caused by the increase in dynamic head losses within the force main with increasing discharge rate. With one pump out of service the pump station operating curve in Figure A.7.2.2.2 shows that the maximum discharge is approximately 923 gpm when the wet well is at the overflow level. This is the firm capacity of the pump station. When two pumps are running at this station Figure A.7.2.2.3 shows that the maximum total discharge of those two pumps combined is approximately 1720 gpm when the wet well is at the overflow level.

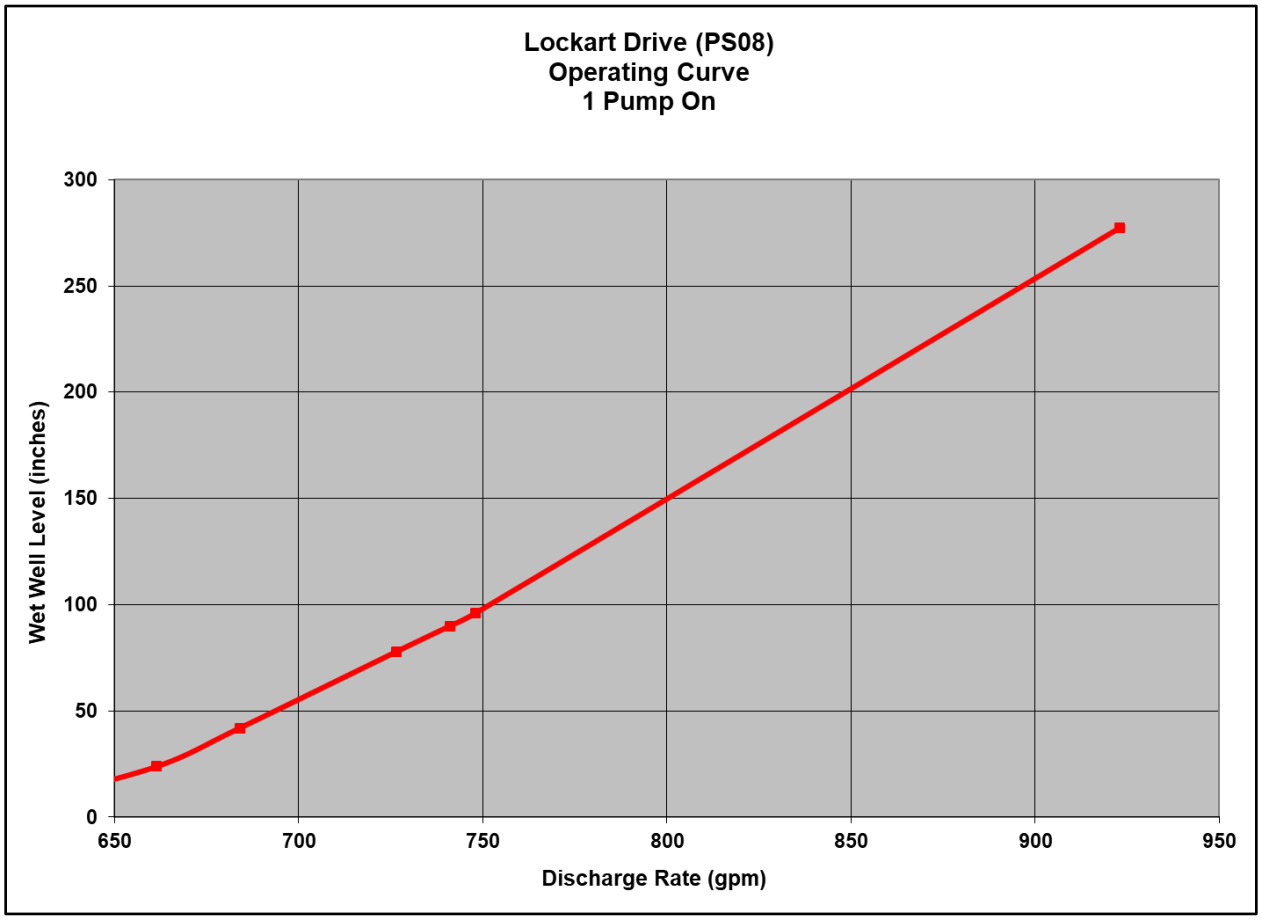


Figure A.7.2.2.2 Lockart Street Pump Station Operating Curve with One Pump On

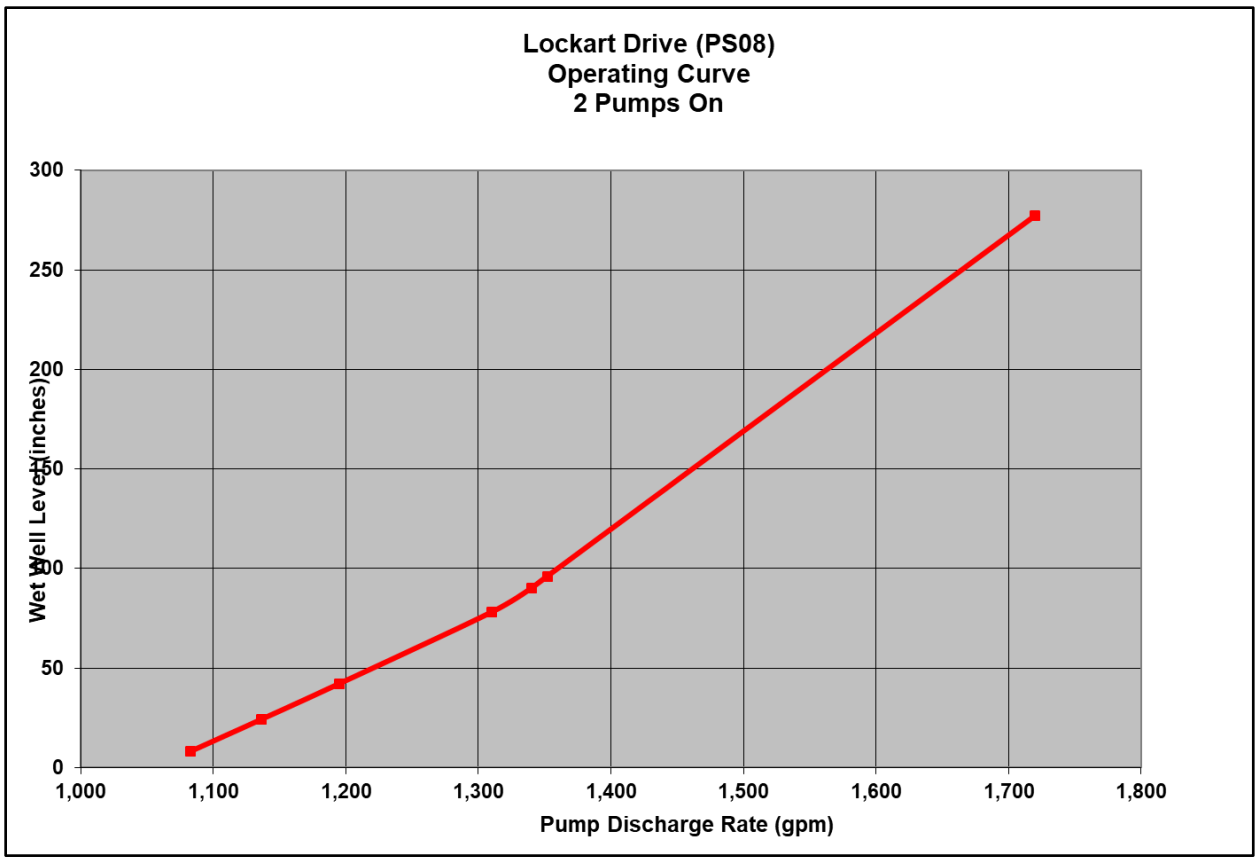


Figure A.7.2.2.3 Lockart Street Pump Station Operating Curve with Two Pumps On

Wet-Weather Inflows

Flow separation and rainfall dependent inflow and infiltration (RDII) analyses have been performed using EPA SSOAP application software. The five events observed for 2020 with the largest peak hourly inflow rates are identified and summarized in Table A.7.2.2.2.

Table A.7.2.2.2 Lockart Street Pump Station Peak Wet-Weather Inflow Summary

Year	Start Date	End Date	RG-24 Rainfall (inches)	RG-24 Peak Rainfall (inches/ 15-minutes)	Peak Hourly Inflow (gpm)
2020	08/04/20 01:30	08/04/20 23:45	2.68	0.60	1525
2020	07/06/20 12:30	07/06/20 18:45	1.84	0.33	785
2020	12/24/20 18:15	12/25/20 10:15	1.79	0.27	755
2020	08/28/20 16:15	08/28/20 22:00	0.90	0.53	715
2020	01/25/20 06:30	01/25/20 19:30	1.44	0.20	630
Average Top-5 Annual Event Peak Inflow Rates					**880**

Data Gaps

Periods of missing tabular data one day or longer during 2020 are listed in Table A.7.2.2.3. No high-level auto-dialer alarms were recorded during this period.

Table A.7.2.2.3

Missing Data	
Start Date	End Date
11/12/2020	11/18/2020

Conclusion

The firm capacity of the Lockart Pumping Station, estimated at 923 gpm, is deemed sufficient to handle the average of the top 5 peak wet-weather inflows observed during 2020 with one pump out of service, however, PWD will continue to closely monitor the station follow up with the I/I and grease investigations during 2021.

On August 4th, 2020 Tropical Storm Isaias hit the Philadelphia region which caused the Lockart Station to experience inflows greater than the firm capacity, 1525-gpm. Multiple pump failures occurred during the storm due to excessive amounts of grease being washed into the wet well by the heavy inflows. Grease accumulated in the wet well and affected pump performance significantly enough to require maintenance. According to data from a sensor located in the first upstream manhole, P116-02-S0010, the water level did not exceed the rim elevation of the overflow manhole. However, due to the timing and duration of pump failures during this storm, PWD believes that exfiltration may have occurred at defects in the system which are at lower elevations than the overflow manhole.

In 2018 PWD began investigating the Lockart contributory shed due to the high inflows observed. Since then PWD has replaced 13 end caps on upper end manholes in the piggy-backed storm-sanitary system, installed flow meters and collected data, conducted CCTV inspections, surveyed manhole elevations, and requested further investigation from other PWD departments. PWD's Leak Detection and Industrial Waste Units are currently investigating the shed for reasons behind the outstanding I/I issues and grease accumulation issues, respectively. In November 2020 PWD's Design and Construction Units grouted and pressured tested 140 joints that were at a location of know infiltration and exfiltration. Further analysis will be needed to resolve the existing I/I issues, track down the grease sources, and determine the effect of grouting.

A.7.2.3 Milnor Street Pump Station

Pump Station Information	
Pump Station Name:	Milnor Street Pump Station
Pump Station Number:	PS-09
Contributing Area:	20 acres
Time Frame Data Used for Analysis:	January 1, 2020 – December 31, 2020
Treatment Plant:	NE WPCP
Rain Gauge:	RG-04
Average Daily Flow:	9 gpm
Number of Pumps	3
Firm Pump Station Capacity*:	1385 gpm

*Firm capacity is the maximum discharge at overflow level with one pump out of service

Pump Station Summary

Located in the East Torresdale section of the city on Milnor Street at Grant Avenue, this below grade lift station handles the domestic wastewater from a primarily residential community of approximately 20 acres (see Figure A.7.2.3.1). The pumps are controlled by the wet well level elevations shown in Table A.7.2.3.1. The overflow level is based on the overflow pipe elevation at manhole Q120-05-S0064 which is the closest upstream manhole.

Figure A.7.2.3.1 Contributing Area for the Milnor Street Pump Station

Table A.7.2.3.1 Milnor Street Pump Station Pump Control Levels

Alarm Low Level (ft)	All Pumps Off (ft)	1st Pump On (ft)	2nd Pump On (ft)	3rd Pump On (ft)	Alarm High Level (ft)	Overflow Level (ft)
3.6	4.1	5.1	6.1	7.1	8.1	21.5

Pump Station Performance

Pump station system curves and pump performance curves are used to estimate the relationship between the wet well level and station discharge capacity as are shown in the operating curves in Figures A.7.2.3.2 through A.7.2.3.4. These curves have been updated with current data for 2020. The relationships show that as the number of pumps in operation is increased from one to three pumps the total capacity of the pump station triples from the capacity of only one pump. This is caused by the fact that each pump has a separate force main for this station. With one pump out of service the pump station operating curve in Figure A.7.2.3.3 shows that the maximum discharge is approximately 1,385 gpm when the wet well is at the overflow level, assuming a free head boundary at the discharge manhole. This is the firm capacity of the pump station. When all three pumps are running at this station, Figure A.7.2.3.4 shows that the maximum total discharge of those three pumps is estimated to be approximately 2,080 gpm when the wet well is at the overflow level.

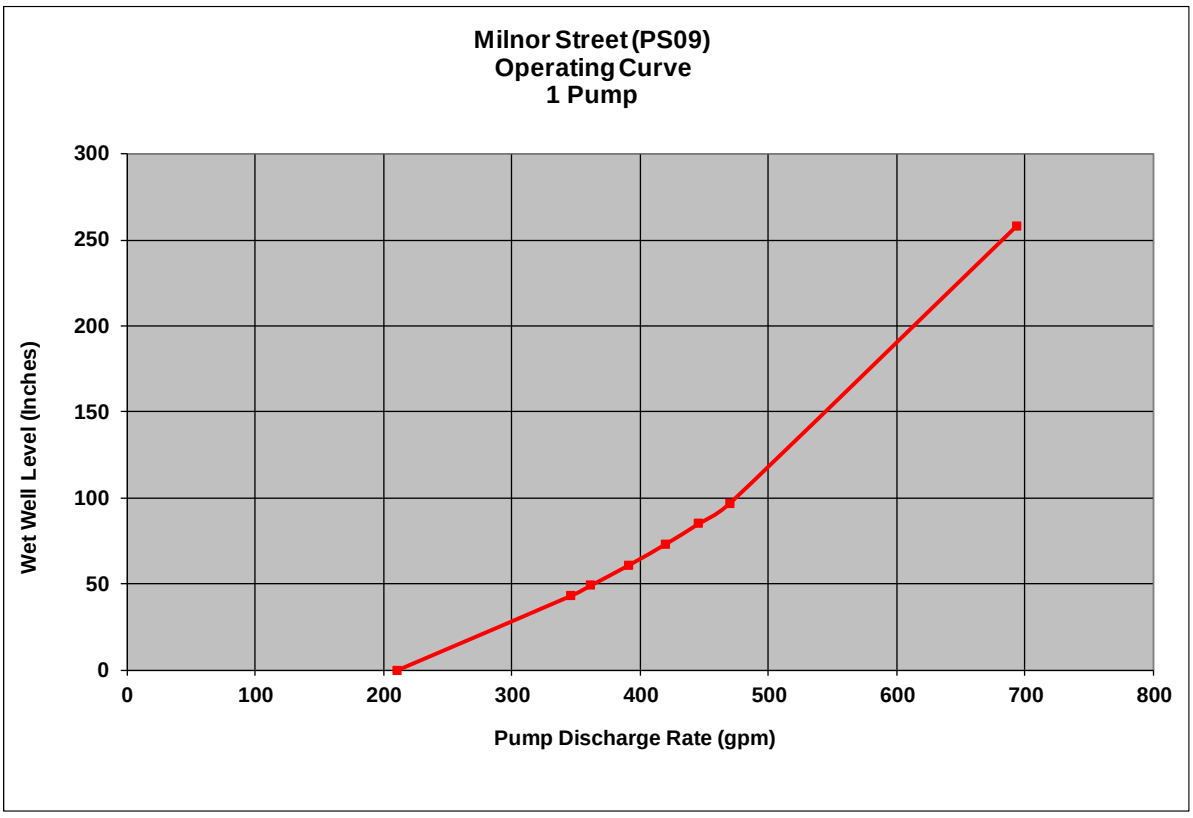


Figure A.7.2.3.2 Milnor Street Pump Station Operating Curve with Only One Pump On

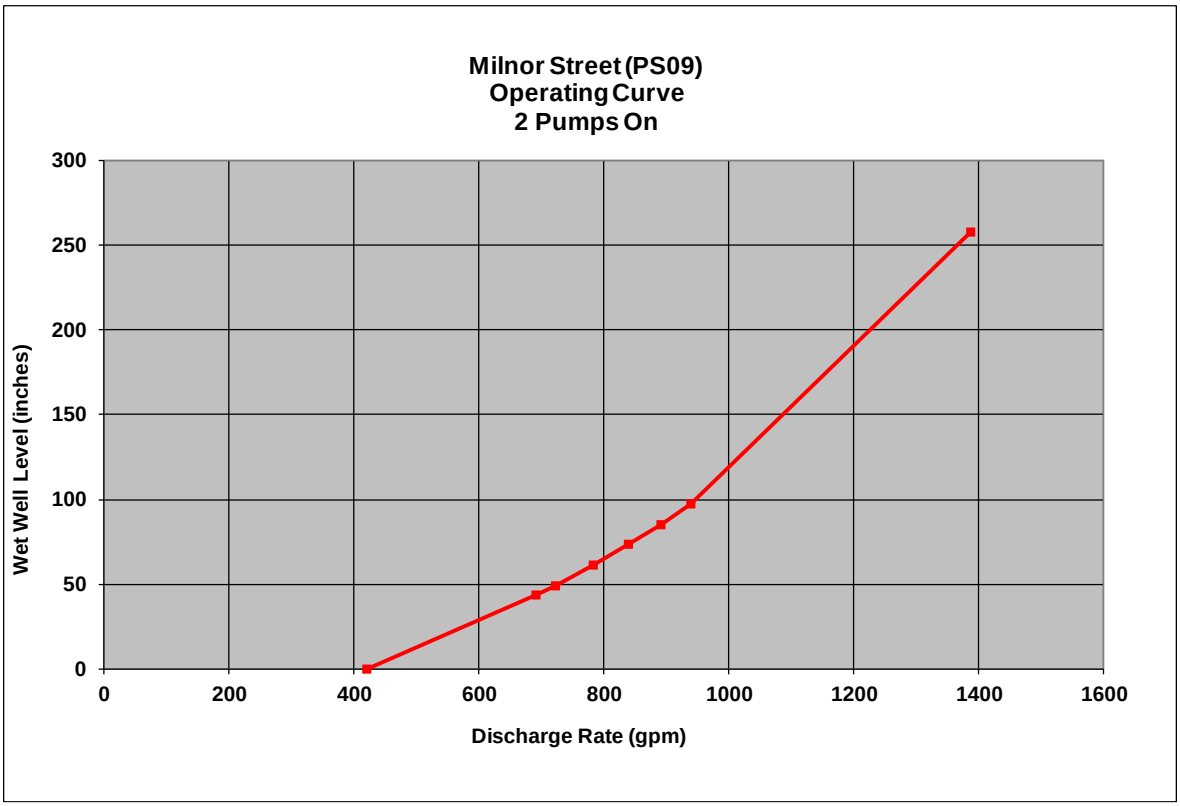


Figure A.7.2.3.3 Milnor Street Pump Station Operating Curve with Two Pumps On

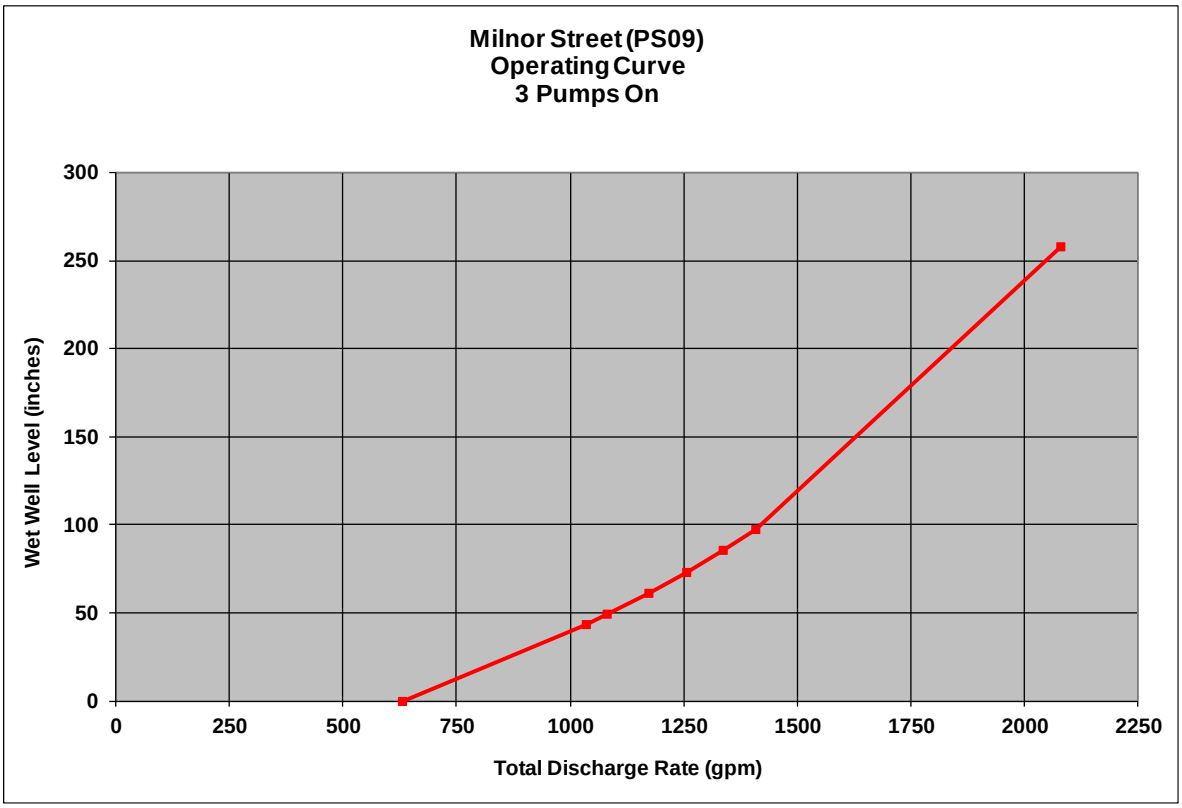


Figure A.7.2.3.4 Milnor Street Pump Station Operating Curve with Three Pumps On

Wet-Weather Inflows

Flow separation and rainfall dependent inflow and infiltration (RDII) analyses have been performed using EPA SSOAP application software. The five events observed for calendar year 2020 with the largest peak hourly inflow rates are identified and summarized in Table A.7.2.3.2.

Table A.7.2.3.2 Milnor Street Pump Station Peak Wet-Weather Inflow Summary

Year	Start Date	End Date	RG-04 Total Rainfall (inches)	RG-04 Peak Rainfall (inches/15-minutes)	Peak Hourly Inflow (gpm)
2020	8/4/20 0:15	8/5/20 3:30	2.59	0.95	835
2020	12/24/20 19:30	12/26/20 7:30	1.16	0.17	755
2020	11/30/20 6:15	12/1/20 5:15	1.79	0.32	495
2020	7/10/20 8:15	7/11/20 5:30	0.98	0.51	395
2020	7/24/20 13:15	7/25/20 5:45	1.39	0.49	385
Average Top-5 Annual Event Peak Inflow Rates					**575**

Conclusions

The firm capacity of the pump station, estimated at 1385 gpm, is determined to be sufficient to handle all peak wet-weather inflows observed during 2020 with one pump out of service.

A.7.2.4 Rennard Street Pump Station

Pump Station Information	
Pump Station Name:	Rennard Street Pump Station
Pump Station Number:	PS-12
Contributing Area:	46 acres
Time Frame Data Used for Analysis:	January 1, 2020 to December 31, 2020
Treatment Plant	NE WPCP
Rain Gauge:	RG-24
Average Daily Dry Weather Flow:	35 gpm
Number of Pumps:	2
Firm Pump Station Capacity*:	565 gpm

*Firm capacity is the maximum discharge at overflow level with one pump out of service

Pump Station Summary

Located in the Somerton section of the city this below grade lift station handles the domestic wastewater from a primarily residential housing area of approximately 46 acres (see Figure A.7.2.5.1). The pumps are controlled by the wet well water levels shown in Table A.7.5.2.1. The overflow point used for Rennard Station is the wet well manhole, which is the lowest lying manhole in the shed.

Figure A.7.2.5.1 Contributing Area for the Rennard Street Pump Station

Table A.7.2.5.1 Rennard Street Pump Station Pump Control Levels

Alarm Low Level (ft)	All Pumps Off (ft)	1st Pump On (ft)	2nd Pump On (ft)	3rd Pump On (ft)	Alarm High Level (ft)	Overflow Level (ft)
1.5	4	6	7	N/A	7.5	17.09

Pump Station Performance

Pump station system curves and pump performance curves are used to estimate the relationship between the wet well level and station discharge capacity as are shown in the operating curves in Figures A.7.2.5.2 and A.7.2.5.3. These curves have been updated with current data for 2020. The relationships show that as the number of pumps in operation is increased from one to two pumps the total capacity of the pump station does not double from the capacity of only one pump. This is caused by the increase in dynamic head losses within the force main with increasing discharge rate. With one pump out of service the pump station operating curve in Figure A.7.2.5.2 shows that the maximum discharge is approximately 565 gpm when the wet well is at the overflow level. This is the firm capacity of the pump station. When two pumps are running at this station Figure A.7.2.5.3 shows that the maximum total discharge of those two pumps combined is approximately 811 gpm when the wet well is at the overflow level.

It should be noted that the wet well and in-system storage volumetric model was updated in 2020 based on plans, control set points and survey information. We believe the new updated model more accurate reflects current conditions and better estimates dry weather flows, wet weather flows and firm/full station capacity compared to the older model. The new model was found to be more accurate when compared to in-shed flow metering data obtained during periods of 2019 through 2020.

