HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services
AN EMPLOYEE-OWNED COMPANY

CHAPTER 94

WASTELOAD MANAGEMENT REPORT

FOR

CALENDAR YEAR 2020

Submitted to:
PENNSYLVANIA DEP
SOUTHCENRAL REGIONAL OFFICE
ATTN: Clean Water Program
909 Elmerton Avenue
Harrisburg, Pennsylvania 17110

Submitted by:
HERBERT, ROWLAND & GRUBIC, INC.
369 East Park Drive
Harrisburg, PA 17111
717.564.1121

On Behalf of:
HALIFAX AREA WATER AND SEWER AUTHORITY
Dauphin County, Pennsylvania

Date:
March, 2021

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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:	**Halifax Area Water and Sewer Authority**	Permit No.:	**PA0024457**
Mailing Address:	**PO Box 443**	Effective Date:	**May 1, 2017**
City, State, Zip:	**Halifax, PA 17032**	Expiration Date:	**April 30, 2022**
Contact Person:	**Jeffrey Grosser**	Renewal Due Date:	**November 1, 2021**
Title:	**Operator**	Municipality:	**Halifax Borough, Halifax Twp**
Phone:	**(717) 896-3886**	County:	**Dauphin**
Email:	**jgrosser@hawasaonline.com**	Consultant Name:	**Herbert, Rowland & Grubic, Inc.**

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 A**)
   ☒ DEP Chapter 94 Spreadsheet used (**Attachment A**)
   ☐ 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 A**)
   ☒ DEP Chapter 94 Spreadsheet used (**Attachment A**)
   ☐ 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 B**)

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

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

Comments:

No new connections to the Authority's collection system were made in 2020.

The Authority is proposing an extension along Peters Mountain Road. The Water Quality Management Part II Permit was issued by PA DEP on November 2, 2020 for the project. See attachment I for the permit.

The proposed extension of sanitary sewer along Peters Mountain Road will consist of low pressure sewer systems, gravity collectors, three (3) pump stations and associated force mains. This project will initially add approximately 300 EDUs (existing homes) to the WWTP. The construction of the proposed sanitary sewer extension is expected to be completed within the current 5 year planning period. The expansion of the HAWASA wastewater treatment facility is anticipated to be completed in April 2022. The expansion will increase the current hydraulic and organic design capacities of the WWTP to accommodate the projected flows from the sewer extension. Construction of the extension is not anticipated to begin for a couple years and the first connection of the new EDU's from sewer extension are not anticipated until 2023. Lenker Estates is anticipated to be the first connection from the extension and accounts for approximately 50 EDUs in 2023. Connection of the remaining EDUs in the extension is expected to be completed in 2024 and 2025. These amount to an estimated 125 EDUs each year. A PENNVEST funding application will be submitted for the project once the appropriate permits have been received. A PADEP Water Quality Management Permit and a PennDOT Highway Occupancy Permit have already been secured for the extension. HRG is currently in the process of obtaining a NPDES permit and a Waterways Obstruction & Encroachment Permit on behalf of HAWSA, after which a PENNVEST application will be submitted. A map of the extension can be viewed in Attachment B.

Another development, the Sycamore Ridge community, is expected to connect to the Authority's system in the 5-year planning period. The development will be constructed east of Pennsylvania Route 147. Sewer facilities will consist of gravity sewer that will tie into the existing gravity system main and ultimately drain into the Main Pumping Station. The aforementioned WWTP expansion project also includes upgrades to the currently hydraulically overloaded Main Pumping Station. The upgrades to the Main PS will increase its capacity and the upgrades will be completed prior to connection of the Sycamore Ridge community to the Authority's sewer system. The Sycamore Ridge development will add 124 new EDUs to the WWTP. Connection of these EDUs are anticipated to begin in 2022 and continue until 2026 as residences are constructed. Land development plans for Sycamore Ridge have not yet been submitted but the location of the development is outlined in Attachment B.

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))

Repairs to the Authority's collection system are conducted on an as-needed basis. There are two full-time operators of the sewer system, shared with the water system. The collection system maintenance program consists of daily checks of the Authority's pump station and routine checks of manholes throughout the collection system. Manhole inserts have been placed in manholes that appear to be affected by inflow. No serious problems have been observed in the collection system. The system is not a combined sewer system and no regulators are present.

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:

No sanitary sewer overflows (SSOs) were observed in the Authority's system in the 2020 calendar year.

PA DEP has identified a hydraulic overload condition at the HAWASA WWTP Main Pumping Station and occurrences of permit violations at the WWTP itself. In response to these issues, HAWASA entered into a Consent Order and Agreement (COA) with PA DEP for the upgrade of the main pump station and WWTP.