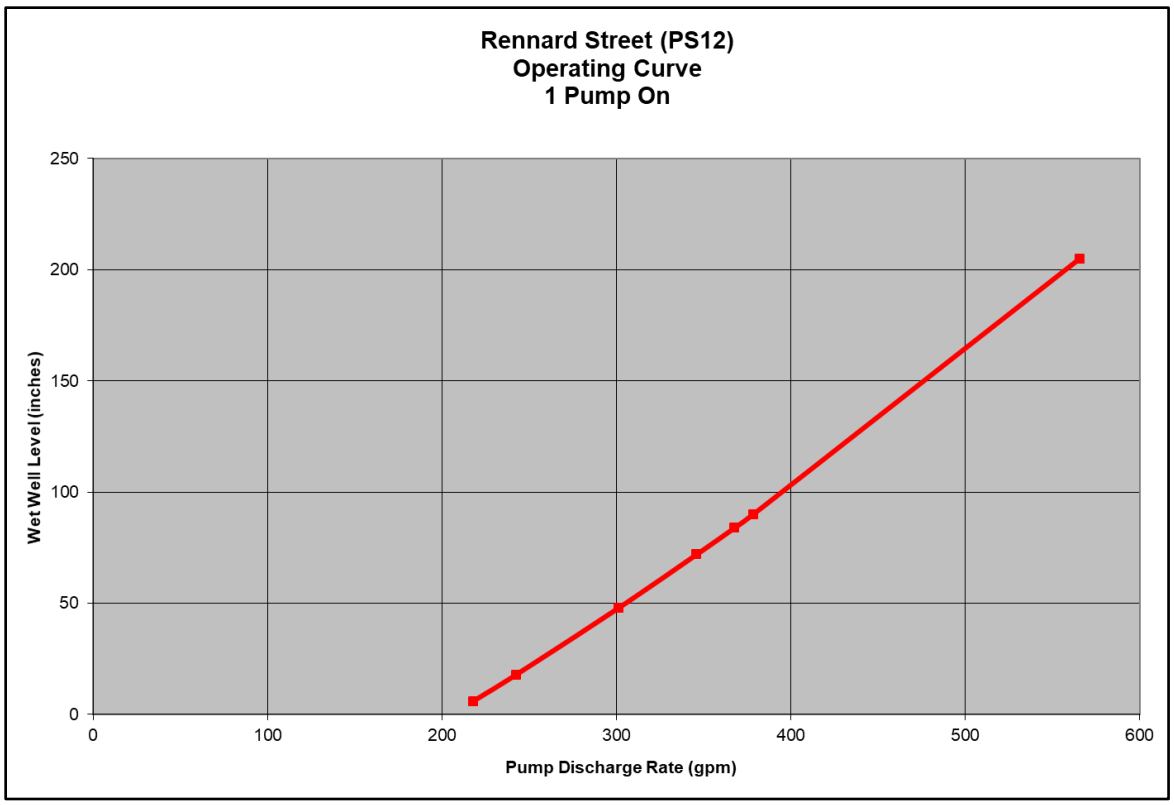


Figure A.7.2.5.2 2020 Rennard Street Pump Station Operating Curve with One Pump On

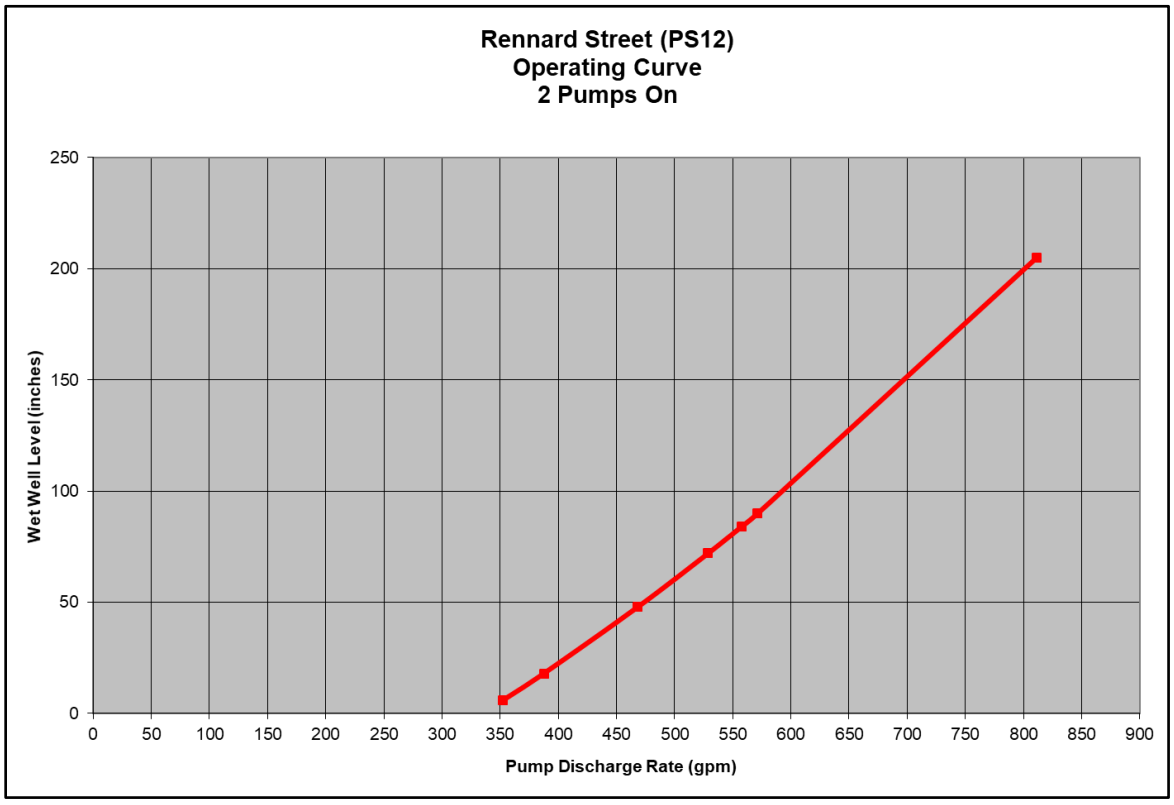


Figure A.7.2.5.3 2020 Rennard Street Pump Station Operating Curve with Two Pumps On

Wet-Weather Inflows

Flow separation and rainfall dependent inflow and infiltration (RDII) analyses have been performed using EPA SSOAP application software. The five events observed during calendar year 2020 with the largest estimated peak hourly inflow rates are identified and summarized in Table A.7.2.5.2.

Table A.7.2.5.2 Rennard Street Pump Station Peak Wet-Weather Inflow Summary

Year	Start Date	End Date	RG-24 Rainfall (inches)	RG-24 Peak Rainfall (inches/15-minutes)	Peak Hourly Inflow (gpm)
2020	08/04/20 01:30	08/04/20 17:00	2.68	0.60	380
2020	01/25/20 06:45	01/25/20 19:00	1.44	0.20	175
2020	09/29/20 14:45	09/30/20 08:30	2.69	0.25	170
2020	07/10/20 08:45	07/11/20 00:00	2.66	0.31	160
2020	11/30/20 06:30	11/30/20 21:15	1.27	0.16	150
Average Top-5 Annual Event Peak Inflow Rates					**205**

Conclusion

The firm capacity of this station, estimated at 571 gpm, is determined to be sufficient to handle all peak wet-weather inflows to this station observed during 2020 with one pump out of service.

SEWER EXTENSIONS

2020

Philadelphia Water Department

Chapter 94

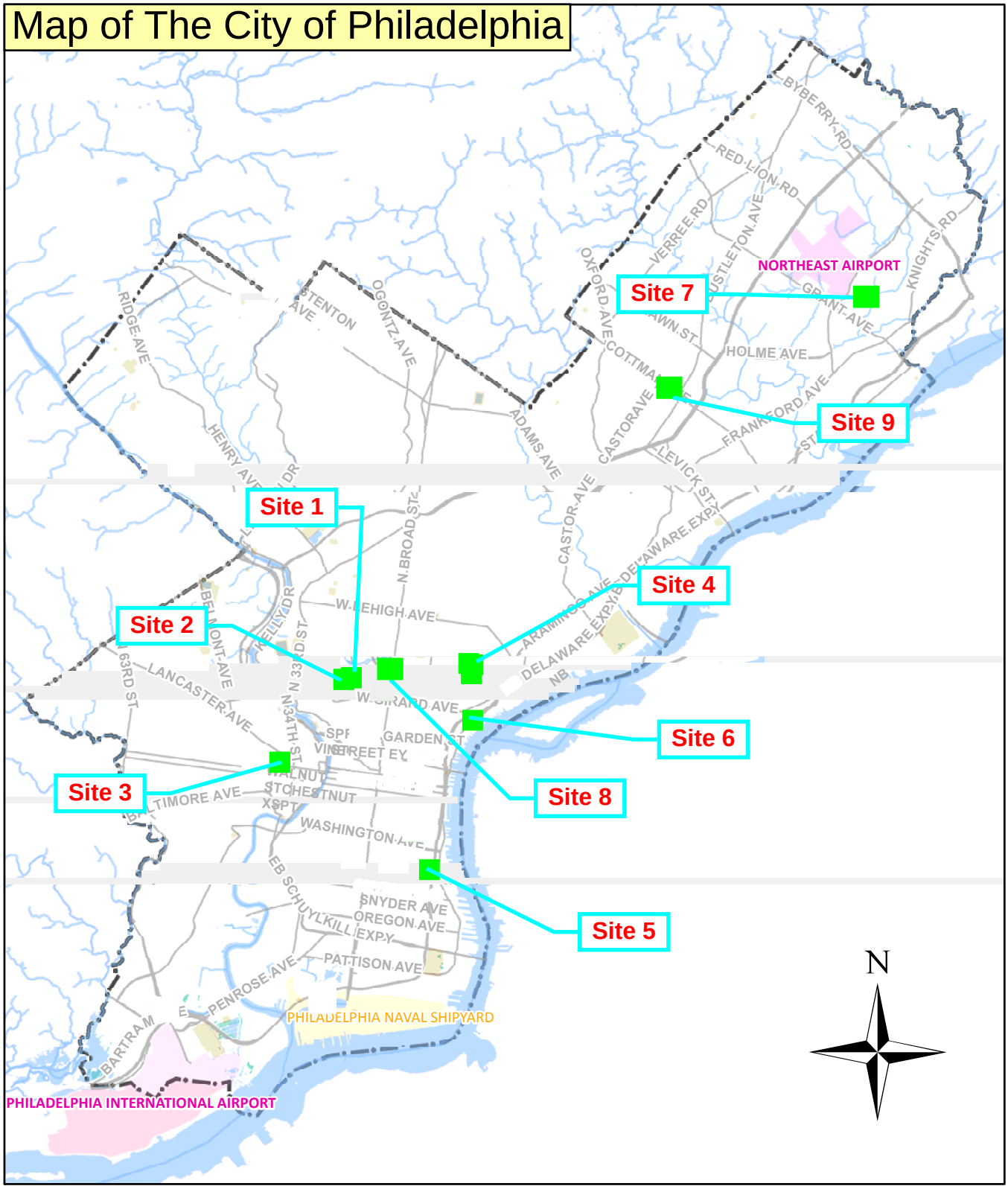
2020 Report on Sewer Extensions

Table of Contents

Summary

This report summarizes the sewer extensions which were constructed or pending completion within the City of Philadelphia in the calendar year 2020. These sewer extensions were required for the development of residential and commercial properties and were constructed at private cost. All sewer extensions listed were reviewed by the Philadelphia Water Department and either approved or exempt under Pennsylvania Sewage Facilities Act 537. In addition, the design and construction of these facilities met the requirements of the Philadelphia Water Department Design standards and were inspected by PWD construction engineers prior to accepting them into our sewer system. Furthermore, all sewers listed and shown on the accompanying plans are within public rights of way and will be maintained by the City of Philadelphia. The size of the developments listed did not require phasing.

2020 Sewer Extension Map

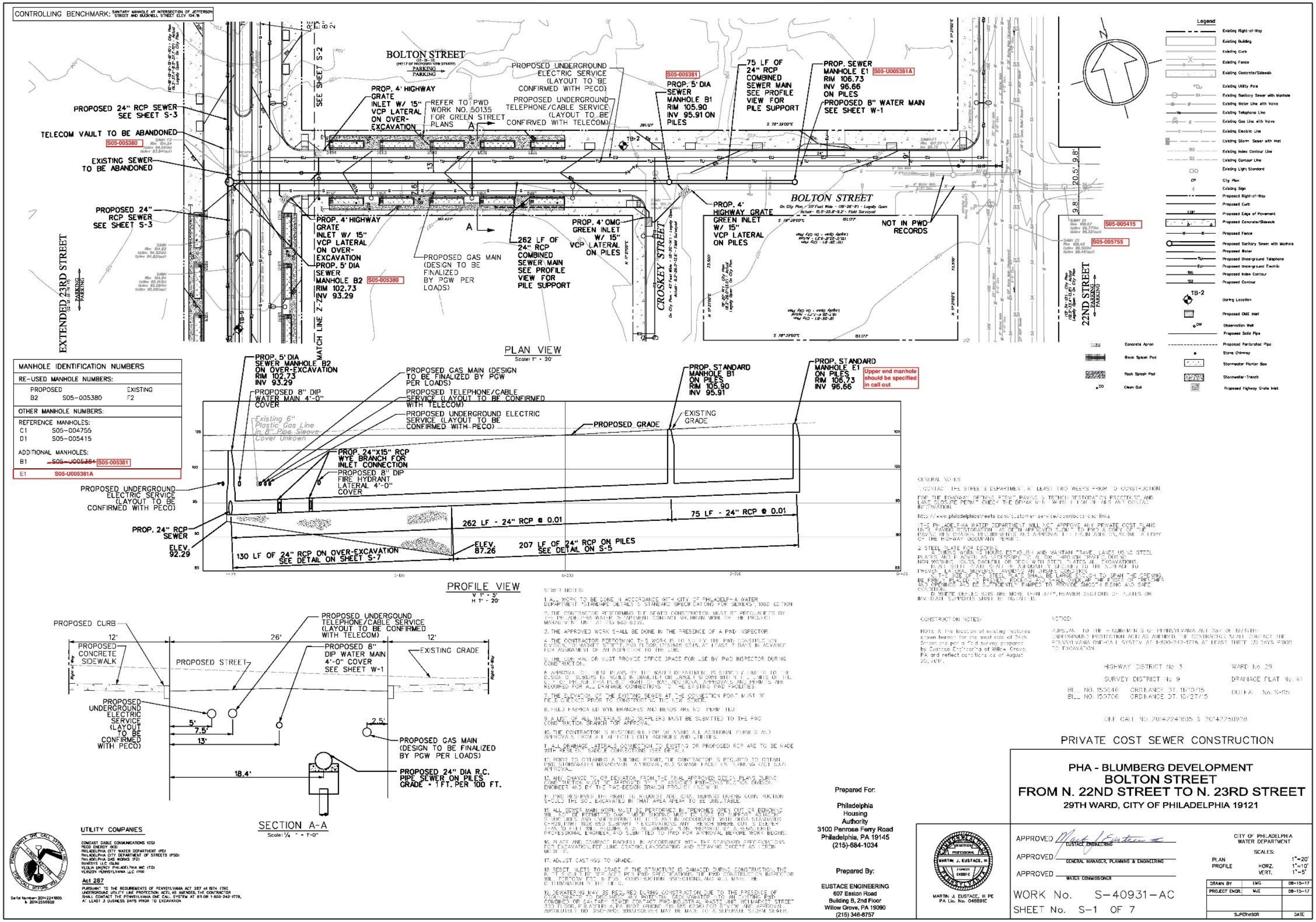


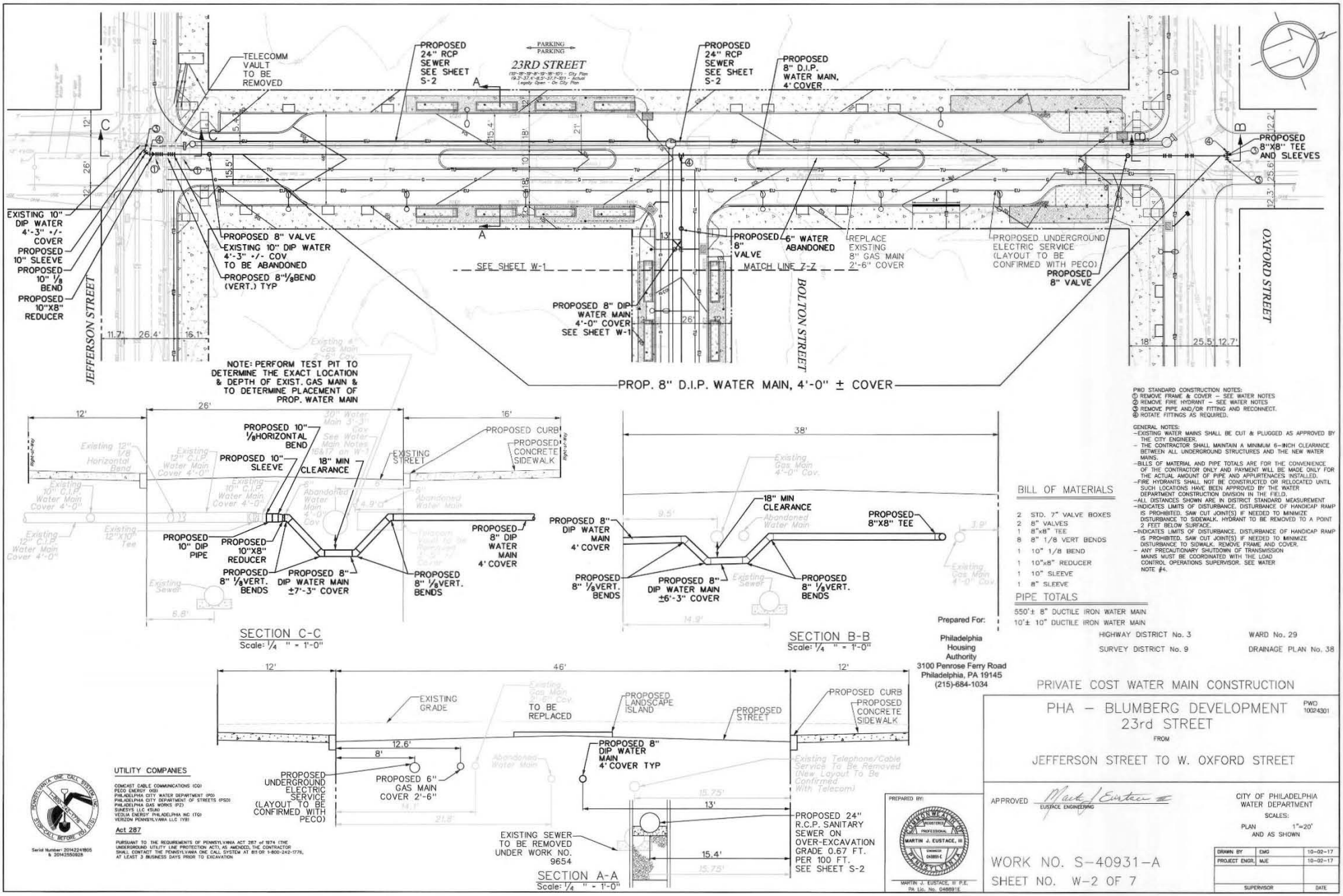
Note: Locations 1-9 on map correspond to "PWD Work No." column in the Sewer Extensions Table on page 5.

2020 Sewer Extension Table

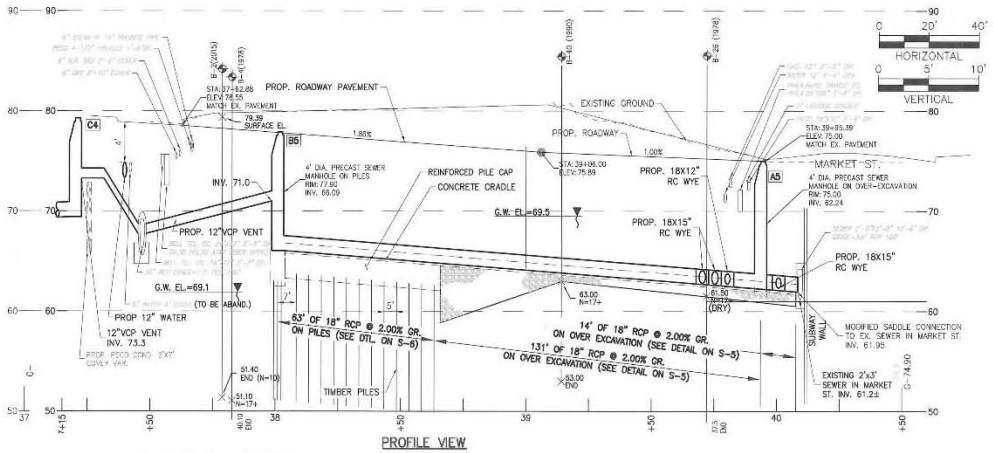
			Key Milestone Dates						Linear Length (ft.)		Dwelling Type			Flow		
Site No.	PWD Work No.	Description	Design Start	NTP	Construction Start	Construction End	Size (in)	Material	Proposed	Completed	Residential	Commercial	Institutional	EDU	GPD	Treatment Facility
1	40931	**Bolton St.** From N. 22nd St. to N. 23rd St.	4/16/2015	11/13/2017	1/15/2018	8/1/2019*	24" San	RCP	256	256	83			83	21,788	SWWPCP
2	40931	**Bucknell St.** From Jefferson St. to W. Oxford St.	4/16/2015	11/13/2017	1/15/2018	8/1/2019*	24" San	RCP	351	351	83			83	21,788	SWWPCP
3	40945	**37th St.** From Warren St. to Market St.	7/13/2015	7/26/2017	7/30/2019		18" Combined 36" Combined	RCP	361 323				1	91	23,900	SWWPCP
4	41020	**Abigail St.** From Martha St. to Trenton Ave.	7/13/2017	7/13/2017	9/7/2018		15" Combined	RCP	60		1			1	263	SEWPCP
5	41055	**S. Front St.** Reed St. to Dickinson St.	5/12/2017	11/6/2019	1/23/2020	8/27/2020	18" Combined	RCP	298	298	8			8	2,100	SEWPCP
6	90031	**N. Delaware Avenue** Pier 53 to N. Delaware Avenue	10/27/2017	7/17/2018			10" San	VCP	28		19			19	4,988	SEWPCP
7	90170	**Academy Rd.** From Glenn St. to Academy Rd.	11/24/2020 In PC				10" San	VCP	126		1			1	263	NEWPCP
8	90177	**Master St.** From N. Sydenham St. to N. 15th St.	7/1/2020 In PC				18" Combined	RCP	73		3			3	788	SEWPCP
9	90090	**Alma St.** From Bleigh Ave. to Elgin Ave.	2/4/2019 In Design				10" San	VCP	103		4			4	1,050	NEWPCP

* Denotes approximate dates based on available aerial images.

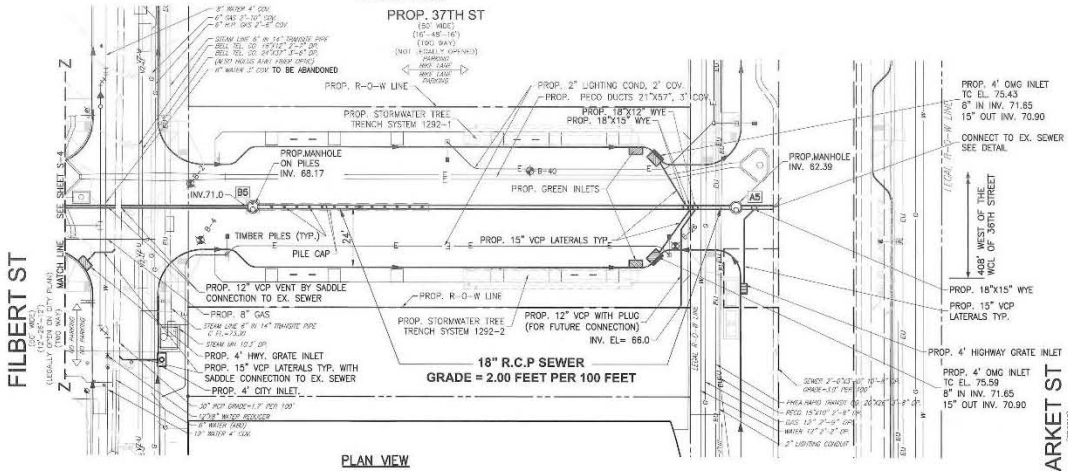

CONTROLLING BENCHMARK: SANITARY MANHOLE AT INTERSECTION OF JEFFERSON STREET AND BUCKNELL STREET ELEV 104.16
BOLTON STREET
PARKING
PROPOSED 24" RCP SEWER SEE SHEET S-3
TELECOM VAULT TO BE ABANDONED
S05-005380
EXISTING SEWER TO BE ABANDONED
PROPOSED 24" RCP SEWER SEE SHEET S-3
EXTENDED 23RD STREET
PROP. 4' HIGHWAY GRATE INLET W/ 15" VCP LATERAL ON OVER-EXCAVATION
REFER TO PWD WORK NO. 50135 FOR GREEN STREET PLANS
PROPOSED UNDERGROUND ELECTRIC SERVICE (LAYOUT TO BE CONFIRMED WITH PECO)
PROPOSED UNDERGROUND TELEPHONE/CABLE SERVICE (LAYOUT TO BE CONFIRMED WITH TELECOM)
S05-005381
PROP. 5' DIA SEWER MANHOLE B1 RIM 105.90 INV 95.91 ON PILES
75 LF OF 24" RCP COMBINED SEWER MAIN SEE PROFILE VIEW FOR PILE SUPPORT
PROP. SEWER MANHOLE E1 RIM 106.73 INV 96.66 ON PILES
S05-U005381A
PROPOSED 8" WATER MAIN SEE SHEET W-1
PROP. 4' HIGHWAY GRATE INLET W/ 15" VCP LATERAL ON OVER-EXCAVATION
PROP. 5' DIA SEWER MANHOLE B2 RIM 102.73 INV 93.29
S05-005380
PROPOSED GAS MAIN (DESIGN TO BE FINALIZED BY PGW PER LOADS)
262 LF OF 24" RCP COMBINED SEWER MAIN SEE PROFILE VIEW FOR PILE SUPPORT
PROP. 4' OMG GREEN INLET W/ 15" VCP LATERAL ON PILES
CROSKEY STREET
PROP. 4' HIGHWAY GRATE GREEN INLET W/ 15" VCP LATERAL ON PILES
BOLTON STREET
NOT IN PWD RECORDS
S05-005415
S05-005755
22ND STREET
MATCH LINE
PLAN VIEW
Scale: 1" = 20'
MANHOLE IDENTIFICATION NUMBERS
RE-USED MANHOLE NUMBERS:
PROPOSED EXISTING
B2 S05-005380 F2
OTHER MANHOLE NUMBERS:
REFERENCE MANHOLES:
C1 S05-004755
D1 S05-005415
ADDITIONAL MANHOLES:
B1 S05-U005384 S05-005381
E1 S05-U005381A
PROP. 5' DIA SEWER MANHOLE B2 ON OVER-EXCAVATION RIM 102.73 INV 93.29
PROPOSED 8" DIP WATER MAIN 4'-0" COVER
Existing 6" Plastic Gas Line in 8" Pipe Sleeve Cover Unknown
PROPOSED GAS MAIN (DESIGN TO BE FINALIZED BY PGW PER LOADS)
PROPOSED TELEPHONE/CABLE SERVICE (LAYOUT TO BE CONFIRMED WITH TELECOM)
PROPOSED UNDERGROUND ELECTRIC SERVICE (LAYOUT TO BE CONFIRMED WITH PECO)
PROPOSED GRADE
PROP. STANDARD MANHOLE B1 ON PILES RIM 105.90 INV 95.91
EXISTING GRADE
PROP. STANDARD MANHOLE E1 ON PILES RIM 106.73 INV 96.66
Upper end manhole should be specified in call out
PROP. 24"X15" RCP WYE BRANCH FOR INLET CONNECTION
PROPOSED 8" DIP FIRE HYDRANT LATERAL 4'-0" COVER
PROPOSED UNDERGROUND ELECTRIC SERVICE (LAYOUT TO BE CONFIRMED WITH PECO)
PROP. 24" RCP SEWER
ELEV. 92.29
262 LF - 24" RCP @ 0.01
75 LF - 24" RCP @ 0.01
130 LF OF 24" RCP ON OVER-EXCAVATION SEE DETAIL ON SHEET S-7
ELEV. 87.26
207 LF OF 24" RCP ON PILES SEE DETAIL ON S-5
PROFILE VIEW
V 1" - 5'
H 1" - 20'
PROPOSED CURB
PROPOSED CONCRETE SIDEWALK
PROPOSED STREET
PROPOSED UNDERGOUND TELEPHONE/CABLE SERVICE (LAYOUT TO BE CONFIRMED WITH TELECOM)
PROPOSED 8" DIP WATER MAIN 4'-0" COVER SEE SHEET W-1
EXISTING GRADE
12'
26'
12'
PROPOSED UNDERGROUND ELECTRIC SERVICE (LAYOUT TO BE CONFIRMED WITH PECO)
5'
7.5'
13'
2.5'
18.4'
PROPOSED GAS MAIN (DESIGN TO BE FINALIZED BY PGW PER LOADS)
PROPOSED 24" DIA R.C. PIPE SEWER ON PILES GRADE - 1 FT. PER 100 FT.
SECTION A-A
Scale: 1/4" = 1'-0"
UTILITY COMPANIES
Act 287
HIGHWAY DISTRICT No. 3
SURVEY DISTRICT No. 9
WARD No. 29
DRAINAGE PLAT No. 41
OUTFALL No. S-05
ONE CALL NO. 20142241805 & 20142250928
PRIVATE COST SEWER CONSTRUCTION
Prepared For:
Philadelphia Housing Authority
3100 Penrose Ferry Road
Philadelphia, PA 19145
(215)-684-1034
Prepared By:
EUSTACE ENGINEERING
607 Easton Road
Building 8, 2nd Floor
Willow Grove, PA 19090
(215) 346-8757
MARTIN J. EUSTACE, III PE
PA Lic. No. 048891E
PHA - BLUMBERG DEVELOPMENT
BOLTON STREET
FROM N. 22ND STREET TO N. 23RD STREET
29TH WARD, CITY OF PHILADELPHIA 19121
APPROVED
EUSTACE ENGINEERING
GENERAL MANAGER, PLANNING & ENGINEERING
WATER COMMISSIONER
CITY OF PHILADELPHIA WATER DEPARTMENT
SCALES:
PLAN 1"=20'
PROFILE HORZ. 1"=10' VERT. 1"=5'
WORK No. S-40931-AC
SHEET No. S-1 OF 7
DRAWN BY
PROJECT ENGR.
SUPERVISOR
DATE
08-15-17


TELECOMM VAULT TO BE REMOVED
PROPOSED 24" RCP SEWER SEE SHEET S-2
PARKING
23RD STREET
PARKING
PROPOSED 24" RCP SEWER SEE SHEET S-2
PROPOSED 8" D.I.P. WATER MAIN, 4' COVER
PROPOSED 8"X8" TEE AND SLEEVES
EXISTING 10" DIP WATER 4'-3" +/- COVER
PROPOSED 10" SLEEVE
PROPOSED 10" 1/8 BEND
PROPOSED 10"X8" REDUCER
JEFFERSON STREET
PROPOSED 8" VALVE
EXISTING 10" DIP WATER 4'-3" +/- COV TO BE ABANDONED
PROPOSED 8" 1/8 BEND (VERT.) TYP
SEE SHEET W-1
MATCH LINE Z-Z
PROPOSED 8" VALVE
6" WATER ABANDONED
REPLACE EXISTING 8" GAS MAIN 2'-6" COVER
PROPOSED UNDERGROUND ELECTRIC SERVICE (LAYOUT TO BE CONFIRMED WITH PECO)
PROPOSED 8" DIP WATER MAIN 4'-0" COVER SEE SHEET W-1
BOLTON STREET
OXFORD STREET
NOTE: PERFORM TEST PIT TO DETERMINE THE EXACT LOCATION & DEPTH OF EXIST. GAS MAIN & TO DETERMINE PLACEMENT OF PROP. WATER MAIN
PROP. 8" D.I.P. WATER MAIN, 4'-0" ± COVER
PROPOSED 10" 1/8 HORIZONTAL BEND
PROPOSED 10" SLEEVE
18" MIN CLEARANCE
PROPOSED CURB
PROPOSED CONCRETE SIDEWALK
PROPOSED 10" DIP PIPE
PROPOSED 10"X8" REDUCER
PROPOSED 8" 1/8 VERT. BENDS
PROPOSED 8" DIP WATER MAIN ±7'-3" COVER
PROPOSED 8" DIP WATER MAIN 4' COVER
PROPOSED 8" 1/8 VERT. BENDS
SECTION C-C
Scale: 1/4 " = 1'-0"
PROPOSED 8" DIP WATER MAIN 4' COVER
18" MIN CLEARANCE
PROPOSED 8"X8" TEE
PROPOSED 8" 1/8 VERT. BENDS
PROPOSED 8" DIP WATER MAIN ±6'-3" COVER
PROPOSED 8" 1/8 VERT. BENDS
SECTION B-B
Scale: 1/4 " = 1'-0"
EXISTING GRADE
TO BE REPLACED
PROPOSED LANDSCAPE ISLAND
PROPOSED STREET
PROPOSED CURB
PROPOSED CONCRETE SIDEWALK
PROPOSED 8" DIP WATER MAIN 4' COVER TYP
PROPOSED UNDERGROUND ELECTRIC SERVICE (LAYOUT TO BE CONFIRMED WITH PECO)
PROPOSED 6" GAS MAIN COVER 2'-6"
EXISTING SEWER TO BE REMOVED UNDER WORK NO. 9654
PROPOSED 24" R.C.P. SANITARY SEWER ON OVER-EXCAVATION GRADE 0.67 FT. PER 100 FT. SEE SHEET S-2
SECTION A-A
Scale: 1/4 " = 1'-0"
UTILITY COMPANIES
COMCAST CABLE COMMUNICATIONS (CQ)
PECO ENERGY (KB)
PHILADELPHIA CITY WATER DEPARTMENT (PD)
PHILADELPHIA CITY DEPARTMENT OF STREETS (PS0)
PHILADELPHIA GAS WORKS (PZ)
SUNESYS LLC (SUN)
VEOLIA ENERGY PHILADELPHIA INC (TQ)
VERIZON PENNSYLVANIA LLC (Y9)
Act 287
PURSUANT TO THE REQUIREMENTS OF PENNSYLVANIA ACT 287 of 1974 (THE UNDERGROUND UTILITY LINE PROTECTION ACT), AS AMENDED, THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM AT 811 OR 1-800-242-1776, AT LEAST 3 BUSINESS DAYS PRIOR TO EXCAVATION
Serial Number: 20142241805 & 20142550928
PWD STANDARD CONSTRUCTION NOTES:
① REMOVE FRAME & COVER – SEE WATER NOTES
② REMOVE FIRE HYDRANT – SEE WATER NOTES
③ REMOVE PIPE AND/OR FITTING AND RECONNECT.
④ ROTATE FITTINGS AS REQUIRED.
GENERAL NOTES:
–EXISTING WATER MAINS SHALL BE CUT & PLUGGED AS APPROVED BY THE CITY ENGINEER.
– THE CONTRACTOR SHALL MAINTAIN A MINIMUM 6–INCH CLEARANCE BETWEEN ALL UNDERGROUND STRUCTURES AND THE NEW WATER MAINS.
–BILLS OF MATERIAL AND PIPE TOTALS ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND PAYMENT WILL BE MADE ONLY FOR THE ACTUAL AMOUNT OF PIPE AND APPURTENACES INSTALLED.
–FIRE HYDRANTS SHALL NOT BE CONSTRUCTED OR RELOCATED UNTIL SUCH LOCATIONS HAVE BEEN APPROVED BY THE WATER DEPARTMENT CONSTRUCTION DIVISION IN THE FIELD.
–ALL DISTANCES SHOWN ARE IN DISTRICT STANDARD MEASUREMENT.
–INDICATES LIMITS OF DISTURBANCE. DISTURBANCE OF HANDICAP RAMP IS PROHIBITED. SAW CUT JOINT(S) IF NEEDED TO MINIMIZE DISTURBANCE TO SIDEWALK. HYDRANT TO BE REMOVED TO A POINT 2 FEET BELOW SURFACE.
–INDICATES LIMITS OF DISTURBANCE. DISTURBANCE OF HANDICAP RAMP IS PROHIBITED. SAW CUT JOINT(S) IF NEEDED TO MINIMIZE DISTURBANCE TO SIDWALK. REMOVE FRAME AND COVER.
– ANY PRECAUTIONARY SHUTDOWN OF TRANSMISSION MAINS MUST BE COORDINATED WITH THE LOAD CONTROL OPERATIONS SUPERVISOR. SEE WATER NOTE #4.
BILL OF MATERIALS
2 STD. 7" VALVE BOXES
2 8" VALVES
1 8"x8" TEE
8 8" 1/8 VERT BENDS
1 10" 1/8 BEND
1 10"x8" REDUCER
1 10" SLEEVE
1 8" SLEEVE
PIPE TOTALS
550'± 8" DUCTILE IRON WATER MAIN
10'± 10" DUCTILE IRON WATER MAIN
Prepared For:
Philadelphia Housing Authority
3100 Penrose Ferry Road
Philadelphia, PA 19145
(215)-684-1034
HIGHWAY DISTRICT No. 3
SURVEY DISTRICT No. 9
WARD No. 29
DRAINAGE PLAN No. 38
PRIVATE COST WATER MAIN CONSTRUCTION
PHA – BLUMBERG DEVELOPMENT
23rd STREET
PWD 100243O1
FROM
JEFFERSON STREET TO W. OXFORD STREET
PREPARED BY:
MARTIN J. EUSTACE, III
MARTIN J. EUSTACE, II P.E.
PA Lic. No. 048891E
APPROVED
EUSTACE ENGINEERING
CITY OF PHILADELPHIA
WATER DEPARTMENT
SCALES:
PLAN 1"=20'
AND AS SHOWN
DRAWN BY EMG 10-02-17
PROJECT ENGR. MJE 10-02-17
SUPERVISOR DATE
WORK NO. S-40931-A
SHEET NO. W-2 OF 7

CONTROLLING BENCH MARK:
PK NAIL IN THE CENTER OF THE MEDIAN ISLAND ON 38TH STREET, 20.5' NORTH OF POWELTON AVENUE ELEV. 90.20

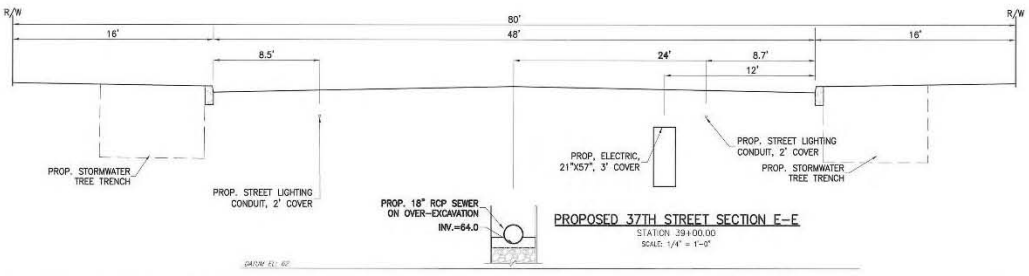


PROFILE VIEW



PLAN VIEW

MANHOLE IDENTIFICATION NUMBERS	
ADDITIONAL MANHOLES	
A5	S20-001032
B5	S20-U001034

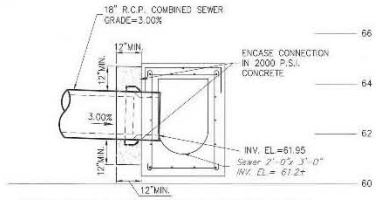


PROPOSED 37TH STREET SECTION E-E
STATION 39+00.00
SCALE: 1/4" = 1'-0"

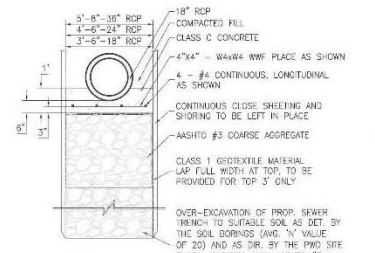
LEGEND

- KEYSTONE TEL. / AT&T
- MCI/ VERIZON BUSINESS
- BELL TEL. / VERIZON
- PECO ENERGY
- PHILADELPHIA GAS WORKS
- SEWER
- PHILADELPHIA WATER DEPT.
- SCPTA
- VEOLIA PHILA. ENERGY CORP.
- TRAFFIC SIGNAL CONDUIT
- EX. CONTOUR (1')
- LOD (PHASE 3A)
- PR. WATER
- PR. SEWER
- EX. SEWER TO BE REMOVED
- B-11 BORING LOCATION
- PR. CONTOUR

CONNECTION INSTALLATION PROCEDURE:
1. EXCAVATE SAFELY TO EXPOSE THE EXISTING SEWER PIPE WITHOUT DAMAGING IT.
2. EXCAVATE A DITCH WIDE ENOUGH TO ACCOMMODATE CORING THE EXISTING SEWER PIPE AND CONCRETING THE CONNECTION JOINT TO 1'-FOOT PAST THE EDGE OF THE CORED OPENING IN ALL DIRECTIONS.
3. CONTRACTORS TO PERFORM THE CONNECTION IN A SAFE MANNER AND PER OSHA REGULATIONS.
4. SHORING SHALL BE INSTALLED IN DITCHES AND TRENCHES AS PER OSHA REGULATIONS OR AS REGULATED BY PWD. VIOLATION OF THIS PROVISION WILL RESULT IN A STOP WORK ORDER AND/OR PENALTIES PRESCRIBED BY LAW. (REFER TO PHILADELPHIA PLUMBING CODE 2004 SECTION P- 1503.2 SHORING).
5. RE-USE AND ENLARGE EXISTING SPUR OPENING, IF FOUND NEAREST TO CONNECTION POINT. OTHERWISE CORE DRILL A HOLE NOT MORE THAN 1-INCH LARGER THAN THE OD OF THE CONNECTING PIPE.
6. PREVENT ANY PIECES OF CORED SECTION OR DEBRIS TO FALL INTO THE SEWER.
7. REMOVE ALL THE BROKEN PIECES OR DEBRIS THAT FALL INTO THE SEWER.
8. CAULK THE INTERIOR SURFACE OF THE CORED AREA WITH NON-SHRINK OR EPOXY MORTAR.
9. INSERT PIPE INTO THE CORED HOLE AND SET SO IT WILL BE FLUSH WITH THE INSIDE FACE OF THE SEWER WALL OR WITH NOT MORE THAN 1-INCH PROTRUSION INTO THE SEWER PIPE AND ALSO THE BELL END WILL REST ON THE SEWER PIPE.
10. FILL THE ANNULAR SPACE BETWEEN THE PROPOSED SEWER PIPE AND THE EXISTING SEWER PIPE WITH APPROVED CAULK OR NON-SHRINK EPOXY MORTAR. USE SIKATOP 123 PLUS OR AN APPROVED EQUAL FOLLOWING ALL MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.
10. SECURE THE PIPE.
11. FORM THE OUTSIDE OF THE CONNECTION JOINT SO THAT A 12-INCH THICK CONCRETE COLLAR CAN BE PLACED AROUND THE CONNECTION JOINT.
12. PLACE A MINIMUM OF 2000 PSI CONCRETE COLLAR EXTENDING 12 INCH AROUND THE JOINT.
13. ALLOW AT LEAST 24 HOURS FOR THE CONCRETE TO HARDEN BEFORE BACKFILLING.
14. ANY OTHER PIPELINE EXPOSED AND UNDERMINED DURING THIS OPERATION MUST BE SUPPORTED IMMEDIATELY AND BACKFILLED WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM) AFTER THE COMPLETION OF THE CONNECTION.
15. REPAIR AND SEAL EXISTING SLRS IF DAMAGED DURING CONSTRUCTION.



CONNECTION TO EX. SEWER IN MARKET STREET
SCALE: 1/2"=1'-0"



REINFORCED CONCRETE CRADLE AND STONE FOUNDATION IN OVER-EXCAVATION IN NEW STREET
NOT TO SCALE

NOTES:
1. THE LIMITS OF THE OVER-EXCAVATION & REINF. CONC. CRADLE SHOWN ON THE PIPE PROFILE ARE THE MINIMUM LIMITS REQ'D. ADDITIONAL OVER-EXCAVATION MAY BE REQ'D BY THE CITY ENGINEER.
2. THE CONTRACTOR MAY PROVIDE ADDITIONAL BORINGS.

NOTICE:
PURSUANT TO THE REQUIREMENTS OF PA ACT 287 of 1974 (THE UNDERGROUND UTILITY LINE PROTECTION ACT), AS AMENDED,THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776, AT LEAST 3 DAYS PRIOR TO EXCAVATION.

HIGHWAY DISTRICT NO. 1 WARD NO. 24
SURVEY DISTRICT NO. 7 SEWER PLAT NO. 29

ONE CALL NO. 2015-0641234, 2015-0641244, 20150441250, 20150641254, 20150641256, 20150641257, 20150641280

R.O.W. PLACED ON CITY PLAN BILL NO. 160145 ORDINANCE DATE: 6/19/16

PRIVATE COST SEWER

PREPARED FOR:
INGLEFORD DEVELOPMENT LLC
3535 MARKET STREET, SUITE 1230
PHILADELPHIA PA 19104

PREPARED BY:
BOLES, SMYTH ASSOCIATES INC.
2400 CHESTNUT STREET
PHILADELPHIA, PA. 19103

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
TIMOTHY F. BOLES

NAME: TIMOTHY F. BOLES
P.E. #: 043690E

PWD 10021902

37TH STREET FROM FILBERT STREET TO MARKET STREET

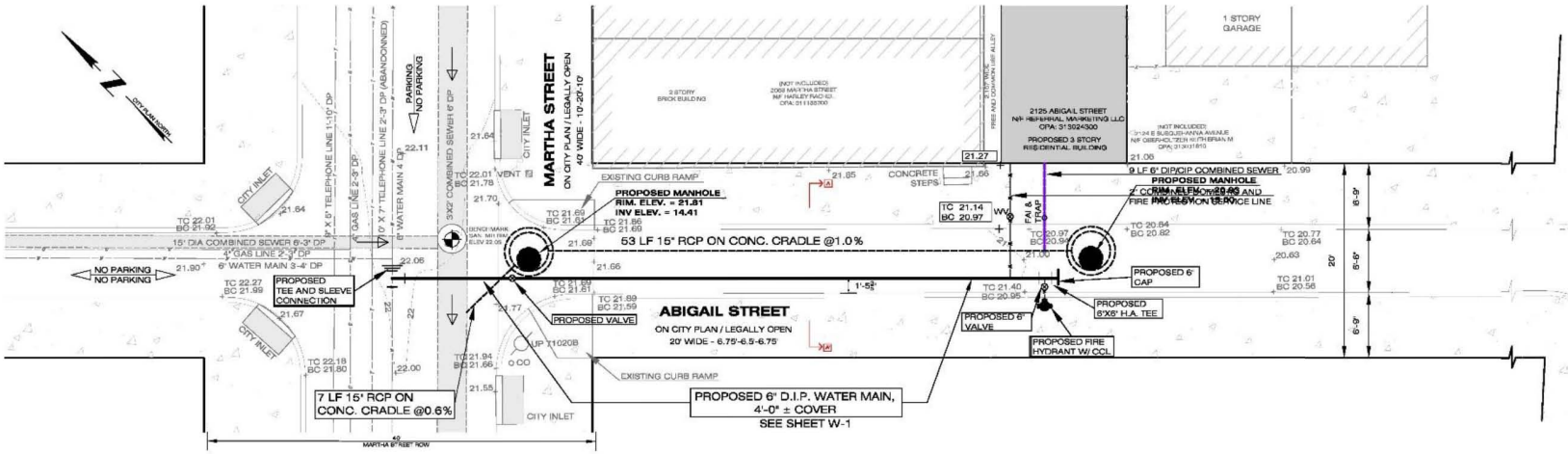
APPROVED BOLES SMYTH ASSOCIATES INC.

CITY OF PHILADELPHIA
WATER DEPARTMENT

SCALES:
PLAN: 1"=20'
PROFILE: HORIZ: 1"=20'
VERT: 1"= 5'

DRAWN BY	TJR	DATE 07/22/16
TRACED BY		DATE
CHECKED BY	TFB	DATE 07/22/16
HIGHWAY SUP.		DATE
SUPERVISOR		DATE

WORK NO. S-40945-AC
WORK NO. S-5 OF 8



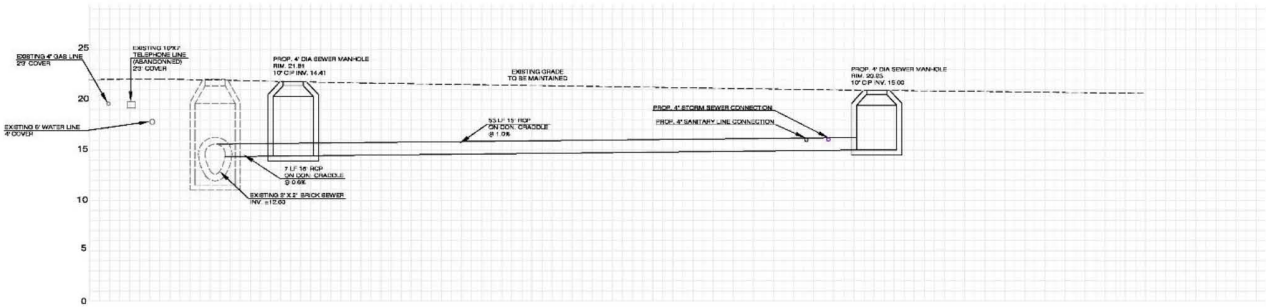
LEGEND

EXISTING FEATURES

- TELECOM MANHOLE
- WATER MANHOLE
- ELECTRICAL MANHOLE
- SANITARY MANHOLE
- CITY INLET
- FIRE HYDRANT
- WATER VALVE
- UTILITY POLE
- SIGN
- LIGHT STANDARD
- DRILL HOLE
- SANITARY SEWER
- COMBINED SEWER
- UNDERGROUND WATER LINE
- UNDERGROUND GAS LINE
- UNDERGROUND ELECT. LINE
- OVERHEAD AERIAL LINE
- FENCE LINE
- EXISTING BUILDINGS
- PROPERTY LINE
- BENCH MARK

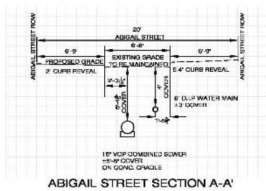
PROPOSED FEATURES

- XX.XX UNIT DIMENSIONS
- PROPOSED BUILDING
- ROOF DECK
- WATER MAIN
- SANITARY SEWER MAIN
- STORM SEWER LINE
- WATER VALVE
- FIRE HYDRANT



PROFILE VIEW
SCALE: 1" = 5'

CONTROLLING BENCHMARK:
Benchmark is a sanitary manhole at the intersection of Abigail Street and Martha Street at rim elevation 22.05'.



ABIGAIL STREET SECTION A-A'
1" = 5'

SEWER NOTES

1. ALL WORK TO BE DONE IN ACCORDANCE WITH THE CITY OF PHILADELPHIA WATER DEPARTMENT 'STANDARD DETAILS & STANDARD SPECIFICATIONS FOR SEWERS', 1985 EDITION.
2. THE CONTRACTOR PERFORMING THE WATER & SEWER INSTALLATION MUST BE PRE-QUALIFIED BY THE PHILADELPHIA WATER DEPARTMENT (PWD). CONTACT MR. BRIAN MOHL OF THE PROJECTS MANAGEMENT UNIT AT (215) 685-6388.
3. THE APPROVED WORK SHALL BE DONE IN THE PRESENCE OF A PWD INSPECTOR.
4. THE CONTRACTOR PERFORMING THIS WORK IS TO NOTIFY THE PWD CONSTRUCTION DIVISION, 1101 MARKET STREET, 2ND FLOOR, PHONE (215) 685-6341, AT LEAST 7 DAYS IN ADVANCE FOR ASSIGNMENT OF AN INSPECTOR TO THE JOB.
5. THE CONTRACTOR MUST PROVIDE OFFICE SPACE FOR USE BY THE PWD INSPECTOR DURING CONSTRUCTION.
6. APPROVAL OF THESE PLANS BY THE WATER DEPARTMENT IS STRICTLY LIMITED TO THE DESIGN OF SEWERS 15-INCHES IN DIAMETER AND LARGER SHOWN WITHIN THE LIMITS OF THE CITY OF PHILADELPHIA PUBLIC RIGHT-OF-WAY. ADDITIONAL APPROVALS AND PERMITS ARE REQUIRED FOR ALL DRAINAGE CONNECTIONS TO THE EXISTING PWD FACILITIES.
7. THE ELEVATION OF THE EXISTING SEWER AT THE CONNECTION POINT MUST BE FIELD-CHECKED PRIOR TO CONSTRUCTING THE NEW SEWER.
8. FIELD-FABRICATED WYE BRANCHES AND BENDS ARE NOT PERMITTED. ALL HOUSE LATERAL CONNECTIONS TO BE MADE WITH PREFABRICATED VCP FITTINGS.
9. A LIST OF ALL MATERIALS AND SUPPLIERS MUST BE SUBMITTED TO THE PWD CONSTRUCTION BRANCH FOR APPROVAL.
10. THE CONTRACTOR OR ENGINEER IS RESPONSIBLE FOR OBTAINING ALL ADDITIONAL PERMITS AND APPROVALS FROM ALL AFFECTED CITY AGENCIES AND UTILITIES.
11. PRIOR TO OBTAINING A BUILDING PERMIT, THE CONTRACTOR IS REQUIRED TO OBTAIN A PWD STORMWATER MANAGEMENT APPROVAL, AND SEWAGE FACILITIES PLANNING (ACT 537) APPROVAL.
12. ANY CHANGE OR DEVIATION FROM THE FINAL APPROVED DESIGN PLANS DURING CONSTRUCTION MUST BE APPROVED BY THE ASSIGNED PWD-CONSTRUCTION DIVISION ENGINEER AND BY THE PWD DESIGN BRANCH PROJECT ENGINEER.
13. PWD RESERVES THE RIGHT TO REQUEST ADDITIONAL BORINGS DURING CONSTRUCTION SHOULD THE SOIL EXCAVATED IN THAT AREA APPEAR TO BE UNSUITABLE.
14. ALL SEWER WORK MUST BE PERFORMED IN TRENCHES. OPEN CUT OR BENCHING WILL NOT BE PERMITTED. OAK TIMBER SHORING MUST BE USED TO SUPPORT ADJACENT STRUCTURES AND UNDERGROUND UTILITIES AND IN ACCORDANCE WITH OSHA STANDARDS CFR29 PART 1926.650 SUBPART - P EXCAVATIONS. ANY TRENCH WHERE THE CUT IS DEEPER THAN 10 FEET WILL REQUIRE A DETAILED SHORING PLAN PREPARED BY A REGISTERED PROFESSIONAL ENGINEER TO BE SUBMITTED TO PWD FOR APPROVAL BEFORE WORK CAN BEGIN.
15. PLACE AND COMPACT BACKFILL IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR EXCAVATION, RETILLING, GRADING, LANDSCAPING AND REPAVING, EXCEPT AS HEREIN MODIFIED.
16. THE ABANDONED SEWER MANHOLE COVERS SHALL BE REMOVED AND DELIVERED INTACT TO THE PWD SEWER MAINTENANCE YARD AT FOX STREET AND ASSHTSFORD AVENUE.
17. ALL ACTIVE DRAINAGE LATERALS TO BE RECONNECTED TO THE NEW SEWER.
18. THE THICKNESS OF THE EXISTING SEWER PIPE AND THE CHARACTERISTICS AND EXTENT OF THE PIPE CRADLES ARE UNKNOWN.
19. DEPENDING ON THE CONDITION OF THE EXISTING BRICK PIPE AT THE POINT OF CONNECTION, IT MAY BE NECESSARY TO CONSTRUCT A MANHOLE AT THE DISCRETION OF THE PWD-CONSTRUCTION ENGINEER.
20. THE CONTRACTOR MUST ENSURE THAT NO EXISTING WATER SERVICES OR PRIVATE SEWER LINES ARE AFFECTED BY THIS WORK. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY PUBLIC OR PRIVATE PROPERTY DAMAGES, FINES, ENVIRONMENTAL CLEAN-UPS, LOSS OF SERVICE, ETC SHOULD THIS WORK AFFECT ANY PRIVATE OR PUBLIC UTILITY OR SERVICE LINE NOT SHOWN.

NOTICE

PURSUANT TO THE REQUIREMENTS OF PENNSYLVANIA ACT 287 OF 1974, AS AMENDED, THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776, AT LEAST 3-10 BUSINESS DAYS PRIOR TO EXCAVATION.

HIGHWAY DISTRICT NO. 3
SURVEY DISTRICT NO. 5
ONE CALL NO. 20163192047

WARD NO. 31
DRAINAGE PLAT NO. 42
WATER PLAT NO. 39
OUTFALL NO. D-39

prepared for:
Reel Construction
1145 Forrest Street, Suite 300
Conshohocken, PA 19428

prepared by:
RUGGIERO PLANTE LAND DESIGN
4220 Main Street
Philadelphia, PA 19127

prepared by:

PRIVATE COST SEWER CONSTRUCTION

2125 ABIGAIL STREET

ABIGAIL STREET

From Martha St. to Trenton Ave.