In accordance with the schedule contained in the COA, HAWASA submitted a Wastewater Treatment Plant Alternatives Review and Design Engineers Report, prepared by Herbert, Rowland & Grubic, Inc. (HRG), to PA DEP. HRG determined that the Authority's WWTP will require comprehensive upgrades to nearly all unit processes in order to eliminate the hydraulic overload condition at the Main Pumping station and the occurrence of permit violations at the WWTP. Improvements to the Main Pumping Station at the WWTP and the WWTP itself will be completed as part of the WWTP Upgrade project. The Water Quality Management Permit for construction of the WWTP Upgrade project was issued by PA DEP on March 12, 2020.

HAWSA is moving forward with the Wastewater Treatment Plant Upgrade Project. The project includes the construction of new headworks, two (2) new sequencing batch reactors (SBRs), construction of a new post-equalization tank, upgraded disinfection system, new chemical equipment and improvements to existing biological tanks and digester tanks. The project will increase the capacity of the existing WWTP to 0.28 MGD. In addition to treatment plant upgrades, the project also entails upgrades to the hydraulically overloaded Main Pumping Station. Bids for the HAWSA Wastewater Treatment Plant Upgrade Project were received on August 11, 2020. All three contracts under the project were awarded on November 25, 2020.

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 – **2**)
☒ Discussion of condition of each pump station attached (**Attachment C**)

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. **At the WWTP main pumping station only**
☐ 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 F**)

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 D**)

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 E**)

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).

Jeffrey Enders, Chairman
Name of Responsible Official

Signature

(717) 896-3886
Telephone No.

3/16/2021
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).

Justin J. Mendinsky, P.E.
Name of Preparer

Signature

(717) 564-1121
Telephone No.

3/16/2021
Date

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

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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).

ATTACHMENT A

HYDRAULIC AND ORGANIC LOADING DATA AND LINE GRAPHS

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PADEP Chapter 94 Spreads
Sewage Treatment Pl

Reporting Year: 2020

Facility Name: Halifax Wastewater Treatment Plant

Permit No.: 24457

Persons/EDU: 3.5

Existing Hydraulic Design Capacity: 0.21 MGD
Upgrade Planned in Next 5 Years? YES **Year:** 2021
Future Hydraulic Design Capacity: 0.28 MGD

Existing Organic Design Capacity: 527 lbs BOD5/day
Upgrade Planned in Next 5 Years? YES **Year:** 2021
Future Organic Design Capacity: 636 lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2016	2017	2018	2019	2020
January	0.0902	0.0787	0.0726	0.1445	0.103
February	0.1269	0.0819	0.1175	0.1352	0.1137
March	0.1153	0.0906	0.1157	0.1429	0.1255
April	0.1062	0.122	0.1258	0.1603	0.1398
May	0.1173	0.1128	0.1484	0.1933	0.1714
June	0.1239	0.1168	0.1418	0.1586	0.1586
July	0.1244	0.1444	0.167	0.1451	0.1561
August	0.1198	0.1456	0.174	0.1233	0.1523
September	0.1038	0.122	0.1599	0.111	0.127
October	0.0915	0.1047	0.1299	0.1018	0.105
November	0.0784	0.0914	0.1583	0.0966	0.0933
December	0.0765	0.0748	0.1457	0.0955	0.0947
Annual Avg	0.1062	0.1071	0.1381	0.134	0.1284
Max 3-Mo Avg	0.1227	0.1373	0.167	0.1707	0.162
Max : Avg Ratio	1.16	1.28	1.21	1.27	1.26
Existing EDUs	749.0	751.0	753.0	753.0	753.0
Flow/EDU (GPD)	141.8	142.6	183.4	178.0	170.5
Flow/Capita (GPD)	40.5	40.7	52.4	50.8	48.7
Exist. Overload?	**NO**	**NO**	**NO**	**NO**	**NO**

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

Month	2016	2017	2018	2019	2020
January	380	99	151	102	125
February	325	86	127	114	181
March	253	105	114	108	86
April	190	297	53	133	89
May	262	197	42	71	73
June	303	197	39	103	156
July	328	106	66	177	232
August	208	220	101	146	332
September	152	257	165	169	423
October	466	193	149	131	157
November	175	221	137	157	175
December	148	110	139	136	148
Annual Avg	266	174	107	129	181
Max Mo Avg	466	297	165	177	423
Max : Avg Ratio	1.75	1.71	1.54	1.37	2.33
Existing EDUs	749	751	753	753	753
Load/EDU	0.355	0.232	0.142	0.171	0.241
Load/Capita	0.101	0.066	0.041	0.049	0.069
Exist. Overload?	**NO**	**NO**	**NO**	**NO**	**NO**