APPROVED _____ DAVID J. PLANTE (PA NO. PE-043560-E) RUGGIERO PLANTE LAND DESIGN

APPROVED _____ GENERAL MANAGER PLANNING & ENGINEERING

APPROVED _____ WATER COMMISSIONER

WORK NO. S-41020-AC

SHEET NO. S-1 OF ___

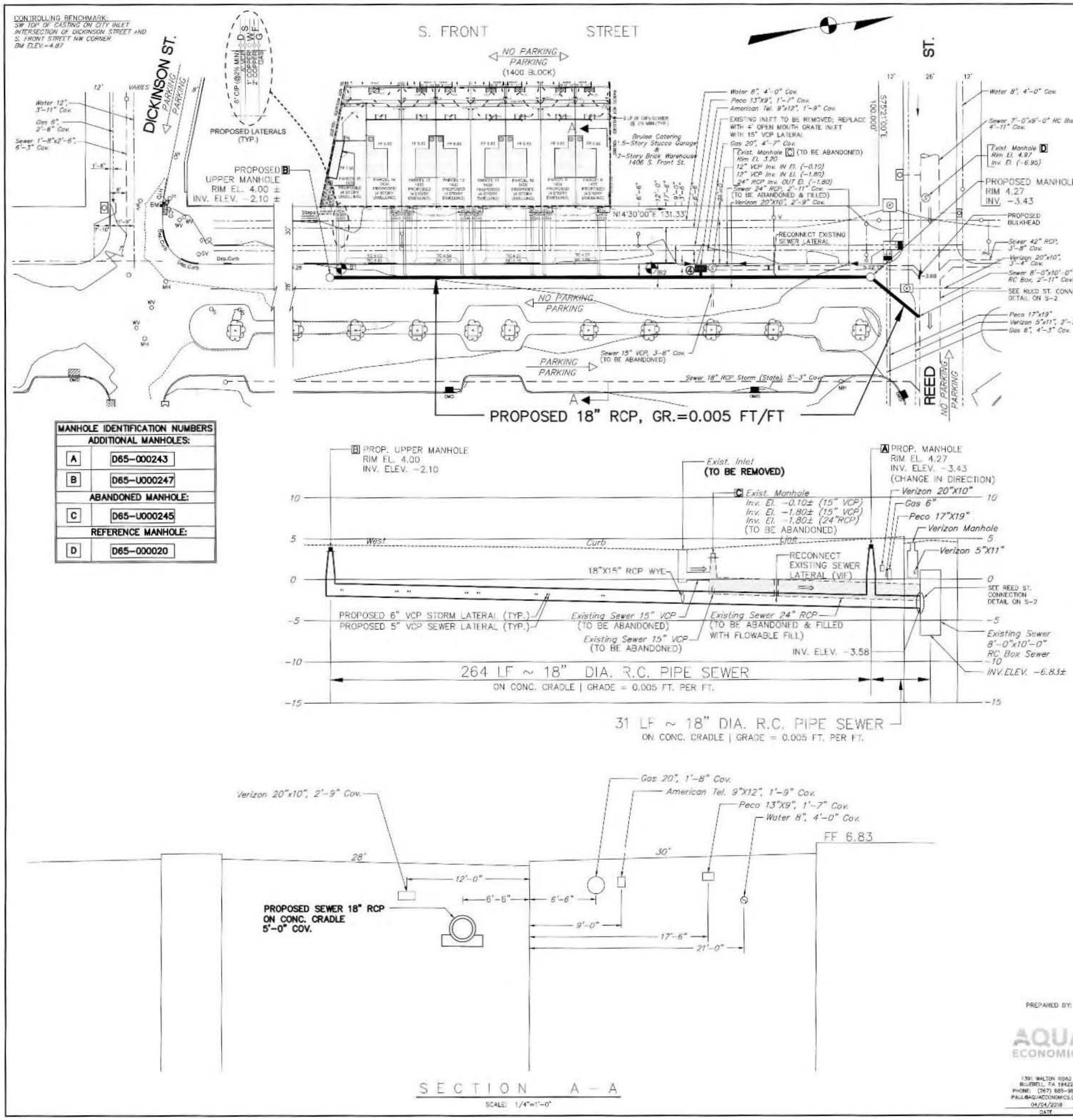
DAVID J. PLANTE (PA NO. PE-043560-E)

CITY OF PHILADELPHIA
WATER DEPARTMENT

SCALES:

PLAN SCALE: 1" = 5'

DRAWN BY	RGP	11/22/16
PROJECT ENG'R	DJP	
SUPERVISOR		DATE



MANHOLE IDENTIFICATION NUMBERS	
ADDITIONAL MANHOLES:	
A	D65–000243
B	D65–U000247
ABANDONED MANHOLE:	
C	D65–U000245
REFERENCE MANHOLE:	
D	D65–000020

SEWER NOTES:

1. ALL WORK TO BE DONE IN ACCORDANCE WITH THE CITY OF PHILADELPHIA WATER DEPARTMENT "STANDARD DETAILS & STANDARD SPECIFICATIONS FOR SEWERS", 1985 EDITION
2. THE CONTRACTOR PERFORMING THE WATER & SEWER INSTALLATION MUST BE PREQUALIFIED BY THE PHILADELPHIA WATER DEPARTMENT (PWD). CONTACT MR. BRIAN MOHL OF THE PROJECTS MANAGEMENT UNIT (215)685-6338
3. THE APPROVED WORK SHALL BE DONE IN THE PRESENCE OF A PWD INSPECTOR.
4. THE CONTRACTOR PERFORMING THIS WORK IS TO NOTIFY THE PWD CONSTRUCTION DIVISION, 1101 MARKET STREET, 2ND FLOOR, (215)685-6345, AT LEAST 7 DAYS IN ADVANCE FOR ASSIGNMENT OF AN INSPECTOR TO THE JOB.
5. THE CONTRACTOR MUST PROVIDE OFFICE SPACE FOR USE BY THE PWD INSPECTOR DURING CONSTRUCTION.
6. APPROVAL OF THESE PLANS BY THE WATER DEPARTMENT IS STRICTLY LIMITED TO THE DESIGN OF SEWERS 15-INCH IN DIAMETER AND LARGER SHOWN WITHIN THE LIMITS OF THE CITY OF PHILADELPHIA PUBLIC RIGHT-OF-WAY. ADDITIONAL APPROVALS AND PERMITS ARE REQUIRED FOR ALL DRAINAGE CONNECTIONS TO THE EXISTING PWD FACILITIES.
7. CONTACT MR. ERIK SMITH, PWD-WATER TRANSPORT RECORDS, 1101 MARKET STREET, 2ND FLOOR, PHONE (215) 685-6270, FOR ADDITIONAL APPROVALS AND PERMITS REQUIRED FOR ALL SEWER CONNECTIONS TO THE EXISTING AND/OR PROPOSED PWD FACILITIES.
8. THE ELEVATION OF THE EXISTING SEWER AT THE CONNECTION POINTMUST BE FIELD CHECKED PRIOR TO CONSTRUCTING THE NEW SEWER.
9. FIELD FABRICATED WYE BRANCHES AND BENDS ARE NOT PERMITTED.
10. A LIST OF ALL MATERIALS AND SUPPLIERS MUST BE SUBMITTED TO THE PWD CONSTRUCTION BRANCH FOR APPROVAL.
11. THE CONTRACTOR OR ENGINEER IS RESPONSIBLE FOR OBTAINING ALL ADDITIONAL PERMITS AND APPROVALS FROM ALL AFFECTED CITY AGENCIES AND UTILITIES.
12. ALL DRAINAGE LATERAL CONNECTIONS TO EXISTING OR PROPOSED RCP IS TO BE MADE WITH RESILIENT SADDLE CONNECTIONS.
13. PRIOR TO OBTAINING A BUILDING PERMIT, THE CONTRACTOR IS REQUIRED TO OBTAIN PWD STORMWATER MANAGEMENT APPROVAL AND SEWAGE FACILITIES PLANNING (ACT 537) APPROVAL.
14. ANY CHANGE TO OR DEVIATION FROM, THE FINAL APPROVED DESIGN PLANS DURING CONSTRUCTION MUST BE APPROVED BY THE ASSIGNED PWD CONSTRUCTION DIVISION ENGINEER AND BY THE PWD DESIGN BRANCH PROJECT ENGINEER.
15. PWD RESERVES THE RIGHT TO REQUEST ADDITIONAL BORINGS DURING CONSTRUCTION SHOULD THE SOIL EXCAVATED IN THAT AREA APPEAR TO BE UNSTABLE.
16. ALL SEWER WORK MUST BE PERFORMED IN TRENCHES. OPEN CUT OR BENCHING WILL NOT BE PERMITTED. OAK TIMBER SHORING MUST BE USED TO SUPPORT ADJACENT STRUCTURES AND UNDERGROUND UTILITIES, AND IN ACCORDANCE WITH OSHA STANDARDS CFR29, PART 1926-650, SUBPART-P EXCAVATIONS. ANY TRENCH WHERE THE CUT IS DEEPER THAN 10 FEET WILL REQUIRE A DETAILED SHORING PLAN PREPARED BY A REGISTERED PROFESSIONAL ENGINEER TO BE SUBMITTED TO PWD FOR APPROVAL BEFORE WORK CAN BEGIN.
17. PLACE AND COMPACT BACKFILL IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR EXCAVATION, REFILLING, GRADING, LANDSCAPING AND REPAVING.
18. ALL DISTANCES SHOWN ARE IN DISTRICT STANDARD MEASUREMENT. PAYMENT FOR ALL WORK WILL BE BASED UPON THAT STANDARD.
19. THE LOCATIONS AND ELEVATIONS OF THE EXISTING SEWERS ARE APPROXIMATE. THE ELEVATIONS OF THE EXISTING SEWER AT THE TERMINATING CONNECTION POINTS TO THE PROPOSED SEWER MUST BE FIELD CHECKED PRIOR TO CONSTRUCTING THE NEW SEWER.
20. THE THICKNESS OF THE ARCHES AND THE CHARACTER AND THE EXTENT OF THE CRADLES OF THE EXISTING SEWERS ARE UNKNOWN.
21. ALL COVER DIMENSIONS ARE TAKEN TO TOP OF STRUCTURE.
22. ALL ACTIVE DRAINAGE LATERALS TO BE RECONNECTED TO THE NEW SEWER PRIOR TO ABANDONING THE EXISTING 24" RCP SEWER.
23. MAINTAIN AND PROTECT EXISTING INLETS. SHOULD THE EXISTING INLETS BE IN ANY WAY DAMAGED DURING CONSTRUCTION, THESE SHOULD BE REPAIRED TO THE SATISFACTION OF THE PWD INSPECTOR OR REPLACED PER PWD STANDARDS.

GENERAL NOTES:

1. CONTACT THE STREETS DEPARTMENT, AT LEAST TWO WEEKS PRIOR TO CONSTRUCTION, FOR ROADWAY OPENING PERMIT, PAVING & TRENCH RESTORATION PROCEDURE, AND LANE CLOSURE PERMIT. CHECK THE DEPARTMENTS WEBSITE FOR DETAILS AND CONTAC INFORMATION. http://www.philadelphiastreets.com/customer-service/downloads-and-links
2. STEEL PLATE FOR DECKING
   A. DURING WORKING HOURS ESTABLISH AND MAINTAIN TRAVEL LANES USING STEEL PLATES AND FLAGMEN AS NECESSARY TO ALLOW THROUGH TRAFFIC. DURING NON-WORKING HOURS, BACKFILL OR DECK WITH STEEL PLATES ALL EXCAVATIONS.
   B. ALL STEEL PLATE SHALL BE ADEQUATELY SECURED TO THE SURFACE TO PREVENT LATERAL MOVEMENT AVOIDING AN UNSAFE CONDITION.
   C. THE SIZE OF THE STEEL PLATE SHALL BE LARGE ENOUGH TO SPAN THE OPENING, BE FIRMLY PLACED TO PREVENT ROCKING AND SHALL OVERLAP THE EDGES OF TRENCHES AND OPENINGS AND BE SUFFICIENTLY RAMPED TO PROVIDE SMOOTH RIDING AND SAFE CONDITION.
   D. WHERE DEFLECTIONS ARE MORE THAN ½", HEAVIER SECTIONS OF PLATES OR IMMEDIATE SUPPORTS SHALL BE INSTALLED.
   E. PRIOR TO PLACING ANY STEEL PLATING, THE CONTRACTOR SHALL PROVIDE THE RIGHT OF WAY UNIT OF THE DEPT. OF STREETS INSPECTOR WITH AN EMERGENCY TELEPHONE NUMBER IN THE EVENT ANY STEEL PLATING OR DECKING IS DISLODGED. UPON NOTICE FROM THE CITY, THE CONTRACTOR SHALL REMOVE OR RESTORE ANY IS LODGED STEEL PLATING OR DECKING TO A SAFE CONDITION WITHIN SIX HOURS UPON RECEIPT OF NOTICE BY THE CITY. IN THE EVENT IT BECOMES NECESSARY FOR THE CITY TO RESTORE OR REMOVE ANY STEEL PLATING OR DECKING, THE CONTRACTOR SHALL REIMBURSE THE CITY FOR ALL COSTS.
   F. THE LOCATION OF ANY STEEL PLATE REMAINING IN THE PUBLIC RIGHT OF WAY FOR MORE THAN 72 HOURS MUST BE REPORTED TO THE STREETS DEPARTMENT DURING BUSINESS HOURS AT (215) 686-5501.

LEGEND

	tree–w/size
CC	coal chute
	fence
TS	traffic sign
MB	mail box
FH	fire hydrant
TL	traffic light
FA	fire alarm box
V	vent box
G	gas box
W	water box
MP	metal post
SP	SEPTA pole
	electrolysis test sta.
PM	parking meter
	PECO Pole
	PECO Pole w/Light
	Private Property Light
DS	downspout
F	Unknown Curb Box
CATV	cable TV box
SI	street light
+221.78	First Flr. Elev.
	steps
	cellar doors
	porch
	exist. grate inlet
CI#2	exist. city inlet
	exist. O.M.G.I.
	window grate
C. Curb	concrete curb
C. Dr.	concrete driveway
D.C.	Depressed curb
Gr. Curb	Granite curb
St. Curb	Stone curb
H/R	handicap ramp
C. Ftw.	concrete footway
Br. Ftw.	brick footway
Sl. Ftw.	slate footway
Gr. Ftw.	granite footway
S.R.L.	Sewer Return Loc.
S.R.E.	Sewer Return Elev.
SS	survey stone
BM	benchmark
	Water Manhole
	Sewer Manhole
	PECO Manhole
	Verizon Manhole
	Sewer Flow Arrow
	Exist. Water Line
	Exist. Sewer Line
	Exist. Gas Line
	Exist. Verizon Line
	Prop. Sewer Line
	Prop. Water Line
	Existing 1' Contour
	Prop. Utility Laterals W=Water F=Fire D=Storm (Drainage) Sewer S=Sanitary Sewer
	Flowable Fill Material
B1	Soil Boring
	Trees centered in 5'x5' Planters (Typ.)
	Proposed Accessible Ramp

PROJECT: PENNSPORT POINTE

(FY17–PENN–4547–01)

NOTICE:
PURSUANT TO THE REQUIREMENTS OF PA ACT 287 OF 1974 (THE UNDERGROUND UTILITY LINE PROTECTION ACT), AS AMENDED, THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM AT 1–800–242–1776, AT LEAST 3 DAYS PRIOR TO EXCAVATION.

HIGHWAY DISTRICT NO. 2 WARD NO. 1 OUTFALL NO. D–65 GPIS NO. G2017–00853
SURVEY DISTRICT NO. 2 SEWER PLAT NO. 21 PA ONE CALL SERIAL NO. 20162382946

PRIVATE COST SEWER

PREPARED FOR:
PROJECT OWNER:
1422 S FRONT ASSOCIATES, LLC
CASEY LAFFERTY
1 W. 3RD ST.
MEDIA, PA 19063

CONTACT: LOUIS SCRENCI
PHONE: 267-450-5570
EMAIL: louis.scrcnci@gmail.com

PREPARED BY:
AQUA ECONOMICS
1391 WALTON ROAD
BLUEBELL, PA 19422
PHONE: (267) 685-9875
PAUL@AQUAECONOMICS.COM
04/04/2018
DATE

SHANE McALEER, P.E.

S. FRONT STREET
FROM
REED ST. TO DICKINSON ST.

PWD 1003095

APPROVED — AQUA ECONOMICS & ENGINEERING, LLC
APPROVED — GENERAL MANAGER, PLANNING & ENGINEERING
APPROVED — WATER COMMISSIONER

CITY OF PHILADELPHIA WATER DEPARTMENT

SCALES:
PLAN 1" = 20'
PROFILE HORZ. 1" = 20'
VERT. 1" = 5'

MFR 4/13/18

WORK NO. S–41055–A (2 SHEETS)
SHEET NO. 1 OF 2 SHEETS

DRAWN BY	AQUA	04/04/2018
PROJECT ENGR.	AQUA - MU	04/04/2018
SUPERVISION		DATE

PROJECT BENCHMARK:

VERTICAL DATUM IS CITY DATUM. PROJECT BENCHMARK TAKEN FROM A FADED PINK PINK PAINT MARK AT THE SOUTHWESTERLY CORNER OF THE ELEVATED PORTION OF THE LOADING DOCK (NORTHEASTERLY CORNER OF THE WAREHOUSE BUILDING) AT PENN AND ELLEN STREETS, ELEVATION 9.33 (NGVD29 ELEVATION MEASURED AT 15.153').

GENERAL NOTES:

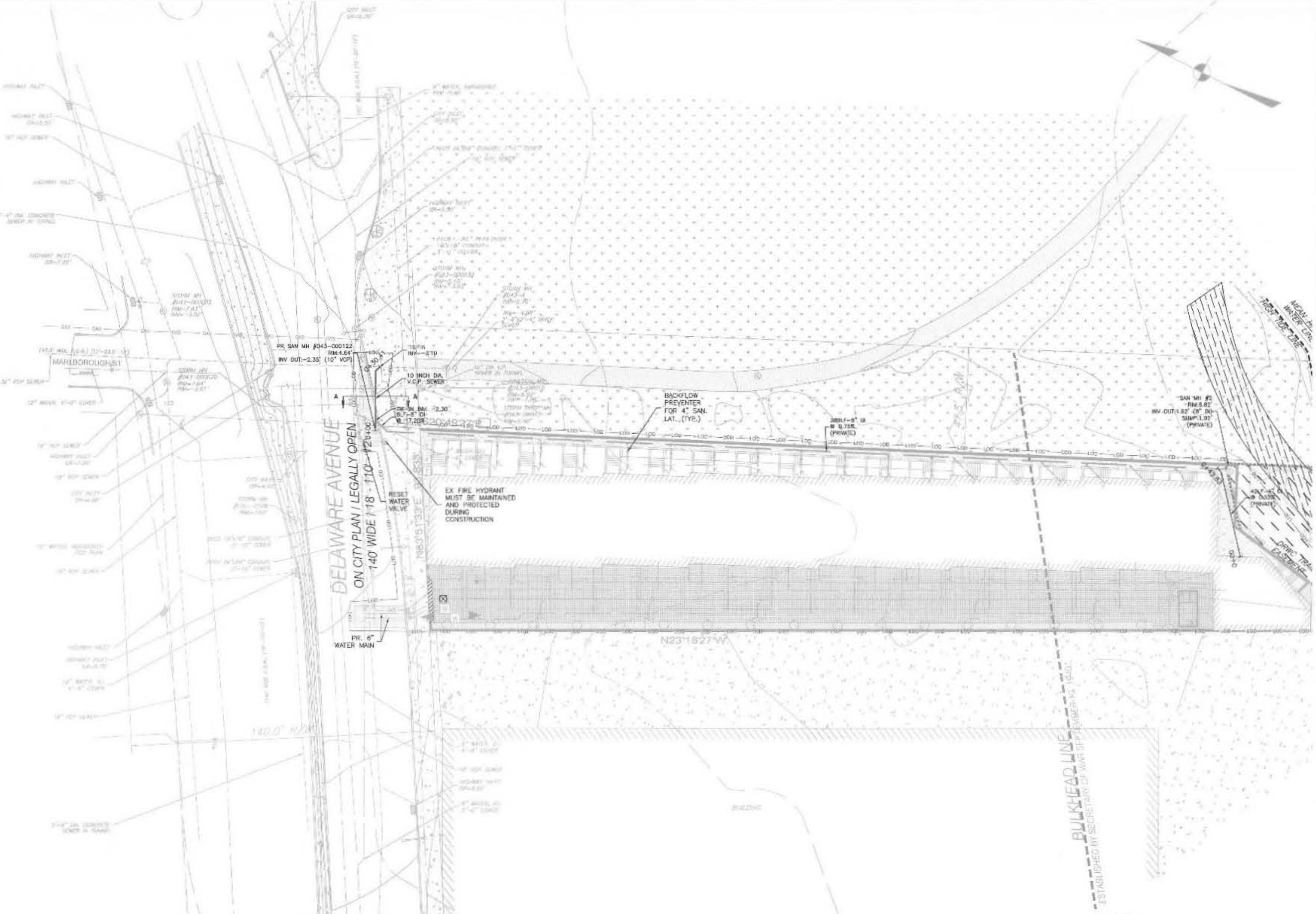
1. CONTACT THE STREETS DEPARTMENT, AT LEAST TWO WEEKS PRIOR TO CONSTRUCTION, FOR THE FOLLOWING:

ROADWAY OPENING PERMIT:	JOHN SCANLON RIGHT-OF-WAY UNIT 1401 JFK BLVD, MSB-940 PHILADELPHIA, PA 19102-1685 215-686-5525, FAX: 215-686-5062 JOHN.SCANLON@PHILA.GOV
PAVING & TRENCH RESTORATION PROCEDURE:	NANCY SEN PROJECT & PROGRAMMING DIRECTOR 215-686-5507 NANCY.SEN@PHILA.GOV
LANE CLOSURE PERMITS:	JOHN SCANLON STREETS DEPARTMENT – HIGHWAYS 1401 JFK BLVD, MSB-980 PHILADELPHIA, PA 19102-1685 215-686-5525 JOHN.SCANLON@PHILA.GOV

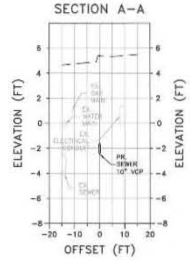
2. STEEL PLATE FOR DECKING.
   A. DURING THE WORKING HOURS, ESTABLISH AND MAINTAIN TRAVEL LANES USING STEEL PLATES AND FLAGMEN AS NECESSARY TO ALLOW THROUGH TRAFFIC. DURING NON-WORKING HOURS, BACKFILL OR DECK WITH STEEL PLATES ALL EXCAVATIONS.
   B. ALL STEEL PLATE SHALL BE ADEQUATELY SECURED TO THE SURFACE TO PREVENT LATERAL MOVEMENT AVOIDING AN UNSAFE CONDITION.
   C. THE SIZE OF THE STEEL PLATE SHALL BE LARGE ENOUGH TO SPAN THE OPENING, BE FIRMLY PLACED TO PREVENT ROCKING AND SHALL OVERLAP THE EDGES OF THE TRENCHES AND OPENINGS AND BE SUFFICIENTLY RAMPED TO PROVIDE SMOOTH RIDING AND SAFE CONDITION.
   D. WHERE DEFLECTIONS ARE MORE THAN ¾", HEAVIER SECTIONS OF PLATES OR IMMEDIATE SUPPORTS SHALL BE INSTALLED.
   E. PRIOR TO PLACING ANY STEEL PLATING, THE CONTRACTOR SHALL PROVIDE THE RIGHT OF WAY UNIT OF THE DEPARTMENT OF STREETS INSPECTOR WITH AN EMERGENCY TELEPHONE NUMBER IN THE EVENT ANY STEEL PLATING OR DECKING IS DISLODGED. UPON NOTICE FROM THE CITY, THE CONTRACTOR SHALL REMOVE OR RESTORE ANY DISLODGED STEEL PLATING OR DECKING TO A SAFE CONDITION WITHIN SIX HOURS UPON RECEIPT OF NOTICE BY THE CITY. IN THE EVENT IT BECOMES NECESSARY FOR THE CITY TO RESTORE OR REMOVE ANY STEEL PLATING OR DECKING, THE CONTRACTOR SHALL REIMBURSE THE CITY FOR ALL COSTS.
   F. THE LOCATION OF ANY STEEL PLATE REMAINING IN THE PUBLIC RIGHT OF WAY FOR MORE THAN 72 HOURS MUST BE REPORTED TO THE STREETS DEPARTMENT DURING BUSINESS HOURS AT 215-686-5501.

WATER AND SEWER NOTES:

1. ALL WORK TO BE DONE IN ACCORDANCE WITH THE CITY OF PHILADELPHIA WATER DEPARTMENT "STANDARD DETAILS & STANDARD SPECIFICATIONS FOR SEWERS", AND THE CITY OF PHILADELPHIA WATER DEPARTMENT "WATER MAIN STANDARD DETAILS & CORROSION CONTROL SPECIFICATIONS1985 EDITION.
2. THE CONTRACTOR PERFORMING THE WATER & SEWER INSTALLATION MUST BE PREQUALIFIED BY THE PHILADELPHIA WATER DEPARTMENT (PWD). CONTACT MR. BRIAN MOHL OF THE PROJECTS MANAGEMENT UNIT AT (215) 685-6339.
3. THE APPROVED WORK SHALL BE DONE IN THE PRESENCE OF A PWD INSPECTOR.
4. THE CONTRACTOR PERFORMING THIS WORK IS TO NOTIFY THE PWD CONSTRUCTION DIVISION, 1101 MARKET STREET, 2ND FLOOR, PHONE (215) 685-6345, AT LEAST 7 DAYS IN ADVANCE FOR ASSIGNMENT OF AN INSPECTOR TO THE JOB.
5. THE CONTRACTOR MUST PROVIDE OFFICE SPACE FOR USE BY THE PWD INSPECTOR DURING CONSTRUCTION.
6. APPROVAL OF THESE PLANS BY THE WATER DEPARTMENT IS STRICTLY LIMITED TO THE DESIGN OF SEWERS 15-INCHES IN DIAMETER AND LARGER SHOWN WITHIN THE LIMITS OF THE CITY OF PHILADELPHIA PUBLIC RIGHT OF WAY. ADDITIONAL APPROVALS AND PERMITS ARE REQUIRED FOR ALL DRAINAGE CONNECTIONS TO THE EXISTING PWD FACILITIES.
7. CONTACT MR. ERIK SMITH, PWD-WATER TRANSPORT RECORDS, 1101 MARKET STREET, 2ND FLOOR, PHONE (215) 685-6270, FOR ADDITIONAL APPROVALS AND PERMITS REQUIRED FOR ALL WATER AND SEWER CONNECTIONS TO THE EXISTING AND/OR PROPOSED PWD FACILITIES.
8. THE ELEVATION OF THE EXISTING SEWER AT THE CONNECTION POINT MUST BE FIELD-CHECKED BY THE CONTRACTOR IN THE PRESENCE OF A PWD INSPECTOR PRIOR TO CONSTRUCTING THE NEW SEWER.
9. FIELD-FABRICATED WYE BRANCHES AND BENDS ARE NOT PERMITTED.
10. A LIST OF ALL MATERIALS AND SUPPLIERS MUST BE SUBMITTED TO THE PWD CONSTRUCTION BRANCH FOR APPROVAL.
11. THE CONTRACTOR OR ENGINEER IS RESPONSIBLE FOR OBTAINING ALL ADDITIONAL PERMITS AND APPROVALS FROM ALL AFFECTED CITY AGENCIES AND UTILITIES.
12. PRIOR TO OBTAINING A BUILDING PERMIT, THE CONTRACTOR IS REQUIRED TO OBTAIN PWD STORMWATER MANAGEMENT APPROVAL, AND SEWAGE FACILITIES PLANNING (ACT 537)APPROVAL.
13. ANY CHANGE TO, OR DEVIATION FROM, THE FINAL APPROVED DESIGN PLANS DURING CONSTRUCTION MUST BE APPROVED BY THE ASSIGNED PWD-CONSTRUCTION DIVISION ENGINEER AND BY THE PWD-DESIGN BRANCH PROJECT ENGINEER.
14. PWD RESERVES THE RIGHT TO REQUEST ADDITIONAL BORINGS DURING CONSTRUCTION SHOULD THE SOIL EXCAVATED IN THAT AREA APPEAR TO BE UNSUITABLE.
15. ALL SEWER WORK MUST BE PERFORMED IN TRENCHES. OPEN CUT OR BENCHING WILL NOT BE PERMITTED. OAK TIMBER SHORING MUST BE USED TO SUPPORT ADJACENT STRUCTURES AND UNDERGROUND UTILITIES, AND IN ACCORDANCE WITH OSHA STANDARDS CFR29, PART 1926- 650 SUBPART – P EXCAVATIONS. ALTERNATIVE SHORING METHODS MUST BE APPROVED BY PWD-CONSTRUCTION DIVISION ENGINEER.
16. ANY TRENCH WHERE THE CUT IS DEEPER THAN 10 FEET WILL REQUIRE A DETAILED SHORING PLAN PREPARED BY A REGISTERED PROFESSIONAL ENGINEER TO BE SUBMITTED TO PWD FOR APPROVAL BEFORE WORK CAN BEGIN.
17. PLACE AND COMPACT BACKFILL IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR EXCAVATION, REFILLING, GRADING, LANDSCAPING AND REPAVING.
18. MAINTAIN AND PROTECT EXISTING INLETS. SHOULD THE EXISTING INLETS BE IN ANY WAY DAMAGED DURING CONSTUCTION, THESE SHOULD BE REPAIRED TO THE SATISFACTION OF THE PWD INSPECTOR OR REPLACED PER PWD STANDARDS.
19. ALL ACTIVE WATER SERVICES ARE TO BE RECONNECTED TO THE NEW MAIN IN ACCORDANCE WITH THE PHILADELPHIA PLUMBING CODE.
20. "D" PERMITS ARE REQUIRED FOR ALL EXISTING CONNECTIONS THAT ARE TO BE ABANDONED.



SECTION A-A



NOTICE

PURSUANT TO THE REQUIREMENTS OF PENNSYLVANIA ACT 287 OF 1974 (THE UNDERGROUND UTILITY LINE PROTECTION ACT), AS AMENDED, THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM AT 811 OR 1-800-242-1776, 3 TO 10 WORKING DAYS PRIOR TO EXCAVATION.

HIGHWAY DISTRICT NO. 3 WARD NO. 0521
SURVEY DISTRICT NO. 5 SEWER PLAT NO. 38
ONE CALL NO. ______ OUTFALL NO. D-43

PWD 10025842

PRIVATE COST

PREPARED FOR
PENN TREATY VIEWS, LLC
630 NORTH 3RD STREET
PHILADELPHIA, PA 19123

PREPARED BY
URBAN ENGINEERS
UEI PROJ. NO. 2017280141

SEWER CONNECTION AT N. DELAWARE AVE.
FROM
PIER 53 TO N. DELAWARE AVE.

APPROVED [signature] URBAN ENGINEERS, INC.
APPROVED [signature] GENERAL MANAGER, PLANNING & ENGINEERING
APPROVED [signature] WATER COMMISSIONER

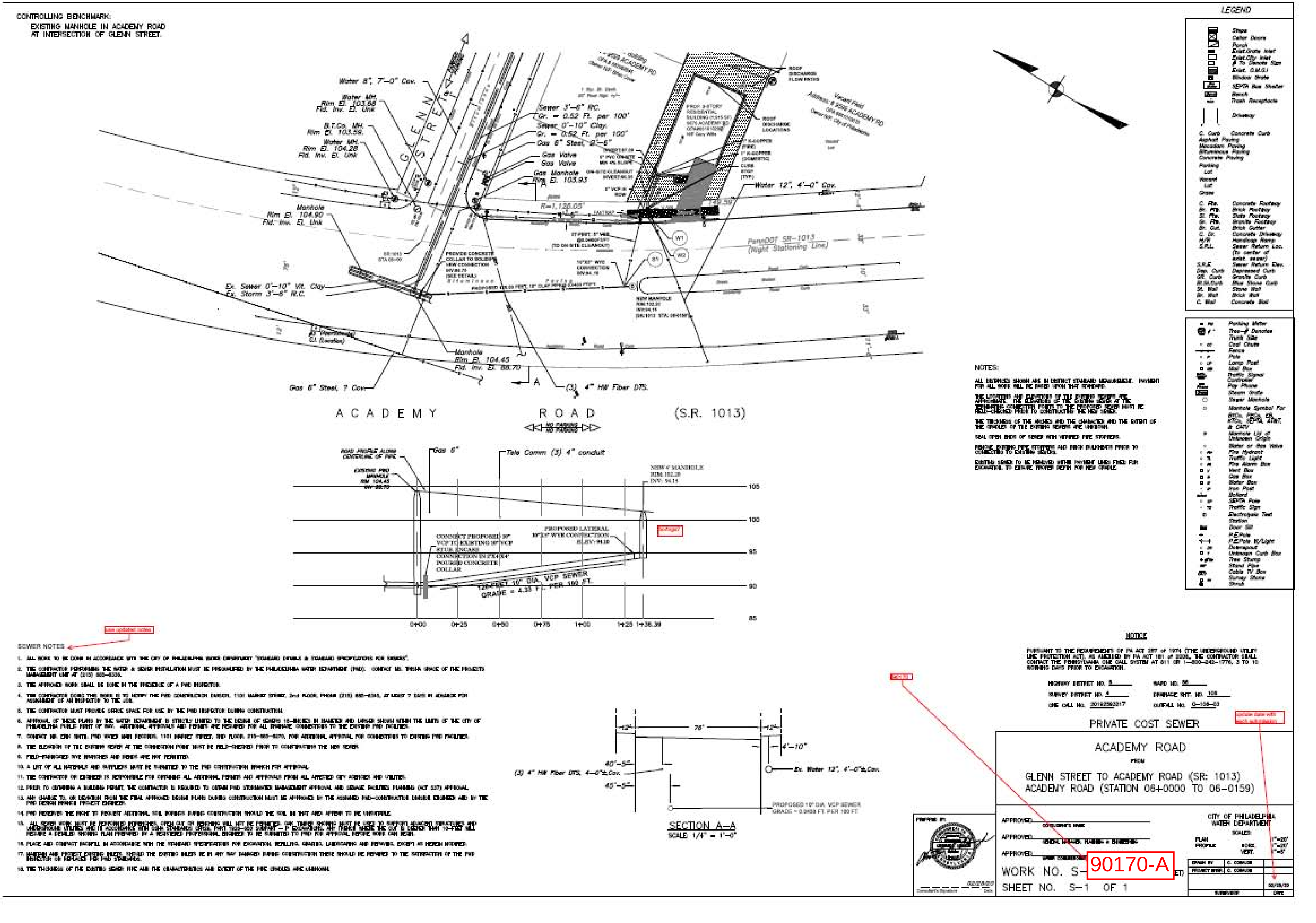
CITY OF PHILADELPHIA
WATER DEPARTMENT

SCALE:
PLAN 1"=20'
AND AS SHOWN

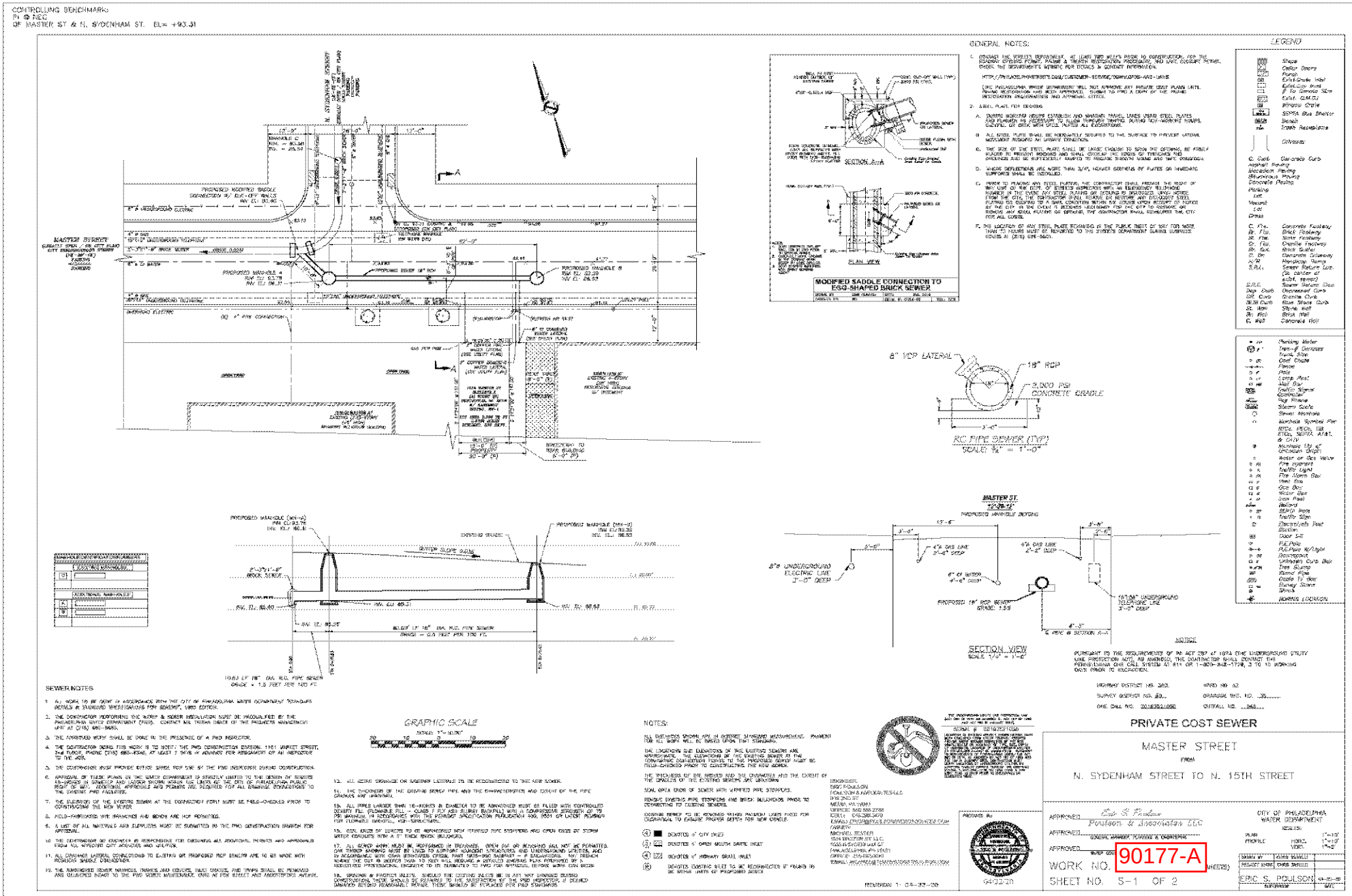
6/6/18

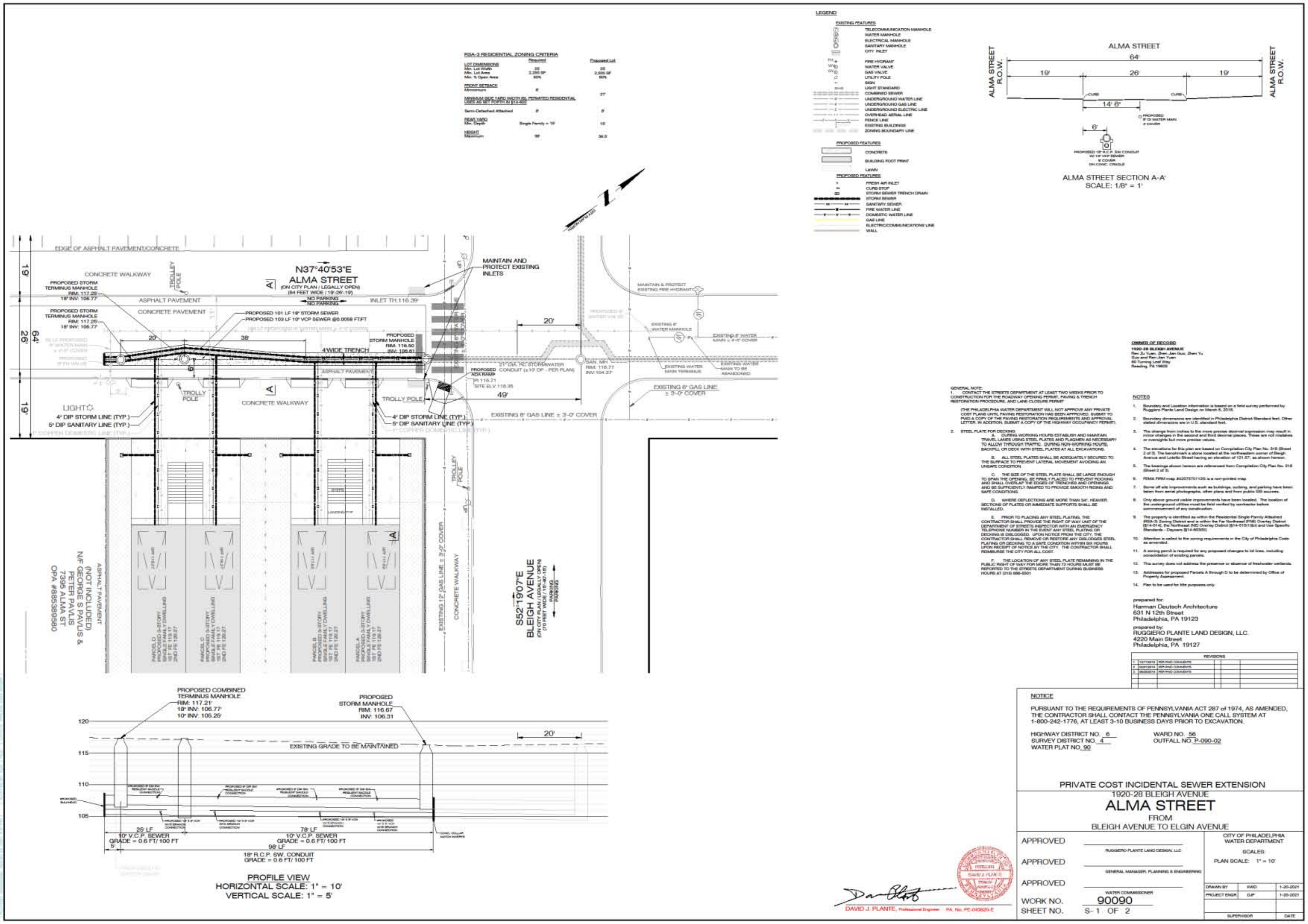
WORK NO. 90031
SHEET NO. S-1 OF 2

DRAWN GCB		04/13/18
CHECKED MJT		04/13/18
	SUPERVISOR	DATE



CONTROLLING BENCHMARK:
EXISTING MANHOLE IN ACADEMY ROAD AT INTERSECTION OF GLENN STREET.
LEGEND
GLENN STREET
Water 8", 7'-0" Cov.
Sewer 3'-6" R.C.
Sewer 0'-10" Clay.
Gas 6" Steel
Gas Valve
Gas Manhole
Water 12", 4'-0" Cov.
R=1,136.05'
PennDOT SR-1013 (Right Stationing Line)
Manhole Rim El. 104.90
Ex. Sewer 0'-10" Vit. Clay
Ex. Storm 3'-6" R.C.
Manhole Rim El. 104.45 Fld. Inv. El. 88.70
Gas 6" Steel, 7' Cov.
(3) 4" HW Fiber DTS.
ACADEMY ROAD (S.R. 1013)
NO PARKING
NOTES:
Gas 6"
Tele Comm (3) 4" conduit
NEW 4' MANHOLE
PROPOSED LATERAL
CONNECT PROPOSED 10" VCP TO EXISTING 18" VCP
10" DIA. VCP SEWER
105
100
95
90
85
0+00
0+25
0+50
0+75
1+00
1+25
1+36.39
SEWER NOTES
SECTION A-A
SCALE: 1/4" = 1'-0"
76'
12'
4'-10"
Ex. Water 12", 4'-0"±Cov.
(3) 4" HW Fiber DTS, 4-0"±Cov.
PROPOSED 10" DIA. VCP SEWER
NOTICE
PRIVATE COST SEWER
ACADEMY ROAD
FROM
GLENN STREET TO ACADEMY ROAD (SR: 1013)
ACADEMY ROAD (STATION 06+0000 TO 06-0159)
APPROVED
CITY OF PHILADELPHIA WATER DEPARTMENT
WORK NO. S-90170-A
SHEET NO. S-1 OF 1


CONTROLLING BENCHMARKS
PI # NEC
OF MASTER ST & N. SYDENHAM ST. Elev. +93.31
GENERAL NOTES:
LEGEND
MODIFIED SADDLE CONNECTION TO EGG-SHAPED BRICK SEWER
8" VCP LATERAL
18" RCP
3,000 PSI CONCRETE CRADLE
RC PIPE SEWER (TYP)
SCALE 3/4" = 1'-0"
SECTION VIEW
SCALE 1/4" = 1'-0"
SEWER NOTES
GRAPHIC SCALE
NOTES:
PRIVATE COST SEWER
MASTER STREET
FROM
N. SYDENHAM STREET TO N. 15TH STREET
CITY OF PHILADELPHIA
WATER DEPARTMENT
APPROVED
Poulson & Associates LLC
APPROVED
WORK NO. 90177-A
SHEET NO. S-1 OF 2
ERIC S. POULSON


ALMA STREET
64'
19'
26'
19'
14' 6"
ALMA STREET R.O.W.
ALMA STREET SECTION A-A'
SCALE: 1/8" = 1'
N37°40'53"E
ALMA STREET
CONCRETE WALKWAY
ASPHALT PAVEMENT
MAINTAIN AND PROTECT EXISTING INLETS
TROLLY POLE
LIGHT
4" DIP STORM LINE (TYP.)
5" DIP SANITARY LINE (TYP.)
EXISTING 6" GAS LINE ± 3'-0" COVER
EXISTING 8" GAS LINE ± 3'-0" COVER
S52°19'07"E
BLEIGH AVENUE
PROPOSED COMBINED TERMINUS MANHOLE
RIM: 117.21'
18" INV: 106.77'
10" INV: 105.25'
PROPOSED STORM MANHOLE
RIM: 116.67
INV: 106.31
EXISTING GRADE TO BE MAINTAINED
PROFILE VIEW
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'
NOTICE
PURSUANT TO THE REQUIREMENTS OF PENNSYLVANIA ACT 287 of 1974, AS AMENDED, THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776, AT LEAST 3-10 BUSINESS DAYS PRIOR TO EXCAVATION.
HIGHWAY DISTRICT NO. 6
SURVEY DISTRICT NO. 4
WATER PLAT NO. 90
WARD NO. 56
OUTFALL NO. P-090-02
PRIVATE COST INCIDENTAL SEWER EXTENSION
1920-28 BLEIGH AVENUE
ALMA STREET
FROM
BLEIGH AVENUE TO ELGIN AVENUE
CITY OF PHILADELPHIA WATER DEPARTMENT
APPROVED
APPROVED
APPROVED
WORK NO. 90090
SHEET NO. S-1 OF 2
prepared for:
Harman Deutsch Architecture
631 N 12th Street
Philadelphia, PA 19123
prepared by:
RUGGIERO PLANTE LAND DESIGN, LLC.
4220 Main Street
Philadelphia, PA 19127
DAVID J. PLANTE

INDUSTRIAL WASTE UNIT

2020

INDEX

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From: 01-01-2020 To: 12-31-2020 Report Date: 03-25-2021

Section I. General Information

Northeast Water Pollution Control Plant-- NPDES PERMIT NO: PA0026689

Reporting Period: From: 01/01/2020 To: 12/31/2020 Report Date: 03/25/2021

The following sections are provided to meet the pretreatment reporting requirements of the Chapter 94 Report for the City's Northeast Water Pollution Control Plant (NEWPCP). In essence[1], these sections are the same as those submitted to the EPA as the City's Pretreatment Annual Report[2] but formatted to include information for the NEWPCP only.

- Sections I.a. – I.d. provide the list of significant industrial users (SIUs) permitted to discharge to the NEWPCP (i.e. list of facilities under a control document). Section I.d. provides any additions or deletions from the previous reporting year.

- Sections II.a. – II.b. provide the definition of significant noncompliance, which would be deemed a significant permit violation and require various levels of enforcement, and the list of SIUs in significant noncompliance during the reporting period.

- Sections III.a. – III.f. provide lists of all SIUs with permit violations (i.e. SIU's receiving written notices of violation), SIUs on compliance schedules (formal and informal), SIUs on which fines were assessed and SIUs subject to civil or criminal law suits during the reporting period.

- Section IV. provides a narrative summary of any episodes of interference or pass through at the NEWPCP during the reporting period.

In addition to this annual report, the City also prepares a Local Limit Evaluation[3] as required per the issuance of the NPDES Permit. This report evaluates industrial pollutant loadings and background pollutant loadings and compares them to plant monitoring data to ensure compliance with all applicable regulations and calculates local limits when necessary.

1- This report specifically formatted for the PADEP omits the sections that pertain to the Compliance Monitoring Program, POTW Operations, and Pretreatment Program Changes.
2- The City's Pretreatment Annual Report as submitted to the EPA can be supplied upon request.
3- The City's Current Local Limit Evaluation as submitted to the EPA and PADEP can be supplied upon request.

Section I.a. Summary of Significant Industrial Users (SIUs)

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From: 01-01-2020 To: 12-31-2020 Report Date: 03-25-2021

There are **50** active categorical SIUs in the drainage basin of the Northeast Water Pollution Control Plant (NEWPCP). Categorical SIUs are those who perform a categorically regulated process. See Section I.b. for an updated listing. Categorical SIUs have numerical limits as well as other reporting requirements.

Other SIUs are classified as significant because of their flow, high strength or because they have the potential to cause an interference or pass through. There are **28** dischargers that are in this classification. See Section I.c. for an updated listing.

The following is the significant industrial user definition as it appears in the City's wastewater control regulations:

The term Significant Industrial User shall mean the following:

(a) Any Industrial User subject to any National Categorical Pretreatment Standard; or

(b) Any Industrial User that discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, non-contact cooling and boiler blowdown wastewater) or contributes a process wastestream which makes up five percent (5%) or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or

(c) Any Industrial User that is found by the City, DEP, or EPA to have a reasonable potential, either alone or in conjunction with other discharges, to adversely affect the POTW, the collector system, the Solid Waste Byproducts of the POTW or air emissions from the POTW.

Section I.b. Categorical Significant Industrial Users

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Total Number of Industrial Users: 50

Company Name & Address	Permit Number & Effective Date	Category	Description
A & R Logistics, Inc. 4301 N. Delaware Avenue Philadelphia, PA 19137	IU-00021 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 442 Subpart A	Transportation Equipment Cleaning, Truck/Chemical and Petroleum
Abbey Color Incorporated 400 E. Tioga St Philadelphia, PA 19134	IU-00050 Effective : 1/1/2021 Expire : 12/31/2025	40 CFR 414	Organic Chemicals, Plastics, and Synthetic Fibers
Acme Heat Treating Co. 4626 Hedge Street Philadelphia, PA 19124	IU-99614 Effective : 1/1/2020 Expire : 1/1/2024	40 CFR 433 Subpart A	Metal Finishing
Advance Technologies 2925 E. Ontario Street Philadelphia, PA 19134	IU-00110 Effective : 1/1/2019 Expire : 12/31/2023	40 CFR 414	Organic Chemicals, Plastics, and Synthetic Fibers
AdvanSix Resins & Chemicals, LLC 2501 Margaret St Philadelphia, PA 19137-1193	IU-02490 Effective : 1/1/2021 Expire : 12/31/2025	40 CFR 414	Organic Chemicals, Plastics, and Synthetic Fibers
AgustaWestland Philadelphia Corporation 3050-3076 Red Lion Rd Philadelphia, PA 19114	IU-00130 Effective : 1/1/2021 Expire : 12/31/2025	40 CFR 433 Subpart A	Metal Finishing
Amuneal Manufacturing Corp 4219-4243 Torresdale Ave Philadelphia, PA 19124	IU-00246 Effective : 1/1/2021 Expire : 12/31/2025	40 CFR 433 Subpart A	Metal Finishing
Amuneal Manufacturing Corp 4737 Darrah Street Philadelphia, PA 19124	IU-00245 Effective : 1/1/2018 Expire : 12/31/2022	40 CFR 433.15(PSES) 40 CFR 468 Subpart A 40 CFR 467 Subpart D	Metal Finishing-Existing Source Copper Forming Aluminum Forming, Forging

Section I.b. Categorical Significant Industrial Users

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Total Number of Industrial Users: 50

Company Name & Address	Permit Number & Effective Date	Category	Description
AstraZeneca PLP 3031 Red Lion Road Philadelphia, PA 19114	IU-01550 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 439 Subpart D	Pharmaceutical Manufacturing, Mixing, Compounding and Formulating
Brenner Aerostructure, LLC 450-3 Winks Lane Bensalem, PA 19020	IU-00390 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 433 Subpart A	Metal Finishing
C. Lever Company, Inc. 736 Dunks Ferry Rd Bensalem, PA 19020	IU-00425 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 414 Subpart H	Organic Chemicals, Plastics and Synthetic Fibers, Specialty Organic Chemicals
Catalent Pharma Solutions 3031 Red Lion Road Philadelphia, PA 19114	IU-00480 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 439 Subpart D	Pharmaceutical Manufacturing, Mixing, Compounding and Formulating
Computer Components Corporation 2751 Southampton Road Philadelphia, PA 19154	IU-00580 Effective : 1/1/2018 Expire : 12/31/2022	40 CFR 433 Subpart A	Metal Finishing
Custom Powder Coatings, Inc. 8451 Hegerman St Philadelphia, PA 19136	IU-00650 Effective : 1/1/2018 Expire : 12/31/2022	40 CFR 433 Subpart A	Metal Finishing
DGM Custom Polishing & Finishing Corporation 8301 Torresdale Avenue Philadelphia, PA 19136	IU-00720 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 433 Subpart A	Metal Finishing
Finish Tech Corporation 90 Industrial Drive Ivyland, PA 18974	IU-99630 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 433 Subpart A	Metal Finishing
Fluitron Inc. 30 Industrial Drive Ivyland, PA 18974	IU-99632 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 433 Subpart A	Metal Finishing

Section I.b. Categorical Significant Industrial Users

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Total Number of Industrial Users: 50

Company Name & Address	Permit Number & Effective Date	Category	Description
Frankford Plating Inc. 2505 Orthodox Street Philadelphia, PA 19137	IU-00860 Effective : 1/1/2018 Expire : 12/31/2022	40 CFR 413 Subpart A 40 CFR 413 Subpart B	Electroplating, Common Metals Electroplating, Precious Metals
Frontida BioPharm 1100 Orthodox St Philadelphia, PA 19124	IU-01690 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 439 Subpart D	Pharmaceutical Manufacturing, Mixing, Compounding and Formulating
Garfield Refining Company 810 E. Cayuga Street Philadelphia, PA 19124	IU-00900 Effective : 1/1/2019 Expire : 12/31/2023	40 CFR 421 Subpart X	Non-ferrous Metals Manufacturing, Secondary Precious Metals
Gill Powder Coating 1384 Byberry Road Bensalem, PA 19020	IU-00960 Effective : 1/1/2021 Expire : 12/31/2025	40 CFR 433 Subpart A	Metal Finishing
Gill Powder Coating 1340 Ford Road Bensalem, PA 19020	IU-00961 Effective : 7/1/2017 Expire : 12/31/2021	40 CFR 433	Metal Finishing
Harold Beck & Sons 11 Terry Drive Newtown, PA 18940	IU-99655 Effective : 7/1/2019 Expire : 12/31/2023	40 CFR 433 Subpart A	Metal Finishing
Hillock Anodizing, Inc. 5101 Comly Street Philadelphia, PA 19135	IU-01040 Effective : 1/1/2018 Expire : 12/31/2022	40 CFR 433 Subpart A	Metal Finishing
Hillock Anodizing, Inc. 7363A Tulip Street Philadelphia, PA 19136	IU-01041 Effective : 1/1/2018 Expire : 12/31/2022	40 CFR 433 Subpart A	Metal Finishing
II-VI Optical Systems 2710 Commerce Way Philadelphia, PA 19154-1016	IU-01511 Effective : 1/1/2018 Expire : 12/31/2022	40 CFR 433 Subpart A	Metal Finishing

Section I.b. Categorical Significant Industrial Users

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Total Number of Industrial Users: 50

Company Name & Address	Permit Number & Effective Date	Category	Description
IVD, LLC 10101 Roosevelt Blvd Philadelphia, PA 19154	IU-00690 Effective : 1/1/2019 Expire : 12/31/2023	40 CFR 439 Subpart D	Pharmaceutical Manufacturing, Mixing, Compounding and Formulating
J.P. Cerini Technologies, Inc. 4600 N. Fairhill St Philadelphia, PA 19140	IU-01160 Effective : 1/1/2018 Expire : 12/31/2022	40 CFR 433 Subpart A	Metal Finishing
James Abbott, Inc. 2105-11 E.Wishart Street Philadelphia, PA 19134	IU-01180 Effective : 1/1/2021 Expire : 12/31/2025	40 CFR 433 Subpart A	Metal Finishing
Jerith Manufacturing LLC 14400 McNulty Road Philadelphia, PA 19154	IU-02850 Effective : 8/1/2018 Expire : 12/31/2022	40 CFR 433 Subpart A	Metal Finishing
KVK Tech 110 Terry Drive Newtown, PA 18940	IU-99763 Effective : 7/1/2019 Expire : 12/31/2023	40 CFR 439 Subpart D	Pharmaceutical Manufacturing, Mixing, Compounding and Formulating
Medical Products Laboratories 490 Red Lion Road Philadelphia, PA 19115	IU-01541 Effective : 1/1/2021 Expire : 12/31/2025	40 CFR 439 Subpart D	Pharmaceutical Manufacturing, Mixing, Compounding and Formulating
Medical Products Laboratories 9990 Global Road Philadelphia, PA 19115	IU-01540 Effective : 1/1/2021 Expire : 12/31/2025	40 CFR 439 Subpart D	Pharmaceutical Manufacturing, Mixing, Compounding and Formulating
Mid Atlantic Circuits 1001-B Pulinski Road Ivyland, PA 18974	IU-01615 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 433 Subpart A	Metal Finishing
Model Finishing Co., Inc. 4949 Cottman Avenue Philadelphia, PA 19135	IU-01620 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 433 Subpart A	Metal Finishing

Section I.b. Categorical Significant Industrial Users

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Total Number of Industrial Users: 50

Company Name & Address	Permit Number & Effective Date	Category	Description
Newman & Company, Inc. 6101 Tacony St. Philadelphia, PA 19135	IU-01780 Effective : 1/1/2017 Expire : 12/31/2021	40 CFR 430 Subpart J	Pulp, Paper, and Paperboard, Secondary Fiber Non-Deink
Petroleum Recycling Corporation 3000 E. Ontario Street Philadelphia, PA 19134	IU-01970 Effective : 11/1/2018 Expire : 12/31/2022	40 CFR 437 Subpart B	Centralized Waste Treatment, Oils Treatment and Recovery
Philadelphia Rust-Proof Company, Inc. 2086 E. Willard Street Philadelphia, PA 19134	IU-02080 Effective : 1/1/2017 Expire : 12/31/2021	40 CFR 413 Subpart A 40 CFR 433 Subpart A 40 CFR 413 Subpart B 40 CFR 413 Subpart E	Electroplating, Common Metals Metal Finishing Electroplating, Precious Metals Electroplating, Coatings
Podcon, Inc 1000 E. Mermaid Lane Wyndmoor, PA 19038-8093	IU-01590 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 433 Subpart A	Metal Finishing
Premier Medical (MFG) 10090 Sandmeyer Lane Philadelphia, PA 19116	IU-02150 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 433 Subpart A	Metal Finishing
Purolite Company 3620 G Street Philadelphia, PA 19134	IU-02170 Effective : 1/1/2021 Expire : 12/31/2025	40 CFR 414	Organic Chemicals, Plastics, and Synthetic Fibers
Qualawash Holdings, LLC 1000 Imperial Road Bensalem, PA 19020	IU-02185 Effective : 1/1/2017 Expire : 12/31/2021	40 CFR 442 Subpart A	Transportation Equipment Cleaning, Truck/Chemical and Petroleum
SigmaPharm Laboratories 3375 Progress Drive Bensalem, PA 19020	IU-99688 Effective : 7/1/2019 Expire : 12/31/2023	40 CFR 439 Subpart D	Pharmaceutical Manufacturing, Mixing, Compounding and Formulating

Section I.b. Categorical Significant Industrial Users

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Total Number of Industrial Users: 50

Company Name & Address	Permit Number & Effective Date	Category	Description
SigmaPharm Laboratories 3399 Progress Drive Bensalem, PA 19020	IU-99687 Effective : 7/1/2019 Expire : 12/31/2023	40 CFR 439 Subpart D	Pharmaceutical Manufacturing, Mixing, Compounding and Formulating
SPS Technologies 301 Highland Avenue Jenkintown, PA 19046	IU-02420 Effective : 1/1/2021 Expire : 12/31/2025	40 CFR 433 Subpart A	Metal Finishing
Stockwell Elastomerics, Inc. 4749 Tolbut St Philadelphia, PA 19136	IU-02455 Effective : 1/1/2019 Expire : 12/31/2023	40 CFR 428	Rubber Manufacturing
UCT Specialties, Inc. 2731 Bartram Road Bristol, PA 19007	IU-02590 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 414	Organic Chemicals, Plastics, and Synthetic Fibers
United Color Manufacturing 2940 E. Tioga Street Philadelphia, PA 19134	IU-02600 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 447 Subpart A 40 CFR 414 Subpart H	Ink Formulating, Oil-Based Solvent Wash Ink Organic Chemicals, Plastics and Synthetic Fibers, Specialty Organic Chemicals
Vibroplating, Inc. 353 Camer Drive Bensalem, PA 19020	IU-02650 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 433 Subpart A	Metal Finishing
Visco, Inc. 65 Richard Rd. Warminster, PA 18974	IU-99631 Effective : 1/1/2020 Expire : 12/31/2024	40 CFR 433 Subpart A	Metal Finishing

Section I.c. Non-Categorical Significant Industrial Users

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Total Number of Industrial Users: 28

Company Name & Address	Permit Number & Effective Date	Organization Type
Arway Linen and Uniform Rental 1696 Foulkrod Street Philadelphia, PA 19124	IU-00290 Effective : 1/1/2019 Expire : 12/31/2023	SN-IU
Barnell, Inc. 5101 Comly Street Philadelphia, PA 19135	IU-01830 Effective : 1/1/2020 Expire : 12/31/2024	SN-IU
Bethayres Reclamation Corp. 2310 Terwood Drive Huntingdon Valley, PA 19006	IU-00370 Effective : 1/1/2019 Expire : 12/31/2023	SN-IU
Caledonian Dye Works, Inc. 3300 Emerald Street Philadelphia, PA 19134	IU-00430 Effective : 1/1/2017 Expire : 12/31/2021	SN-IU
Cardone Industries, Inc. 5660 Rising Sun Avenue Philadelphia, PA 19120	IU-00470 Effective : 1/1/2018 Expire : 12/31/2022	SN-IU
Cintas Corporation 10080 Sandmeyer Ln Philadelphia, PA 19116	IU-00530 Effective : 1/1/2020 Expire : 12/31/2024	SN-IU
Clean Rental Services, Inc. 4352 N. American Street Philadelphia, PA 19140	IU-00550 Effective : 1/1/2020 Expire : 12/31/2024	SN-IU
Dietz & Watson, Inc. 5701 Tacony St Philadelphia, PA 19135	IU-00740 Effective : 1/1/2018 Expire : 12/31/2022	SN-IU
Domestic Uniform Rental 4100 Frankford Ave Philadelphia, PA 19124	IU-00750 Effective : 1/1/2020 Expire : 12/31/2024	SN-IU
Elite Linen 4361 Elizabeth Street Philadelphia, PA 19124	IU-00815 Effective : 1/1/2019 Expire : 12/31/2023	SN-IU

Section I.c. Non-Categorical Significant Industrial Users

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Total Number of Industrial Users: 28

Company Name & Address	Permit Number & Effective Date	Organization Type
Evoqua Water Technologies LLC 95 Lower Morrisville Rd. Fallsington, PA 19054	IU-02620 Effective : 1/1/2020 Expire : 12/31/2024	SN-IU
Fleetwash, Inc. 786 Haunted Lane Bensalem, PA 19020	IU-00840 Effective : 1/1/2020 Expire : 12/31/2024	SN-IU
HP Hood, LLC 10975 Dutton Rd Philadelphia, PA 19154	IU-01061 Effective : 1/1/2018 Expire : 12/31/2022	SN-IU
I. Rice 11500D Roosevelt Blvd Philadelphia, PA 19116	IU-01090 Effective : 1/1/2021 Expire : 12/31/2025	SN-IU
Kinder-Morgan Liquid Terminals 3300 N. Delaware Avenue Philadelphia, PA 19134	IU-01250 Effective : 1/1/2017 Expire : 12/31/2021	SN-IU
Liberty Coca-Cola Beverages LLC 725 E. Erie Avenue Philadelphia, PA 19134	IU-02000 Effective : 4/25/2018 Expire : 12/31/2021	SN-IU
Michel's Bakery, Inc. 5698 Rising Sun Ave Philadelphia, PA 19120	IU-01610 Effective : 1/1/2017 Expire : 12/31/2021	SN-IU
Mrs. Ressler's Food Products 5501 Tabor Avenue Philadelphia, PA 19120	IU-01641 Effective : 1/1/2019 Expire : 12/31/2023	SN-IU
N. Jonas & Co., Inc. 1301 Adams Road Bensalem, PA 19020	IU-01720 Effective : 1/1/2017 Expire : 12/31/2021	SN-IU
Neatsfoot Oil Corporation 2925 E. Ontario Street Philadelphia, PA 19134	IU-01760 Effective : 1/1/2017 Expire : 12/31/2021	SN-IU

Section I.c. Non-Categorical Significant Industrial Users

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Total Number of Industrial Users: 28

Company Name & Address	Permit Number & Effective Date	Organization Type
Northeast Donut Shops CML LLC 5201-11 Darrah Street Philadelphia, PA 19124	IU-01800 Effective : 1/1/2021 Expire : 12/31/2025	SN-IU
Original Philly Holdings - Hunting Park 520 E. Hunting Park Ave Philadelphia, PA 19124-6009	IU-01990 Effective : 1/1/2021 Expire : 12/31/2025	SN-IU
Original Philly Holdings - North American 4001 N. American St. Philadelphia, PA 19140	IU-02070 Effective : 1/1/2020 Expire : 12/31/2024	SN-IU
Pepsi Beverages Company 11701 Roosevelt Blvd Philadelphia, PA 19154	IU-01940 Effective : 1/1/2017 Expire : 12/31/2021	SN-IU
Suez WTP USA, Inc 4636 Somerton Road Trevose, PA 19053	IU-00920 Effective : 2/26/2018 Expire : 12/31/2021	SN-IU
Tastepoint Inc. 10801 Decatur Road Philadelphia, PA 19154	IU-00670 Effective : 1/1/2021 Expire : 12/31/2025	SN-IU
Wayne Mills Corp. 130 W. Berkley Street Philadelphia, PA 19144	IU-02690 Effective : 1/1/2021 Expire : 12/31/2025	SN-IU
Zentis North America, LLC 1741 Tomlinson Rd Philadelphia, PA 19116	IU-02510 Effective : 1/1/2021 Expire : 12/31/2025	SN-IU

Section I.d. Changes From Previous Reporting

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Company Name & Address	Permit Number & Effective Date & Organization Type	Type of Change & Date	Reason
Acme Heat Treating Co. 4626 Hedge Street Philadelphia, PA 19124	IU-99614 Effective : 1/1/2020 Expire : 1/1/2024 Org. Type : C-IU	Added on Date: 1/1/2020	IU added to EPA Annual Report 01/01/2020 new facility began discharge
Coating Development Group Inc. 3450 East Allen St. Philadelphia, PA 19134	IU-00555 Effective : 1/1/2019 Expire : 12/31/2023 Org. Type : C-IU	Deleted on Date: 4/30/2020	IU deleted from EPA Annual Report 4/15/2020 closure statement received 4/30/2020 facility ceased discharge (Zero discharge company, finished closing out operations on this date)
Finish Tech Corporation 90 Industrial Drive Ivyland, PA 18974	IU-99630 Effective : 1/1/2020 Expire : 12/31/2024 Org. Type : C-IU	Added on Date: 1/1/2020	IU added to EPA Annual Report 01/01/2020 new facility began discharge
Fluitron Inc. 30 Industrial Drive Ivyland, PA 18974	IU-99632 Effective : 1/1/2020 Expire : 12/31/2024 Org. Type : C-IU	Added on Date: 1/1/2020	IU added to EPA Annual Report 01/01/2020 new facility began discharge
PolySat, Inc. 7240 State Rd Philadelphia, PA 19135	IU-02110 Effective : 1/1/2017 Expire : 12/31/2021 Org. Type : C-IU	Deleted on Date: 11/6/2020	IU deleted from EPA Annual Report 11/6/2020 facility closed--Zero discharge IU
Visco, Inc. 65 Richard Rd. Warminster, PA 18974	IU-99631 Effective : 1/1/2020 Expire : 12/31/2024 Org. Type : C-IU	Added on Date: 1/1/2020	IU added to EPA Annual Report 01/01/2020 new facility began discharge

Section II.a. Summary of SIU Compliance

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From: 01/01/2020 To: 12/31/2020 Report Date: 03/25/2021

While most permitted significant industrial users are complying with their permit limitations, it was found that 18/78 SIUs that discharge to NEWPCP were in significant noncompliance (SNC) during 2020.

The following is the significant noncompliance definition as it appears in the City's wastewater control regulations:

(1) If 33% or more of all samples taken for any single parameter during a six-month period demonstrate exceedances of any numeric Pretreatment Standard or Requirement, including the daily maximum effluent limitation, the monthly average limitation, and any instantaneous limits, as defined by:

(A) Any regulation containing pollutant discharge limits promulgated by the EPA in accordance with section 307(b) and (c) of the Act, which applies to Industrial Users. This term includes prohibitive discharge limits established pursuant to Section 501.5.

(2) Monitoring for any parameter less than 100% of the total sampling events required by the Permit.

(3) Discharging without the required Permit under these Regulations.

(4) Violation of any Pretreatment Standard or Requirement that the City determines has caused, either alone or in combination with any other discharges, interference or pass through (including endangering the health of POTW personnel or the general public).

(5) Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or the environment or has resulted in the City's exercise of its emergency authority.

(6) Violation by forty-five (45) days or more of the scheduled date of compliance with milestones for starting construction, completing construction, attaining final compliance or any other milestone event described in any compliance schedule.

(7) Failure to provide any required reports such as Baseline Monitoring Reports, 90 Day Compliance Reports, Periodic Compliance Reports, Spill or Slug Discharge Reports, Surcharge Reports, Responses to Notices of Violation or Notices of Significant Non-Compliance, Compliance Schedule Reports, Pretreatment Facilities Report or any other Report required by law or Permit within thirty (30) days after the report's due date.

(8) Failure to report noncompliance accurately.

(9) Violation of any Best Management Practice requirements or any other violation or group of violations that:

(A) adversely affects the operation or implementation of the local pretreatment program; or
(B) either alone or in conjunction with any other discharge causes harm to the POTW.

All companies that are in SNC are listed in a public notice in the Philadelphia Inquirer.

Section II.b. SIUs in Significant Noncompliance (SNC)

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Company	Reason	Additional Actions	Current Status	Prior Year SNC?
Evaluation Period 1: October to March				
Cintas Corporation (IU-00530)	Did not conduct wastewater monitoring in the month of February, 2020.	SNC / SCH, FINE	Compliance	Yes
Elite Linen (IU-00815)	Temperature monitoring violations.	SNC / SCH, FINE	Compliance	No
Evoqua Water Technologies LLC (IU-02620)	Ammonia effluent violations.	SNC	Compliance	No
II-VI Optical Systems (IU-01511)	Reporting violation--Failure to submit Semi-annual compliance report.	SNC / SCH, FINE	Compliance	No
KVK Tech (IU-99763)	Failure to submit Semi annual compliance report., Failure to submit Semi-annual Compliance report Due January 31, 2020, Monitoring violation January, February, and March 2020 failed to sample.	SNC / SCH, SNC, FINE	Compliance	Yes
Neatsfoot Oil Corporation (IU-01760)	Missing October Oil and Grease (HEM).	SNC, FINE	Compliance	No
SPS Technologies (IU-02420)	TTO effluent violations	SNC / SCH, FINE	Compliance	No
Evaluation Period 2: January to June				
Arway Linen and Uniform Rental (IU-00290)	Failure To Attain 100% Monitoring For All Permitted Parameters For The Month Of April 2020;	SNC, FINE	Compliance	Yes
Domestic Uniform Rental (IU-00750)	3 of 9 Local Organic Compounds samples (33.33%) exceeded permit limit of 2.13 mg/L.	SNC / SCH, FINE	Compliance	No

Section II.b. SIUs in Significant Noncompliance (SNC)

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Company	Reason	Additional Actions	Current Status	Prior Year SNC?
Evaluation Period 2: January to June				
Elite Linen (IU-00815)	LOC monitoring violation.	SNC / SCH, FINE	Compliance	No
Evoqua Water Technologies LLC (IU-02620)	Ammonia effluent violations.	SNC	Compliance	No
KVK Tech (IU-99763)	Monitoring violation April, May, and June 2020 failed to sample.	SNC, FINE	Compliance	Yes
Evaluation Period 3: April to September				
Elite Linen (IU-00815)	Monitoring violation-- No sample taken for August 2020.	SNC / SCH	Compliance	No
Finish Tech Corporation (IU-99630)	Reporting violation--Failure to submit Semi Annual Compliance Report	SNC, FINE	Compliance	No
Gill Powder Coating (IU-00960)	Monitoring violation--No samples were taken at 2 sample locations in August, except for pH.	SNC / SCH	Compliance	No
Gill Powder Coating (IU-00961)	Monitoring violation--No sample wae taken in August, except for pH.	SNC / SCH	Compliance	No
IVD, LLC (IU-00690)	Missed sample for all parameter in February.	SNC, FINE	Compliance	No
J.P. Cerini Technologies, Inc. (IU-01160)	Semiannual Compliance Report over 30 days late.	SNC / SCH, FINE	Compliance	No

Section II.b. SIUs in Significant Noncompliance (SNC)

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Company	Reason	Additional Actions	Current Status	Prior Year SNC?
Evaluation Period 3: April to September				
KVK Tech (IU-99763)	Failure to submit Semi annual compliance report., Monitoring violation--No samples were taken in July, August, and September 2020.	SNC, FINE	Compliance	Yes
UCT Specialties, Inc. (IU-02590)	Reporting--Semi Annual Compliance Report submitted over 30 days late.	SNC, FINE	Compliance	No
Evaluation Period 4: July to December				
A & R Logistics, Inc. (IU-00021)	Monitoring Violations--No sample was taken in October 2020.	SNC / SCH, FINE	Compliance	No
Custom Powder Coatings, Inc. (IU-00650)	Monitoring Violations--No cadmium, TTO or cyanide samples were taken in reporting period.	SNC / SCH, FINE	Compliance	No
Domestic Uniform Rental (IU-00750)	6 of 18 SGT-HEM results (33.33%) exceed permit limits of 100 mg/L.	SNC / SCH, FINE	Compliance	No
Elite Linen (IU-00815)	Reporting violation--Certification statement on form completely blank.	SNC / SCH	Compliance	No
Frankford Plating Inc. (IU-00860)	Failure to Monitor for Volatile Organic Compounds (method EPA 624) as part of the TTO sample taken 12/7/2020.	SNC / SCH, FINE	Compliance	Yes
Gill Powder Coating (IU-00960)	Zinc monthly average effluent violations,	SNC / SCH	Compliance	No
Gill Powder Coating (IU-00961)	Zinc daily and monthly effluent violations.	SNC / SCH	Compliance	No

Section III.a. SIUs Receiving Written Notices of Violation (NOVs)

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Permittees are subject to varying degrees of enforcement. Such enforcement actions include notices of violation (NOV), notices of significant noncompliance (SNC), and monetary penalties (fines).

37 Notices of Violation were issued to SIUs

Company	SNC Notice	NOV Notice
Arway Linen and Uniform Rental	1	2
Domestic Uniform Rental		2
Evoqua Water Technologies LLC	1	2
Finish Tech Corporation	1	1
Fleetwash, Inc.		1
Frankford Plating Inc.		1
Gill Powder Coating		1
Gill Powder Coating		2
II-VI Optical Systems		2
IVD, LLC	1	
J.P. Cerini Technologies, Inc.		1
Jerith Manufacturing LLC		3
KVK Tech	3	3
Liberty Coca-Cola Beverages LLC		1
Michel's Bakery, Inc.		1
Neatsfoot Oil Corporation	1	
Northeast Donut Shops CML LLC	1	
Petroleum Recycling Corporation		1
Premier Medical (MFG)		1
Qualawash Holdings, LLC		1
UCT Specialties, Inc.	1	
Visco, Inc.		1

Section III.b. SIUs Issued Administrative Orders

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Total Number of Industrial Users: 15

Company	Reason	Date Schedule Issued	Final Compliance Date	Type of Schedule	Current Status	Compliance Expected?
Frankford Plating Inc. IU-00860	Failure to Monitor for Volatile Organic Compounds (method EPA 624) as part of the TTO sample taken 12/7/2020.	2/11/2021	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes
J.P. Cerini Technologies, Inc. IU-01160	Semiannual Compliance Report over 30 days late.	8/31/2020	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes
Domestic Uniform Rental IU-00750	Effluent violations -- SGT-HEM	2/19/2021	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes
Domestic Uniform Rental IU-00750	Effluent violations -- LOC	8/10/2020	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes
Fleetwash, Inc. IU-00840	pH violation.	7/20/2020	Pending	Notice of violation containing a formal compliance schedule	Compliance	Yes
Custom Powder Coatings, Inc. IU-00650	Monitoring Violations-- No cadmium, TTO or cyanide samples were taken in reporting period.	2/22/2021	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes
Gill Powder Coating IU-00960	Zinc effluent and monitoring violations	2/16/2021	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes
SPS Technologies IU-02420	TTO effluent violations	2/26/2020	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes

Section III.b. SIUs Issued Administrative Orders

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Total Number of Industrial Users: 15

Company	Reason	Date Schedule Issued	Final Compliance Date	Type of Schedule	Current Status	Compliance Expected?
Cintas Corporation IU-00530	Monitoring violation-- No samples were taken in February.	8/10/2020	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes
II-VI Optical Systems IU-01511	Reporting violation-- Failure to submit Semi-annual compliance report.	3/12/2020	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes
Elite Linen IU-00815	LOC and temperature monitoring violations.	8/28/2020	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes
Elite Linen IU-00815	Reporting and monitoring violations.	3/2/2021	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes
A & R Logistics, Inc. IU-00021	Monitoring Violations-- No sample was taken in October 2020.	2/26/2021	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes
Gill Powder Coating IU-00961	Zinc daily and monthly effluent violations.	2/16/2021	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes
KVK Tech IU-99763	Failure to submit Semi-annual compliance report.	3/23/2020	Pending	SNC Notice of Violation Containing a Formal Compliance Schedule	Compliance	Yes

Section III.c. SIUs on Informal Compliance Schedules

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Company	Reason	Final Compliance Date	Current Status
No Users are on an Informal Compliance Schedule			

Section III. d. SIUs on Which Fines were Assessed

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From: 01/01/2020 To: 12/31/2020 Report Date: 03/25/2021

SIUs on Which Fines were Assessed				
Company	**Assessed**	**Collected Amount**	**Collected Date**	**Reason**
A & R Logistics, Inc.	$ 300	$Pending	Pending	Monitoring Violations – No sample taken in October 2020
Arway Linen and Uniform Rental	$ 300	$ 300	01/22/2021	Monitoring Violations – Failure to attain 100% Monitoring for all permitted parameters for the month of April 2020.
Cintas Corporation	$ 500	$ 500	08/25/2020	Monitoring Violations – No sample taken in February 2020
Custom Powder Coatings, Inc.	$ 300	$Pending	Pending	Monitoring Violations – No cadmium, TTO or cyanide samples were taken in reporting period.
Domestic Uniform Rental	$Pending	$Pending	Pending	Effluent Violations – SGT-HEM and pH.
Domestic Uniform Rental	$1,500	$1,500	08/27/2020	Effluent Violations – LOC
Elite Linen	$1,000	$1,000	10/13/2020	Monitoring Violations – Failure to monitor Temperature & LOC; No sample taken in August 2020. Reporting Violation – Blank Certification
Evoqua Water Technologies LLC	$Pending	$Pending	Pending	Effluent Violations – Ammonia
Finish Tech Corporation	$ 300	$ 300	01/03/2021	Reporting Violations – Semi Annual compliance report submitted over 30 days late.
Frankford Plating Inc.	$ 300	$ 300	03/10/2021	Reporting Violations – Incomplete Reporting.
Gill Powder Coating (IU-00960)	$Pending	$Pending	Pending	Monitoring Violation – No samples taken at 2 locations in August 2020 except for pH
Gill Powder Coating (IU-00961)	$Pending	$Pending	Pending	Monitoring Violation – No samples taken for all parameters in August 2020 except for pH
II-VI Optical Systems	$2,500	$2,500	06/08/2020	Reporting Violation – Failure to submit Semi-annual compliance report.
IVD, LLC	$ 500	$ 500	11/03/2020	Monitoring Violation – No sample taken in February 2020.

CTS – Compliance Tracking System

J.P. Cerini Technologies, Inc.	$ 300	$ 300	11/10/2020	Reporting Violation – Semi Annual Compliance Report submitted over 30 days late.
KVK Tech	$92,800	$Pending	Pending	Multiple reporting and monitoring violations from 7/1/2019 to 10/31/2020.
Neatsfoot Oil Corporation	$ 500	$ 500	10/08/2020	Reporting Violations – Submit all sample results by 25th of each month.
Premier Medical (MFG)	$ 300	$ 300	09/21/2020	Effluent Violations – Copper.
Qualawash Holdings, LLC	$ 300	$ 300	02/25/2021	Effluent Violations – SGT-HEM.
SPS Technologies	$2,300	$2,300	05/05/2020	Effluent Violations – TTO.
UCT Specialties, Inc.	$ 300	$Pending	Pending	Reporting Violation – Semi Annual Compliance Report submitted over 30 days late.

Section III. d. SIUs on Which Fines were Assessed

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From: 01/01/2020 To: 12/31/2020 Report Date: 03/25/2021

Status of Prior Years Unpaid Fines				
Company	**Assessed**	**Collected Amount**	**Collected Date**	**Reason**
Arway Linen and Uniform Rental	$ 300	$ 300	1/22/2021	Failure to Follow Proper Sampling Protocols.
KVK Tech	$92,800	$Pending	Pending	Multiple reporting and monitoring violations from 7/1/2019 to 10/31/2020.

CTS – Compliance Tracking System

Section III.e. Administrative Orders, Other Actions, & SNCs Not Subject to Enforcement

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

ADMINISTRATIVE ORDERS:

The Water Department issues administrative orders in the form of consent orders, and SNC notices with enforceable compliance schedules and enforceable compliance schedules. Sample consent orders can be supplied upon request. Below are descriptions of the administrative orders identified in Section III.b. of this report.

Company	Date Issued	Compliance Date	Description of Actions
KVK Tech IU-99763	3/23/2020	Pending	By 4/25/2020, submit a detailed set of corrective measures to ensure that any future required submissions and notifications are made on time and completely within 15 days of receipt.
Gill Powder Coating IU-00961	2/16/2021	Pending	Continue weekly sampling of pH and Zinc and submit a quarterly report with self-monitoring results from January 1st to March 31st, 2021.
A & R Logistics, Inc. IU-00021	2/26/2021	Pending	IU will collect and analyze one additional sample in March 2021.
Elite Linen IU-00815	3/2/2021	Pending	1. Submit revised Semi Annual Compliance Report cover sheet. 2. Submit a sample schedule for the next four months of sampling.
Elite Linen IU-00815	8/28/2020	Pending	By 9/18/2020, user must submit LOC testing and develops plan to verify that all required samples are taken.

Section III.e. Administrative Orders, Other Actions, & SNCs Not Subject to Enforcement

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

II-VI Optical Systems IU-01511	3/12/2020	Pending	By 4/30/2020, submit a detailed set of corrective measures to ensure that any future required submissions and notifications are made on time and completely.
Cintas Corporation IU-00530	8/10/2020	Pending	Update protocols to ensure monthly sampling is conducted and to send sampling reports to PWD when they are received, but no later than the 15th of the month following the sample date.
SPS Technologies IU-02420	2/26/2020	Pending	By 3/31/2020, Monitor Total Toxic Organics (TTO) as per permit “PART III. MONITORING REQUIREMENTS”, and submit analytical data. Sample was taken by 3/31/2020. Analytical data submitted and accepted with next Semi Annual Report. Submitted on 7/31/2020.
Gill Powder Coating IU-00960	2/16/2021	Pending	Zinc and pH are to be monitored weekly at both Byberry Rd. monitoring points. A quarterly report including all self-monitoring results from January 1st to March 31st 2021 is required.
Custom Powder Coatings, Inc. IU-00650	2/22/2021	Pending	TTOs, cyanide, and Cadmium must be sampled by March 31st, 2021, and the results submitted to Industrial Waste by 4/1/2021.
Fleetwash, Inc. IU-00840	7/20/2020	Pending	By 8/16/2020, Industrial User must submit a plan on how to monitor and neutralize the pH of the wastewater before each discharge. Included in the plan, there must be a log kept with recorded pH readings taken at the time of each discharge.

Section III.e. Administrative Orders, Other Actions, & SNCs Not Subject to Enforcement

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Domestic Uniform Rental IU-00750	8/10/2020	Pending	Create and provide to PWD a Corrective Action Plan to reduce noncompliance events. Include equipment condition/issues, soiled material loading, and planned corrective actions to reduce Local Organic Compound exceedances and find root cause of high solvent loadings.
Domestic Uniform Rental IU-00750	2/19/2021	Pending	Conduct Oil & Grease / SGT-HEM sampling twice per month for the remainder of the reporting period (until 6/30/2021) and conduct a review of maintenance and inspection procedures that allowed the UltraFloc system to be non-operational for extended periods of time.
J.P. Cerini Technologies, Inc. IU-01160	8/31/2020	Pending	Pay $300 fine and submit completed Semiannual Compliance Report.
Frankford Plating Inc. IU-00860	2/11/2021	Pending	Conduct TTO Sampling before 4/30/2021 and send reports to Philadelphia Water Department before 5/30/2021.

DESCRIPTION OF OTHER ACTIONS:

The majority of chronic noncompliance situations are handled through consent agreements. For those companies that have been consistently in noncompliance or have violated a consent agreement a final determination order can be issued. This order revokes the wastewater discharge permit and may result in a total sewer ban. A sample final determination order can be supplied upon request.

No final determination orders were issued.

SNC VIOLATIONS NOT SUBJECT TO ENFORCEMENT:

0 SIUs had SNC violations but were not subject to enforcement.

Part A Section III.f. Civil or Criminal Suits Filed

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From: 01/01/2020 To: 12/31/2020 Report Date: 03/25/2021

The Water Department and/or the U.S. Environmental Protection Agency (EPA) did not sue (civil or criminal) any users for pretreatment violations during the 2020 reporting year.

Section IV. Summary of POTW Operations

Northeast Water Pollution Control Plant -- NPDES PERMIT NO: PA0026689

Reporting Period: From 01/01/2020 To 12/31/2020 Report Date: 03/25/2021

Operations at Philadelphia's Northeast Water Pollution Control Plant (NEWPCP) ran normally during calendar year 2020. There were no significant problems or adverse occurrences. Full compliance with all NPDES parameters at NEWPCP was achieved.

NEWPCP SLUDGE ANALYSIS

2020

SUBURBAN TESTING LABS

Work: 0122759

Client: Philadelphia Water Department

Project: FRC Form 43

Project No.: 1820400-04

Attn: Aaron Bitler

Date: 1/7/2021

Submitted by:
Suburban Testing Labs, Inc.
1037F MacArthur Road, Reading, PA 19605
610.375.8378

NELAP ACCREDITED TNI LABORATORY
PA DEP # 06-00208
NJDEP# PA081

SUBURBAN
TESTING LABS

1/7/2021

Aaron Bitler
Philadelphia Water Department
1500 E. Hunting Park Avenue
Philadelphia, PA 19124

Enclosed are the results of analyses for samples received by the laboratory on 12/18/2020 15:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Arianna Horonzy
Project Manager

SUBURBAN TESTING LABS

1037F MacArthur Road
Reading, PA 19605
610-375-8378 Phone
610-375-4090 Fax

Philadelphia Water Department
1500 E. Hunting Park Avenue
Philadelphia PA, 19124

Project Name: FRC Form 43
Project Number: 1820400-04
Project Manager: Aaron Bitler

Reported:
01/07/2021 12:34

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
0122759-01	NE Feed - SW201216-001,-002	Solid (Dry Weight)	12/15/2020 12:10	12/18/2020 15:40

SUBURBAN TESTING LABS

Chain of Custody Record

1037F MacArthur Road, Reading, PA 19605
Phone: 610-375-8378 - Fax: 610-375-4090 - suburbantestinglabs.com

TAT (Circle One): Standard - 24hr - 48hr - 72hr - Other ____
(Additional charges may apply for rush TAT. If not specified, standard TAT will apply.)

ORDER ID: 0122759

COC # 2020-515

Client Name / Address:
Philadelphia Water Department
1500 E. Hunting Park Avenue
Philadelphia, PA 19124

Phone: **(215) 685-1450**
Fax: **(215) 743-5594**

Client Project Manager: **Aaron Bitler**

Payment / P.O. Info:

Project Name / Address:
FRC Form 43

Regulatory ID (SDWA/Permit #):

Project Description:

Order Comments: Added via by ANH 12/10/2020 14:48

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
0122759-01	NE Feed	CAKE BELT	12/15 1210P	JH	Solid (Dry Weight)	Grab	

Container Type / Preservation	Preservation Check

Analysis - Method	Field Results

Dominic Fonrose 12/16/20 0907
RICHARD PFEIFFER 12/16/20 10:11 3.1°C
RICHARD PFEIFFER 12/16/20 - REFRIGERATOR #2 12/16/20 10:45AM
REFRIGERATOR # 2 12/18/20 1238

SW201216-001
SW 201216-002

[illegible] STL - 12/18/20 1238 4.6

ORDER ID: 0122759

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time
1L G		A					
1L G		B					
1L G		C					

***** DEFAULT GENERAL ME**
Oil & Grease, 9071 - SW 846 9071

[Group Analysis]
Form 43 - varies

Inorganics
Corrosivity (pH) - SW 846 9045D
Cyanide, Reactive - SW 7.3.3.2/9014
Free Liquids (Paint Filter Test) - SW 846 9095B
Ignitability - SW 846 1030
Sulfate, 300.0, Solid - EPA 300.0
Sulfide, Reactive - SW 846 9034
Sulfur - ASTM D4239
Total Solids, 2540-G (%) - SM 2540-G
Volatile Solids - SM 2540-G

Inorganics, ASTM Leachate
Ammonia as N, ASTM - ASTM D6919-09
ASTM Leaching Procedure - ASTM 3987-85*
COD, ASTM - SM 5220-D
Oil & Grease, ASTM - EPA 1664A
Total Solids, 2540-B, ASTM - SM 2540-B

Inorganics, TCLP NVE
TCLP NVE Extraction - SW 846 1311

Inorganics, TCLP ZHE
TCLP ZHE Extraction - SW 846 1311

Metals
Arsenic, 6010 - SW 846 6010D
Barium, 6010 - SW 846 6010D
Cadmium, 6010 - SW 846 6010D
Chromium, 6010 - SW 846 6010D
Copper, 6010 - SW 846 6010D
Lead, 6010 - SW 846 6010D
Mercury, 7471 - SW 846 7471B
Molybdenum, 6010 - SW 846 6010D
Nickel, 6010 - SW 846 6010D
Selenium, 6010 - SW 846 6010D
Silver, 6010 - SW 846 6010D
Zinc, 6010 - SW 846 6010D

Metals, TCLP
Arsenic, 6010, TCLP - SW 846 6010D
Barium, 6010, TCLP - SW 846 6010D
Cadmium, 6010, TCLP - SW 846 6010D
Chromium, 6010, TCLP - SW 846 6010D
Copper, 6010, TCLP - SW 846 6010D
Lead, 6010, TCLP - SW 846 6010D
Mercury, 7470, TCLP - SW 846 7470A
Nickel, 6010, TCLP - SW 846 6010D
Selenium, 6010, TCLP - SW 846 6010D
Silver, 6010, TCLP - SW 846 6010D

ORDER ID: 0122759

Sample Number	Sample Description - Site ID	Sampling Location	Collect Date/Time	Sampler's Initials	Matrix	Sample Type	Composite Start Date / Time

Zinc, 6010, TCLP - SW 846 6010D

Pesticide/PCB

PCBs, 8082 - SW846 3550C/8082A

Pesticides, 8081, TCLP - SW846 3550C/8081B

Semivolatiles

Herbicides, TCLP - SW846 3535A/8151A

SVOA, 8270, TCLP - SW846 3510C/8270E

Volatiles

VOA, 8260, TCLP - SW 846 8260D

Suburban Testing Labs

WKO TAT = 10 Cool Sample(s) to 6 C

	Count		
Relinquished By: JH		Date: 12-16-20 Time: 06:20	Temp (°C):
Received By: FEDEX		Date: Time:	Temp (°C):
Relinquished By: Dominique Fontana		Date: 12/16/20 Time: 0907	Temp (°C): Acceptable:? Y /
Received in Lab By: GKM - STL	3	Date: 12-18-20 Time: 1298	Temp (°C): Acceptable:? Y /

Lab Date/Time: 12.18.20 1540 Lab Temp: ICE 2.1

Number of containers/coolers match number on COC? (Y) N

Sample labels and COC are free of discrepancies? (Y) N

All containers in tact? (Y) N

Received in lab within acceptable temperature limits? (Y) N

40mL VOA vials free of headspace? Y / N

Relinquished by: GKM-STL

Received in Lab by: GKM 12.18.20 1540

(3)

Bottle Type Key

PP = Sterile Polypropylene
PS = Sterile Polystyrene
HDPE = High Density Poylethylene
O = Other

Preservative Key

OH = NaOH
S = H2SO4
O = Other
NA = None Required

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Shaded areas are for STL use only

SUBURBAN TESTING LABS

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610-375-8378 Phone
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Philadelphia Water Department
1500 E. Hunting Park Avenue
Philadelphia PA, 19124

Project Name: FRC Form 43
Project Number: 1820400-04
Project Manager: Aaron Bitler

Reported:
01/07/2021 12:34

Sample Number: 0122759-01 | Site: NE Feed - SW201216-001,-002 | Sample ID: Cake Belt - 2020-515
Collector: JH | Collect Date: 12/15/2020 12:10 pm | Sample Type: Grab

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
HEM and SGT-HEM										
Oil & Grease (HEM)	2900		mg/Kg dry	9071B	2400	1	12/23/20		12/24/20 1:00	SUB*
Inorganics										
Corrosivity (pH)										
Corrosivity, pH (pH Units)	7.44	H	N/A	SW 846 9045D		1	01/05/21	YTM	01/05/21 9:22	YTM
Corrosivity, Temperature (C)	20.3	H	N/A	SW 846 9045D		1	01/05/21	YTM	01/05/21 9:22	YTM
Cyanide, Reactive	< 0.025		mg/kg	SW 7.3.3.2/9014	0.025	1	12/22/20	DCJ	12/23/20 17:28	DCJ
Free Liquids	Pass		P/F	SW 846 9095B		1	01/05/21	ZJH	01/05/21 10:28	ZJH
Ignitability	< 2.20		mm/sec	SW 846 1030	2.20	1	12/28/20	MAG	12/28/20 17:07	MAG
Sulfate	209		mg/kg dry	EPA 300.0	194	1	12/30/20	EJJ	12/31/20 1:51	EJJ
Sulfide, Reactive	< 80		mg/kg	SW 846 9034	80	1	12/30/20	DCJ	12/31/20 11:00	DCJ
Total Solids	25.8		%	SM 2540-G		1	12/21/20	CH	12/21/20 10:10	CH
Volatile Solids	48.2		%	SM 2540-G		1	12/21/20	CH	12/22/20 8:12	CH
Inorganics, ASTM Leachate										
Ammonia as N	49.7		mg/L as N	ASTM D6919-09	0.10	1	01/04/21	CJ	01/04/21 14:52	CJ
pH, Final	7.29		pH Units	ASTM 3987-85*		1	12/21/20	JAG	12/22/20 10:54	JAG
Chemical Oxygen Demand	598		mg/L	SM 5220-D	50.0	10	01/05/21	MCJ	01/05/21 22:28	MCJ
Oil and Grease, as HEM	< 10.2		mg/L	EPA 1664A	10.2	2	12/30/20	KMH	12/30/20 16:27	KMH
Total Solids	460		mg/L	SM 2540-B	10.0	1	12/23/20	CH	12/23/20 9:48	CH
Inorganics, TCLP NVE										
TCLP NVE Extraction										
pH, Initial	7.69		pH Units	SW 846 1311		1	12/21/20	JAG	12/22/20 10:54	JAG
pH, Final	5.14		pH Units	SW 846 1311		1	12/21/20	JAG	12/22/20 10:54	JAG
Inorganics, TCLP ZHE										
TCLP ZHE Extraction										
pH, Initial	7.69		pH Units	SW 846 1311		1	12/21/20	JAG	12/22/20 10:54	JAG
pH, Final	5.00		pH Units	SW 846 1311		1	12/21/20	JAG	12/22/20 10:54	JAG
Metals										
Arsenic	5.99	J	mg/kg dry	SW 846 6010D	1.94	1	12/23/20	RJS	12/28/20 12:47	RJS
Barium	479		mg/kg dry	SW 846 6010D	77.5	1	12/23/20	RJS	12/28/20 12:47	RJS
Cadmium	2.79		mg/kg dry	SW 846 6010D	0.388	1	12/23/20	RJS	12/28/20 12:47	RJS
Chromium	98.0		mg/kg dry	SW 846 6010D	7.75	1	12/23/20	RJS	12/28/20 12:47	RJS
Copper	450		mg/kg dry	SW 846 6010D	0.388	1	12/23/20	RJS	12/28/20 12:47	RJS
Lead	83.9		mg/kg dry	SW 846 6010D	1.94	1	12/23/20	RJS	12/28/20 12:47	RJS
Mercury	0.391		mg/kg dry	SW 846 7471B	0.0775	1	12/31/20	MKR	12/31/20 10:31	MKR
Molybdenum	15.8		mg/kg dry	SW 846 6010D	7.75	1	12/23/20	RJS	12/28/20 12:47	RJS
Nickel	23.7		mg/kg dry	SW 846 6010D	7.75	1	12/23/20	RJS	12/28/20 12:47	RJS
Selenium	< 1.94		mg/kg dry	SW 846 6010D	1.94	1	12/23/20	RJS	12/28/20 12:47	RJS
Silver	2.26	J	mg/kg dry	SW 846 6010D	1.94	1	12/23/20	RJS	12/28/20 12:47	RJS

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Philadelphia Water Department
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Philadelphia PA, 19124

Project Name: FRC Form 43
Project Number: 1820400-04
Project Manager: Aaron Bitler

Reported:
01/07/2021 12:34

Sample Number: 0122759-01 | Site: NE Feed - SW201216-001,-002 | Sample ID: Cake Belt - 2020-515
Collector: JH | Collect Date: 12/15/2020 12:10 pm | Sample Type: Grab

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By
Metals (Continued)										
Zinc	1090	B1	mg/kg dry	SW 846 6010D	77.5	1	12/23/20	RJS	12/28/20 12:47	RJS
Metals (ICP)										
Sulfur	9300		mg/Kg dry	6010D	140	1	12/23/20		12/28/20 12:36	SUB*
Metals, TCLP										
Arsenic	< 0.050		mg/L	SW 846 6010D	0.050	1	12/28/20	RJS	12/29/20 11:40	RJS
Barium	0.664		mg/L	SW 846 6010D	0.500	1	12/28/20	RJS	12/29/20 11:40	RJS
Cadmium	0.0115		mg/L	SW 846 6010D	0.0050	1	12/28/20	RJS	12/29/20 11:40	RJS
Chromium	< 0.050		mg/L	SW 846 6010D	0.050	1	12/28/20	RJS	12/29/20 11:40	RJS
Copper	< 0.050		mg/L	SW 846 6010D	0.050	1	12/28/20	RJS	12/29/20 11:40	RJS
Lead	0.070		mg/L	SW 846 6010D	0.050	1	12/28/20	RJS	12/29/20 11:40	RJS
Mercury	< 0.0002		mg/L	SW 846 7470A	0.0002	1	12/28/20	MKR	12/28/20 12:02	MKR
Nickel	0.143		mg/L	SW 846 6010D	0.050	1	12/28/20	RJS	12/29/20 11:40	RJS
Selenium	< 0.250		mg/L	SW 846 6010D	0.250	1	12/28/20	RJS	12/29/20 11:40	RJS
Silver	< 0.050		mg/L	SW 846 6010D	0.050	1	12/28/20	RJS	12/29/20 11:40	RJS
Zinc	5.52		mg/L	SW 846 6010D	0.500	1	12/28/20	RJS	12/29/20 11:40	RJS
Pesticide/PCB										
PCBs, 8082										
Aroclor 1016 [2C]	< 971		µg/Kg dry	SW846 3550C/8082A	971	5	12/22/20	SCD	12/29/20 1:48	CEK
Aroclor 1221 [2C]	< 971		µg/Kg dry	SW846 3550C/8082A	971	5	12/22/20	SCD	12/29/20 1:48	CEK
Aroclor 1232 [2C]	< 971		µg/Kg dry	SW846 3550C/8082A	971	5	12/22/20	SCD	12/29/20 1:48	CEK
Aroclor 1242 [2C]	< 971		µg/Kg dry	SW846 3550C/8082A	971	5	12/22/20	SCD	12/29/20 1:48	CEK
Aroclor 1248 [2C]	< 971		µg/Kg dry	SW846 3550C/8082A	971	5	12/22/20	SCD	12/29/20 1:48	CEK
Aroclor 1254 [2C]	< 971		µg/Kg dry	SW846 3550C/8082A	971	5	12/22/20	SCD	12/29/20 1:48	CEK
Aroclor 1260 [2C]	< 971		µg/Kg dry	SW846 3550C/8082A	971	5	12/22/20	SCD	12/29/20 1:48	CEK
Aroclor 1262 [2C]	< 971		µg/Kg dry	SW846 3550C/8082A	971	5	12/22/20	SCD	12/29/20 1:48	CEK
Aroclor 1268 [2C]	< 971		µg/Kg dry	SW846 3550C/8082A	971	5	12/22/20	SCD	12/29/20 1:48	CEK
PCBS, Total [2C]	< 971		µg/Kg dry	SW846 3550C/8082A	971	5	12/22/20	SCD	12/29/20 1:48	CEK

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene [2C]	145	µg/Kg dry	SW846 3550C/8082A	75%	5	35-135	12/29/20 1:48
Surrogate: Decachlorobiphenyl [2C]	175	µg/Kg dry	SW846 3550C/8082A	90%	5	10-153	12/29/20 1:48

Pesticides, 8081, TCLP

Gamma-BHC (Lindane)	< 0.2		µg/L	SW846 3510C/8081B	0.2	1	12/24/20	SCD	12/28/20 21:31	CEK
Chlordane	< 5.0		µg/L	SW846 3510C/8081B	5.0	1	12/24/20	SCD	12/28/20 21:31	CEK
Endrin	< 0.2		µg/L	SW846 3510C/8081B	0.2	1	12/24/20	SCD	12/28/20 21:31	CEK
Heptachlor	< 0.2		µg/L	SW846 3510C/8081B	0.2	1	12/24/20	SCD	12/28/20 21:31	CEK
Heptachlor epoxide	< 0.2		µg/L	SW846 3510C/8081B	0.2	1	12/24/20	SCD	12/28/20 21:31	CEK
Methoxychlor	< 0.2	C4, X	µg/L	SW846 3510C/8081B	0.2	1	12/24/20	SCD	12/28/20 21:31	CEK
Toxaphene	< 5.0		µg/L	SW846 3510C/8081B	5.0	1	12/24/20	SCD	12/28/20 21:31	CEK

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Tetrachloro-m-xylene	4.56	µg/L	SW846 3510C/8081B	91%	1	35-135	12/28/20 21:31
Surrogate: Decachlorobiphenyl	2.23	µg/L	SW846 3510C/8081B	45%	1	10-153	12/28/20 21:31

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Philadelphia PA, 19124

Project Name: FRC Form 43
Project Number: 1820400-04
Project Manager: Aaron Bitler

Reported: 01/07/2021 12:34

Sample Number: 0122759-01 | Site: NE Feed - SW201216-001,-002 | Sample ID: Cake Belt - 2020-515
Collector: JH | Collect Date: 12/15/2020 12:10 pm | Sample Type: Grab

Department / Test / Parameter	Result		Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By

Pesticide/PCB (Continued)

Semivolatiles

Herbicides, TCLP

2,4-D	< 5.00		µg/L	SW846 3535A/8151A	5.00	1	12/28/20	KMH	12/28/20 21:11	CEK
2,4,5-TP (Silvex)	< 5.00		µg/L	SW846 3535A/8151A	5.00	1	12/28/20	KMH	12/28/20 21:11	CEK

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2,4-Dichlorophenylacetic Acid (DCAA)	77.0	µg/L	SW846 3535A/8151A	77%	1	40-120	12/28/20 21:11

SVOA, 8270, TCLP

o-cresol (2-Methylphenol)	< 10.0		µg/L	SW846 3510C/8270E	10.0	1	12/28/20	SCD	12/29/20 13:06	ESB
m,p-cresol (3,4-Methylphenol)	207		µg/L	SW846 3510C/8270E	10.0	1	12/28/20	SCD	12/29/20 13:06	ESB
1,4-Dichlorobenzene	< 10.0		µg/L	SW846 3510C/8270E	10.0	1	12/28/20	SCD	12/29/20 13:06	ESB
2,4-Dinitrotoluene	< 10.0		µg/L	SW846 3510C/8270E	10.0	1	12/28/20	SCD	12/29/20 13:06	ESB
Hexachlorobenzene	< 10.0		µg/L	SW846 3510C/8270E	10.0	1	12/28/20	SCD	12/29/20 13:06	ESB
Hexachlorobutadiene	< 10.0		µg/L	SW846 3510C/8270E	10.0	1	12/28/20	SCD	12/29/20 13:06	ESB
Hexachloroethane	< 100		µg/L	SW846 3510C/8270E	100	1	12/28/20	SCD	12/29/20 13:06	ESB
Nitrobenzene	< 10.0		µg/L	SW846 3510C/8270E	10.0	1	12/28/20	SCD	12/29/20 13:06	ESB
Pentachlorophenol	< 10.0		µg/L	SW846 3510C/8270E	10.0	1	12/28/20	SCD	12/29/20 13:06	ESB
Pyridine	< 30.0	M2	µg/L	SW846 3510C/8270E	30.0	1	12/28/20	SCD	12/29/20 13:06	ESB
2,4,5-Trichlorophenol	< 10.0		µg/L	SW846 3510C/8270E	10.0	1	12/28/20	SCD	12/29/20 13:06	ESB
2,4,6-Trichlorophenol	< 10.0		µg/L	SW846 3510C/8270E	10.0	1	12/28/20	SCD	12/29/20 13:06	ESB

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: 2-Fluorophenol	701	µg/L	SW846 3510C/8270E	35%	1	10-79	12/29/20 13:06
Surrogate: Phenol-d6	495	µg/L	SW846 3510C/8270E	25%	1	10-57	12/29/20 13:06
Surrogate: Nitrobenzene-d5	565	µg/L	SW846 3510C/8270E	56%	1	24-119	12/29/20 13:06
Surrogate: 2-Fluorobiphenyl	520	µg/L	SW846 3510C/8270E	52%	1	29-115	12/29/20 13:06
Surrogate: 2,4,6-Tribromophenol	1290	µg/L	SW846 3510C/8270E	64%	1	10-141	12/29/20 13:06
Surrogate: p-Terphenyl-d14	591	µg/L	SW846 3510C/8270E	59%	1	44-124	12/29/20 13:06

Volatiles

VOA, 8260, TCLP

Benzene	< 5.0		µg/L	SW846 5030C/8260D	5.0	10	12/23/20	MWS	12/23/20 12:34	MWS
2-butanone (MEK)	< 25.0		µg/L	SW846 5030C/8260D	25.0	10	12/23/20	MWS	12/23/20 12:34	MWS
Carbon Tetrachloride	< 5.0		µg/L	SW846 5030C/8260D	5.0	10	12/23/20	MWS	12/23/20 12:34	MWS
Chlorobenzene	< 5.0		µg/L	SW846 5030C/8260D	5.0	10	12/23/20	MWS	12/23/20 12:34	MWS
Chloroform	< 5.0		µg/L	SW846 5030C/8260D	5.0	10	12/23/20	MWS	12/23/20 12:34	MWS
1,2-Dichloroethane	< 5.0		µg/L	SW846 5030C/8260D	5.0	10	12/23/20	MWS	12/23/20 12:34	MWS
1,1-Dichloroethene	< 5.0		µg/L	SW846 5030C/8260D	5.0	10	12/23/20	MWS	12/23/20 12:34	MWS
Tetrachloroethene	< 5.0		µg/L	SW846 5030C/8260D	5.0	10	12/23/20	MWS	12/23/20 12:34	MWS
Trichloroethene	< 5.0		µg/L	SW846 5030C/8260D	5.0	10	12/23/20	MWS	12/23/20 12:34	MWS
Vinyl Chloride	< 5.0		µg/L	SW846 5030C/8260D	5.0	10	12/23/20	MWS	12/23/20 12:34	MWS

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Project Name: FRC Form 43
Project Number: 1820400-04
Project Manager: Aaron Bitler

Reported:
01/07/2021 12:34

Sample Number: 0122759-01 | Site: NE Feed - SW201216-001,-002 | Sample ID: Cake Belt - 2020-515
Collector: JH | Collect Date: 12/15/2020 12:10 pm | Sample Type: Grab

Department / Test / Parameter	Result	Units	Method	R.L.	DF	Prep Date	By	Analysis Date	By

Volatiles (Continued)

VOA, 8260, TCLP (Continued)

Surrogate Recoveries	*Results*	*Units*	*Method*	*%Recovery*	*DF*	*Limits (%Recovery)*	*Analysis Date*
Surrogate: Dibromofluoromethane	21.5	µg/L	SW846 5030C/8260D	108%	10	72-136	12/23/20 12:34
Surrogate: 1,2-Dichloroethane-d4	21.0	µg/L	SW846 5030C/8260D	105%	10	79-135	12/23/20 12:34
Surrogate: Toluene-d8	20.2	µg/L	SW846 5030C/8260D	101%	10	88-112	12/23/20 12:34
Surrogate: Bromofluorobenzene	19.4	µg/L	SW846 5030C/8260D	97%	10	75-117	12/23/20 12:34

Inorganics - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1406 - TS Prep										
Blank (B0L1406-BLK1)										
Volatile Solids	0.0		%							
Total Solids	0.0		%							
LCS (B0L1406-BS1)										
Volatile Solids	0.04		%	0.0405		94	85-115			
Total Solids	0.1		%	0.100		100	85-115			
Batch B0L1486 - Reactivity Prep										
Batch B0L1801 - Method Prep										
Blank (B0L1801-BLK1)										
Ignitability	< 2.20	2.20	mm/sec							
LCS (B0L1801-BS2)										
Ignitability	4.62	2.20	mm/sec	4.51		102	80-120			
Batch B0L1949 - IC Prep										
Blank (B0L1949-BLK1)										
Sulfate	< 49.9	49.9	mg/kg wet							

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1500 E. Hunting Park Avenue	Project Number: 1820400-04	**Reported:**
Philadelphia PA, 19124	Project Manager: Aaron Bitler	01/07/2021 12:34

Inorganics - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1949 - IC Prep				(Continued from Previous Page)						
LCS (B0L1949-BS1)										
Sulfate	261	50.0	mg/kg wet	250		105	90-110			
Batch B1A0039 - Wet Chem Prep										
Batch B1A0136 - Wet Chem Prep										

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Philadelphia PA, 19124	Project Manager: Aaron Bitler	01/07/2021 12:34

Inorganics, ASTM Leachate - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1602 - TS Prep										
Blank (B0L1602-BLK1)										
Total Solids	< 10.0	10.0	mg/L							
Batch B0L1886 - EPA 1664 Prep										
Blank (B0L1886-BLK1)										
Oil and Grease, as HEM	< 5.0	5.0	mg/L							
LCS (B0L1886-BS1)										
Oil and Grease, as HEM	35.1	5.0	mg/L	40.0		88	78-114			
Batch B1A0020 - Wet Chem Prep										
Blank (B1A0020-BLK1)										
Chemical Oxygen Demand	< 5.00	5.00	mg/L							

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Philadelphia Water Department	Project Name: FRC Form 43	
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Philadelphia PA, 19124	Project Manager: Aaron Bitler	01/07/2021 12:34

Inorganics, ASTM Leachate - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B1A0020 - Wet Chem Prep				(Continued from Previous Page)						
LCS (B1A0020-BS1)										
Chemical Oxygen Demand	19.9	5.00	mg/L	20.0		100	85-115			
Batch B1A0033 - IC Prep										
Blank (B1A0033-BLK1)										
Ammonia as N	< 0.10	0.10	mg/L as N							
LCS (B1A0033-BS1)										
Ammonia as N	4.56	0.10	mg/L as N	5.00		91	85-115			

SUBURBAN TESTING LABS

1037F MacArthur Road
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Philadelphia Water Department	Project Name: FRC Form 43	
1500 E. Hunting Park Avenue	Project Number: 1820400-04	**Reported:**
Philadelphia PA, 19124	Project Manager: Aaron Bitler	01/07/2021 12:34

Metals - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1634 - Solid Digestion, Metals										
Blank (B0L1634-BLK1)										
Zinc	< 20.0	20.0	mg/kg wet							
Silver	< 0.500	2.00	mg/kg wet							
Selenium	< 0.500	10.0	mg/kg wet							
Nickel	< 2.00	2.00	mg/kg wet							
Molybdenum	< 2.00	2.00	mg/kg wet							
Lead	< 0.500	2.00	mg/kg wet							
Copper	0.130	2.00	mg/kg wet							J
Chromium	< 2.00	2.00	mg/kg wet							
Cadmium	< 0.100	0.200	mg/kg wet							
Barium	< 20.0	20.0	mg/kg wet							
Arsenic	0.642	2.00	mg/kg wet							J
LCS (B0L1634-BS1)										
Zinc	2050	20.0	mg/kg wet	2000		102	80-120			
Silver	191	2.00	mg/kg wet	200		96	80-120			
Selenium	994	10.0	mg/kg wet	1000		99	80-120			
Nickel	195	2.00	mg/kg wet	200		98	80-120			
Molybdenum	38.4	2.00	mg/kg wet	40.0		96	80-120			
Lead	199	2.00	mg/kg wet	200		100	80-120			
Copper	200	2.00	mg/kg wet	200		100	80-120			
Chromium	194	2.00	mg/kg wet	200		97	80-120			
Cadmium	19.6	0.200	mg/kg wet	20.0		98	80-120			
Barium	1980	20.0	mg/kg wet	2000		99	80-120			
Arsenic	203	2.00	mg/kg wet	200		101	80-120			
Matrix Spike (B0L1634-MS1)	**Source: 0122568-02**									
Zinc	16500	152	mg/kg dry	15200	1180	101	75-125			
Silver	1430	15.2	mg/kg dry	1520	< 3.79	95	75-125			
Selenium	7620	75.8	mg/kg dry	7580	14.9	100	75-125			
Nickel	1480	15.2	mg/kg dry	1520	15.6	97	75-125			
Molybdenum	309	15.2	mg/kg dry	303	17.5	96	75-125			
Lead	1510	15.2	mg/kg dry	1520	10.9	99	75-125			
Copper	1810	15.2	mg/kg dry	1520	308	99	75-125			
Chromium	1470	15.2	mg/kg dry	1520	< 15.2	96	75-125			
Cadmium	150	1.52	mg/kg dry	152	1.45	98	75-125			
Barium	15700	152	mg/kg dry	15200	682	99	75-125			
Arsenic	1530	15.2	mg/kg dry	1520	14.5	100	75-125			

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Philadelphia Water Department
1500 E. Hunting Park Avenue
Philadelphia PA, 19124

Project Name: FRC Form 43
Project Number: 1820400-04
Project Manager: Aaron Bitler

Reported:
01/07/2021 12:34

Metals - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1634 - Solid Digestion, Metals				(Continued from Previous Page)						
Matrix Spike Dup (B0L1634-MSD1)		**Source: 0122568-02**								
Zinc	16600	152	mg/kg dry	15200	1180	102	75-125	0.3	20	
Silver	1440	15.2	mg/kg dry	1520	< 3.79	95	75-125	0.05	20	
Selenium	7590	75.8	mg/kg dry	7580	14.9	100	75-125	0.5	20	
Nickel	1480	15.2	mg/kg dry	1520	15.6	97	75-125	0.05	20	
Molybdenum	308	15.2	mg/kg dry	303	17.5	96	75-125	0.5	20	
Lead	1510	15.2	mg/kg dry	1520	10.9	99	75-125	0.2	20	
Copper	1820	15.2	mg/kg dry	1520	308	100	75-125	0.3	20	
Chromium	1470	15.2	mg/kg dry	1520	< 15.2	96	75-125	0	20	
Cadmium	150	1.52	mg/kg dry	152	1.45	98	75-125	0.02	20	
Barium	15800	152	mg/kg dry	15200	682	100	75-125	0.5	20	
Arsenic	1520	15.2	mg/kg dry	1520	14.5	99	75-125	0.6	20	
Batch B0L1995 - Mercury Prep										
Blank (B0L1995-BLK1)										
Mercury	< 0.0200	0.0200	mg/kg wet							
LCS (B0L1995-BS1)										
Mercury	0.410	0.0200	mg/kg wet	0.400		102	80-120			
Matrix Spike (B0L1995-MS1)		**Source: 0123511-01**								
Mercury	0.424	0.0193	mg/kg dry	0.387	0.0203	104	80-120			
Matrix Spike Dup (B0L1995-MSD1)		**Source: 0123511-01**								
Mercury	0.448	0.0193	mg/kg dry	0.387	0.0203	111	80-120	6	20	

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Project Name: FRC Form 43
Project Number: 1820400-04
Project Manager: Aaron Bitler

Reported:
01/07/2021 12:34

Metals, TCLP - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1743 - Mercury Prep										
Blank (B0L1743-BLK1)										
Mercury	< 0.0002	0.0002	mg/L							
LCS (B0L1743-BS1)										
Mercury	0.00202	0.0002	mg/L	0.00200		101	80-120			
Matrix Spike (B0L1743-MS1)	**Source: 0112468-01**									
Mercury	0.00193	0.0002	mg/L	0.00200	< 0.0002	96	75-125			
Matrix Spike (B0L1743-MS2)	**Source: 0112807-03**									
Mercury	0.00197	0.0002	mg/L	0.00200	< 0.0002	94	75-125			
Matrix Spike Dup (B0L1743-MSD1)	**Source: 0112468-01**									
Mercury	0.00206	0.0002	mg/L	0.00200	< 0.0002	103	75-125	7	20	
Batch B0L1800 - Water Digestion, Metals										
Blank (B0L1800-BLK1)										
Arsenic	< 0.010	0.010	mg/L							
Barium	< 0.100	0.100	mg/L							
Cadmium	< 0.0010	0.0010	mg/L							
Chromium	< 0.010	0.010	mg/L							
Copper	< 0.010	0.010	mg/L							
Lead	< 0.010	0.010	mg/L							
Nickel	< 0.010	0.010	mg/L							
Selenium	< 0.050	0.050	mg/L							
Silver	< 0.010	0.010	mg/L							
Zinc	< 0.100	0.100	mg/L							

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Philadelphia PA, 19124	Project Manager: Aaron Bitler	01/07/2021 12:34

Metals, TCLP - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1800 - Water Digestion, Metals				(Continued from Previous Page)						
LCS (B0L1800-BS1)										
Arsenic	1.08	0.010	mg/L	1.00		108	80-120			
Barium	11.0	0.100	mg/L	10.0		110	80-120			
Cadmium	0.107	0.0010	mg/L	0.100		107	80-120			
Chromium	1.09	0.010	mg/L	1.00		109	80-120			
Copper	1.08	0.010	mg/L	1.00		108	80-120			
Lead	1.11	0.010	mg/L	1.00		111	80-120			
Nickel	1.09	0.010	mg/L	1.00		109	80-120			
Selenium	5.36	0.050	mg/L	5.00		107	80-120			
Silver	0.025	0.010	mg/L	0.0250		102	80-120			
Zinc	11.0	0.100	mg/L	10.0		110	80-120			
Matrix Spike (B0L1800-MS2)		**Source: 0124338-03**								
Arsenic	5.45	0.050	mg/L	5.00	< 0.050	109	75-125			
Barium	55.7	0.500	mg/L	50.0	< 0.500	111	75-125			
Cadmium	0.534	0.0050	mg/L	0.500	< 0.0050	107	75-125			
Chromium	5.42	0.050	mg/L	5.00	< 0.050	108	75-125			
Copper	5.52	0.050	mg/L	5.00	0.056	109	75-125			
Lead	5.54	0.050	mg/L	5.00	< 0.050	110	75-125			
Nickel	5.40	0.050	mg/L	5.00	< 0.050	108	75-125			
Selenium	26.8	0.250	mg/L	25.0	< 0.250	107	75-125			
Silver	0.130	0.050	mg/L	0.125	< 0.050	104	75-125			
Zinc	55.6	0.500	mg/L	50.0	< 0.500	111	75-125			

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Project Name: FRC Form 43
Project Number: 1820400-04
Project Manager: Aaron Bitler

Reported:
01/07/2021 12:34

Volatiles - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1627 - 5030C Purge and Trap										
Blank (B0L1627-BLK1)										
Benzene	< 0.5	0.5	µg/L							
2-butanone (MEK)	< 2.5	2.5	µg/L							
Carbon Tetrachloride	< 0.5	0.5	µg/L							
Chlorobenzene	< 0.5	0.5	µg/L							
Chloroform	< 0.5	0.5	µg/L							
1,2-Dichloroethane	< 0.5	0.5	µg/L							
1,1-Dichloroethene	< 0.5	0.5	µg/L							
1,2-Dichloropropane	< 0.5	0.5	µg/L							
Ethyl Benzene	< 0.5	0.5	µg/L							
Tetrachloroethene	< 0.5	0.5	µg/L							
Toluene	< 0.5	0.5	µg/L							
Trichloroethene	< 0.5	0.5	µg/L							
Vinyl Chloride	< 0.5	0.5	µg/L							
Surrogate: Dibromofluoromethane	*21.7*		µg/L	*20.0*		*108*	*72-136*			
Surrogate: 1,2-Dichloroethane-d4	*20.8*		µg/L	*20.0*		*104*	*79-135*			
Surrogate: Toluene-d8	*20.2*		µg/L	*20.0*		*101*	*88-112*			
Surrogate: Bromofluorobenzene	*19.6*		µg/L	*20.0*		*98*	*75-117*			
LCS (B0L1627-BS1)										
Benzene	22.8	0.5	µg/L	20.0		114	70-130			
2-butanone (MEK)	52.6	2.5	µg/L	50.0		105	70-130			
Carbon Tetrachloride	23.2	0.5	µg/L	20.0		116	70-130			
Chlorobenzene	20.8	0.5	µg/L	20.0		104	70-130			
Chloroform	22.6	0.5	µg/L	20.0		113	70-130			
1,2-Dichloroethane	21.5	0.5	µg/L	20.0		107	70-130			
1,1-Dichloroethene	21.1	0.5	µg/L	20.0		106	70-130			
1,2-Dichloropropane	22.1	0.5	µg/L	20.0		110	70-130			
Ethyl Benzene	21.6	0.5	µg/L	20.0		108	70-130			
Tetrachloroethene	22.5	0.5	µg/L	20.0		112	70-130			
Toluene	22.5	0.5	µg/L	20.0		112	70-130			
Trichloroethene	21.6	0.5	µg/L	20.0		108	70-130			
Vinyl Chloride	22.1	0.5	µg/L	20.0		110	70-130			
Surrogate: Dibromofluoromethane	*21.7*		µg/L	*20.0*		*109*	*72-136*			
Surrogate: 1,2-Dichloroethane-d4	*20.0*		µg/L	*20.0*		*100*	*79-135*			
Surrogate: Toluene-d8	*21.4*		µg/L	*20.0*		*107*	*88-112*			
Surrogate: Bromofluorobenzene	*21.7*		µg/L	*20.0*		*109*	*75-117*			

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Philadelphia Water Department	Project Name: FRC Form 43	
1500 E. Hunting Park Avenue	Project Number: 1820400-04	**Reported:**
Philadelphia PA, 19124	Project Manager: Aaron Bitler	01/07/2021 12:34

Semivolatiles - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1739 - LLE SVOA										
Blank (B0L1739-BLK1)										
o-cresol (2-Methylphenol)	< 1.00	1.00	µg/L							
m,p-cresol (3,4-Methylphenol)	< 1.00	1.00	µg/L							
1,4-Dichlorobenzene	< 1.00	1.00	µg/L							
2,4-Dinitrotoluene	< 1.00	1.00	µg/L							
Hexachlorobenzene	< 1.00	1.00	µg/L							
Hexachlorobutadiene	< 1.00	1.00	µg/L							
Hexachloroethane	< 10.0	10.0	µg/L							
Nitrobenzene	< 1.00	1.00	µg/L							
Pentachlorophenol	< 1.00	1.00	µg/L							
Pyridine	< 3.00	3.00	µg/L							
2,4,5-Trichlorophenol	< 1.00	1.00	µg/L							
2,4,6-Trichlorophenol	< 1.00	1.00	µg/L							
Surrogate: 2-Fluorophenol	*78.8*		µg/L	*200*		*39*	*10-79*			
Surrogate: Phenol-d6	*54.0*		µg/L	*200*		*27*	*10-57*			
Surrogate: Nitrobenzene-d5	*66.2*		µg/L	*100*		*66*	*24-119*			
Surrogate: 2-Fluorobiphenyl	*61.8*		µg/L	*100*		*62*	*29-115*			
Surrogate: 2,4,6-Tribromophenol	*139*		µg/L	*200*		*69*	*10-141*			
Surrogate: p-Terphenyl-d14	*71.0*		µg/L	*100*		*71*	*44-124*			
LCS (B0L1739-BS1)										
o-cresol (2-Methylphenol)	27.4	1.00	µg/L	40.0		69	38-89			
m,p-cresol (3,4-Methylphenol)	25.2	1.00	µg/L	40.0		63	26-63			
1,4-Dichlorobenzene	28.2	1.00	µg/L	40.0		70	33-87			
2,4-Dinitrotoluene	32.1	1.00	µg/L	40.0		80	53-120			
Hexachlorobenzene	31.4	1.00	µg/L	40.0		78	37-112			
Hexachlorobutadiene	29.6	1.00	µg/L	40.0		74	31-94			
Hexachloroethane	27.8	10.0	µg/L	40.0		69	40-85			
Nitrobenzene	29.7	1.00	µg/L	40.0		74	35-90			
Pentachlorophenol	31.1	1.00	µg/L	40.0		78	14-167			
2,4,5-Trichlorophenol	31.5	1.00	µg/L	40.0		79	14-103			
2,4,6-Trichlorophenol	32.8	1.00	µg/L	40.0		82	10-109			
Surrogate: 2-Fluorophenol	*89.0*		µg/L	*200*		*45*	*10-79*			
Surrogate: Phenol-d6	*63.4*		µg/L	*200*		*32*	*10-57*			
Surrogate: Nitrobenzene-d5	*75.4*		µg/L	*100*		*75*	*24-119*			
Surrogate: 2-Fluorobiphenyl	*69.6*		µg/L	*100*		*70*	*29-115*			
Surrogate: 2,4,6-Tribromophenol	*150*		µg/L	*200*		*75*	*10-141*			
Surrogate: p-Terphenyl-d14	*74.4*		µg/L	*100*		*74*	*44-124*			

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Project Name: FRC Form 43
Project Number: 1820400-04
Project Manager: Aaron Bitler

Reported:
01/07/2021 12:34

Semivolatiles - Quality Control
Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1739 - LLE SVOA				(Continued from Previous Page)						
LCS (B0L1739-BS2)										
Pyridine	7.45	3.00	µg/L	40.0		19	19-66			
Surrogate: 2-Fluorophenol	*89.9*		µg/L	*200*		*45*	*10-79*			
Surrogate: Phenol-d6	*63.1*		µg/L	*200*		*32*	*10-57*			
Surrogate: Nitrobenzene-d5	*76.6*		µg/L	*100*		*77*	*24-119*			
Surrogate: 2-Fluorobiphenyl	*70.6*		µg/L	*100*		*71*	*29-115*			
Surrogate: 2,4,6-Tribromophenol	*150*		µg/L	*200*		*75*	*10-141*			
Surrogate: p-Terphenyl-d14	*72.7*		µg/L	*100*		*73*	*44-124*			
Matrix Spike (B0L1739-MS1)		**Source: 0122759-01**								
o-cresol (2-Methylphenol)	232	10.0	µg/L	400	< 10.0	58	38-89			
m,p-cresol (3,4-Methylphenol)	437	10.0	µg/L	400	207	58	26-63			
1,4-Dichlorobenzene	216	10.0	µg/L	400	< 10.0	54	33-87			
2,4-Dinitrotoluene	298	10.0	µg/L	400	< 10.0	75	53-120			
Hexachlorobenzene	286	10.0	µg/L	400	< 10.0	71	37-112			
Hexachlorobutadiene	234	10.0	µg/L	400	< 10.0	59	31-94			
Hexachloroethane	217	100	µg/L	400	< 100	54	40-85			
Nitrobenzene	233	10.0	µg/L	400	< 10.0	58	35-90			
Pentachlorophenol	312	10.0	µg/L	400	< 10.0	78	14-167			
Pyridine	72.9	30.0	µg/L	400	< 30.0	18	19-66			
2,4,5-Trichlorophenol	300	10.0	µg/L	400	< 10.0	75	14-103			
2,4,6-Trichlorophenol	301	10.0	µg/L	400	< 10.0	75	10-109			
Surrogate: 2-Fluorophenol	*713*		µg/L	*2000*		*36*	*10-79*			
Surrogate: Phenol-d6	*538*		µg/L	*2000*		*27*	*10-57*			
Surrogate: Nitrobenzene-d5	*594*		µg/L	*1000*		*59*	*24-119*			
Surrogate: 2-Fluorobiphenyl	*595*		µg/L	*1000*		*59*	*29-115*			
Surrogate: 2,4,6-Tribromophenol	*1420*		µg/L	*2000*		*71*	*10-141*			
Surrogate: p-Terphenyl-d14	*650*		µg/L	*1000*		*65*	*44-124*			

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Semivolatiles - Quality Control
Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1739 - LLE SVOA				(Continued from Previous Page)						
Matrix Spike Dup (B0L1739-MSD1)		**Source: 0122759-01**								
o-cresol (2-Methylphenol)	194	10.0	µg/L	400	< 10.0	48	38-89	18	30	
m,p-cresol (3,4-Methylphenol)	352	10.0	µg/L	400	207	36	26-63	22	30	
1,4-Dichlorobenzene	217	10.0	µg/L	400	< 10.0	54	33-87	0.5	30	
2,4-Dinitrotoluene	294	10.0	µg/L	400	< 10.0	73	53-120	2	30	
Hexachlorobenzene	281	10.0	µg/L	400	< 10.0	70	37-112	2	30	
Hexachlorobutadiene	232	10.0	µg/L	400	< 10.0	58	31-94	1	30	
Hexachloroethane	216	100	µg/L	400	< 100	54	40-85	0.3	30	
Nitrobenzene	224	10.0	µg/L	400	< 10.0	56	35-90	4	30	
Pentachlorophenol	312	10.0	µg/L	400	< 10.0	78	14-167	0.2	30	
Pyridine	61.1	30.0	µg/L	400	< 30.0	15	19-66	18	30	
2,4,5-Trichlorophenol	295	10.0	µg/L	400	< 10.0	74	14-103	2	30	
2,4,6-Trichlorophenol	291	10.0	µg/L	400	< 10.0	73	10-109	3	30	
Surrogate: 2-Fluorophenol	*573*		µg/L	*2000*		*29*	*10-79*			
Surrogate: Phenol-d6	*423*		µg/L	*2000*		*21*	*10-57*			
Surrogate: Nitrobenzene-d5	*578*		µg/L	*1000*		*58*	*24-119*			
Surrogate: 2-Fluorobiphenyl	*584*		µg/L	*1000*		*58*	*29-115*			
Surrogate: 2,4,6-Tribromophenol	*1400*		µg/L	*2000*		*70*	*10-141*			
Surrogate: p-Terphenyl-d14	*590*		µg/L	*1000*		*59*	*44-124*			
Batch B0L1768 - SPE Herbicides										
Blank (B0L1768-BLK1)										
2,4-D	< 1.00	1.00	µg/L							
2,4,5-TP (Silvex)	< 1.00	1.00	µg/L							
Surrogate: 2,4-Dichlorophenylacetic Acid (DCAA)	*13.1*		µg/L	*20.0*		*66*	*40-120*			
LCS (B0L1768-BS1)										
2,4-D	8.62	1.00	µg/L	12.5		69	46-102			
2,4,5-TP (Silvex)	8.13	1.00	µg/L	12.5		65	56-100			
Surrogate: 2,4-Dichlorophenylacetic Acid (DCAA)	*14.1*		µg/L	*20.0*		*70*	*40-120*			

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Philadelphia Water Department	Project Name: FRC Form 43	
1500 E. Hunting Park Avenue	Project Number: 1820400-04	**Reported:**
Philadelphia PA, 19124	Project Manager: Aaron Bitler	01/07/2021 12:34

Semivolatiles - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1768 - SPE Herbicides				(Continued from Previous Page)						
Surrogate: 2,4-Dichlorophenylacetic Acid (DCAA)	*81.9*		µg/L	*100*		*82*	*40-120*			
Surrogate: 2,4-Dichlorophenylacetic Acid (DCAA)	*83.4*		µg/L	*100*		*83*	*40-120*			

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Pesticide/PCB - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1500 - Ultrasonic Extraction										
Blank (B0L1500-BLK2)										
Aroclor 1016	< 16.7	16.7	µg/Kg wet							
Aroclor 1221	< 16.7	16.7	µg/Kg wet							
Aroclor 1232	< 16.7	16.7	µg/Kg wet							
Aroclor 1242	< 16.7	16.7	µg/Kg wet							
Aroclor 1248	< 16.7	16.7	µg/Kg wet							
Aroclor 1254	< 16.7	16.7	µg/Kg wet							
Aroclor 1260	< 16.7	16.7	µg/Kg wet							
Aroclor 1262	< 16.7	16.7	µg/Kg wet							
Aroclor 1268	< 16.7	16.7	µg/Kg wet							
PCBS, Total	< 16.7	16.7	µg/Kg wet							
Surrogate: Tetrachloro-m-xylene	*16.3*		µg/Kg wet	*16.7*		*98*	*35-135*			
Surrogate: Decachlorobiphenyl	*16.2*		µg/Kg wet	*16.7*		*97*	*10-153*			
LCS (B0L1500-BS2)										
Aroclor 1016	160	16.7	µg/Kg wet	167		96	46-136			
Aroclor 1260	162	16.7	µg/Kg wet	167		97	45-125			
Surrogate: Tetrachloro-m-xylene	*16.6*		µg/Kg wet	*16.7*		*100*	*35-135*			
Surrogate: Decachlorobiphenyl	*16.3*		µg/Kg wet	*16.7*		*98*	*10-153*			
Surrogate: Tetrachloro-m-xylene	*297*		µg/Kg dry	*299*		*99*	*35-135*			
Surrogate: Decachlorobiphenyl	*273*		µg/Kg dry	*299*		*91*	*10-153*			
Surrogate: Tetrachloro-m-xylene	*257*		µg/Kg dry	*299*		*86*	*35-135*			
Surrogate: Decachlorobiphenyl	*162*		µg/Kg dry	*299*		*54*	*10-153*			

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Pesticide/PCB - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1630 - LLE Pest/PCBs										
Blank (B0L1630-BLK1)										
Gamma-BHC (Lindane)	< 0.02	0.02	µg/L							
Chlordane	< 0.5	0.5	µg/L							
Endrin	< 0.02	0.02	µg/L							
Heptachlor	< 0.02	0.02	µg/L							
Heptachlor epoxide	< 0.02	0.02	µg/L							
Methoxychlor	< 0.02	0.02	µg/L							
Toxaphene	< 0.5	0.5	µg/L							
Surrogate: Tetrachloro-m-xylene	*0.488*		µg/L	*0.500*		*98*	*35-135*			
Surrogate: Decachlorobiphenyl	*0.351*		µg/L	*0.500*		*70*	*10-153*			
LCS (B0L1630-BS1)										
Gamma-BHC (Lindane)	0.451	0.02	µg/L	0.500		90	58-111			
Endrin	0.451	0.02	µg/L	0.500		90	67-125			
Heptachlor	0.461	0.02	µg/L	0.500		92	53-106			
Heptachlor epoxide	0.464	0.02	µg/L	0.500		93	63-114			
Methoxychlor	0.488	0.02	µg/L	0.500		98	49-141			
Surrogate: Tetrachloro-m-xylene	*0.456*		µg/L	*0.500*		*91*	*35-135*			
Surrogate: Decachlorobiphenyl	*0.351*		µg/L	*0.500*		*70*	*10-153*			
LCS (B0L1630-BS3)										
Toxaphene	2.12	0.5	µg/L	2.50		85	41-126			
Surrogate: Tetrachloro-m-xylene	*0.458*		µg/L	*0.500*		*92*	*35-135*			
Surrogate: Decachlorobiphenyl	*0.352*		µg/L	*0.500*		*70*	*10-153*			
Surrogate: Tetrachloro-m-xylene	*4.11*		µg/L	*5.00*		*82*	*35-135*			
Surrogate: Decachlorobiphenyl	*2.04*		µg/L	*5.00*		*41*	*10-153*			

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Pesticide/PCB - Quality Control

Suburban Testing Labs

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1630 - LLE Pest/PCBs				(Continued from Previous Page)						
Surrogate: Tetrachloro-m-xylene	*4.29*		µg/L	*5.00*		*86*	*35-135*			
Surrogate: Decachlorobiphenyl	*2.27*		µg/L	*5.00*		*45*	*10-153*			

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HEM and SGT-HEM - Quality Control

Eurofins Lancaster

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 79838 - 9071B										

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Metals (ICP) - Quality Control

Eurofins Lancaster

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 79552 - 3050B										

Work Order Memo

SUB: 6010D, 9071B performed by LAB ID# 36-00037

Data Qualifiers:

B1	The target analyte was detected in the Method, Dilution Water, Instrument or Extraction Blank at or above the method Reporting Limit, however it was <10% the concentration detected in the sample. Data may be fully usable under the 2009 TNI Standard.
C4	The CCV for this analyte was above acceptance criteria, however the analyte was not detected in the associated sample. Data may be fully useable under the 2009 TNI Standard.
H	Hold time was exceeded for this analysis.
J	The analyte was detected above the method detection limit but below the method reporting limit; the reported result is an estimated value.
M2	The Matrix Spike associated with this sample is below established acceptance criteria, indicating potential matrix interference. Results of this sample may be biased low.
X	Associated sequence QC failed marginally high.

Sample Receipt Conditions:

All samples met the sample receipt requirements for the relevant analyses.

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The test *pH, Lab* is performed in the Laboratory as soon as possible. These results are not appropriate for compliance with NPDES, SDWA, or other regulatory programs that require analysis within 15 minutes of sample collection and should be considered for informational purposes only.

All results meet the requirements of STL's TNI (NELAC) Accredited Quality System unless otherwise noted. If your results contain any data qualifiers or comments, you should evaluate useability relative to your needs.

If collectors initials include "STL", samples have been collected in accordance with STL SOP SL0015.

All results reported on an As Received (Wet Weight) basis unless otherwise noted.

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Results are considered Preliminary unless report is signed by authorized representative of STL.

Reviewed and Released By:
Arianna Horonzy
Project Manager