Projected Flows for Next Five Years (MGD)

	2021	2022	2023	2024	2025
New EDUs	2.0	25.0	75.0	150.0	150.0
New EDU Flow	0.0003	0.0041	0.0122	0.0245	0.0245
Proj. Annual Avg	0.1231	0.1272	0.1394	0.1639	0.1884
Proj. Max 3-Mo Avg	0.1522	0.1573	0.1724	0.2027	0.2329
Proj. Overload?	**NO**	**NO**	**NO**	**NO**	**NO**

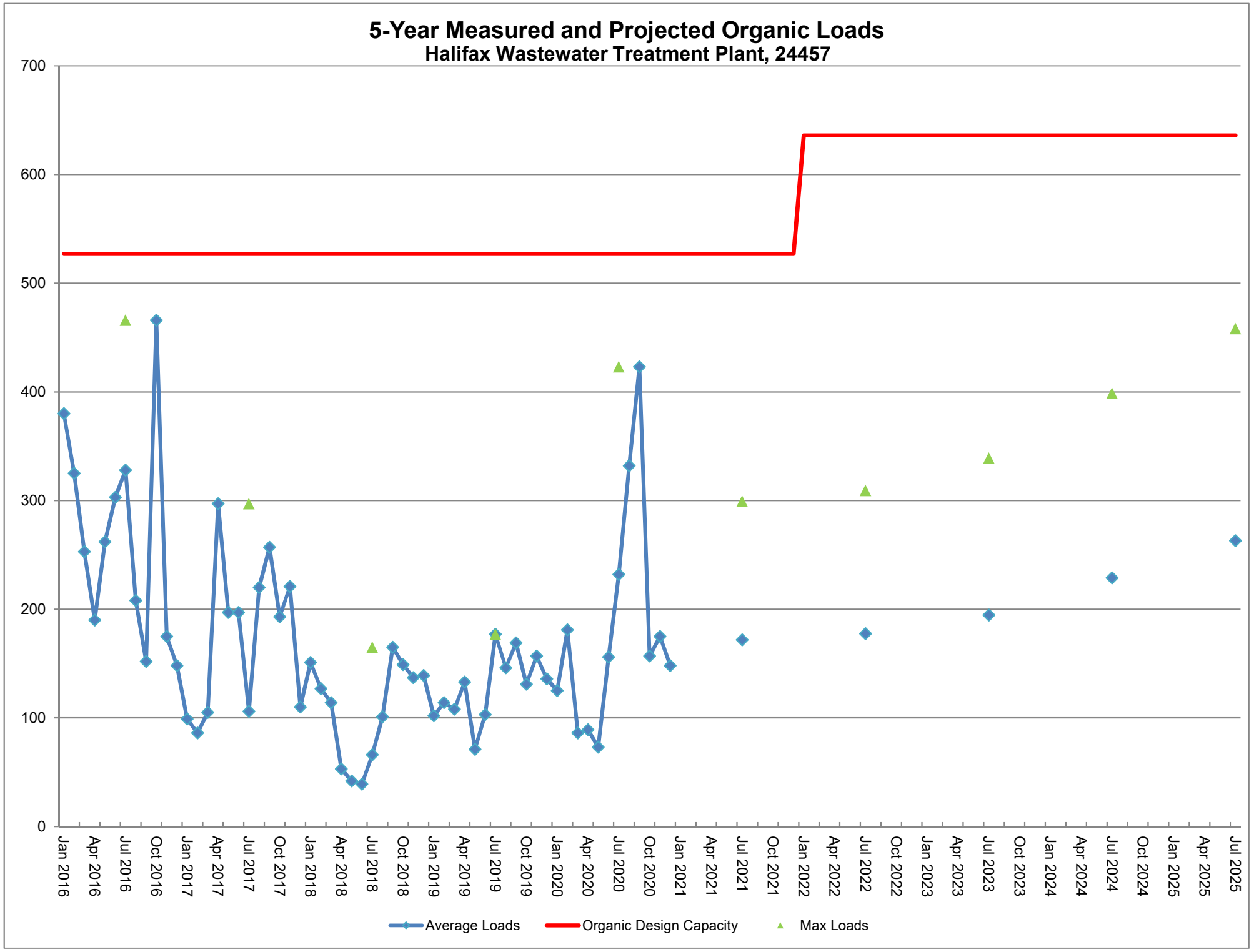
Projected BOD5 Loads for Next Five Years (lbs/day)

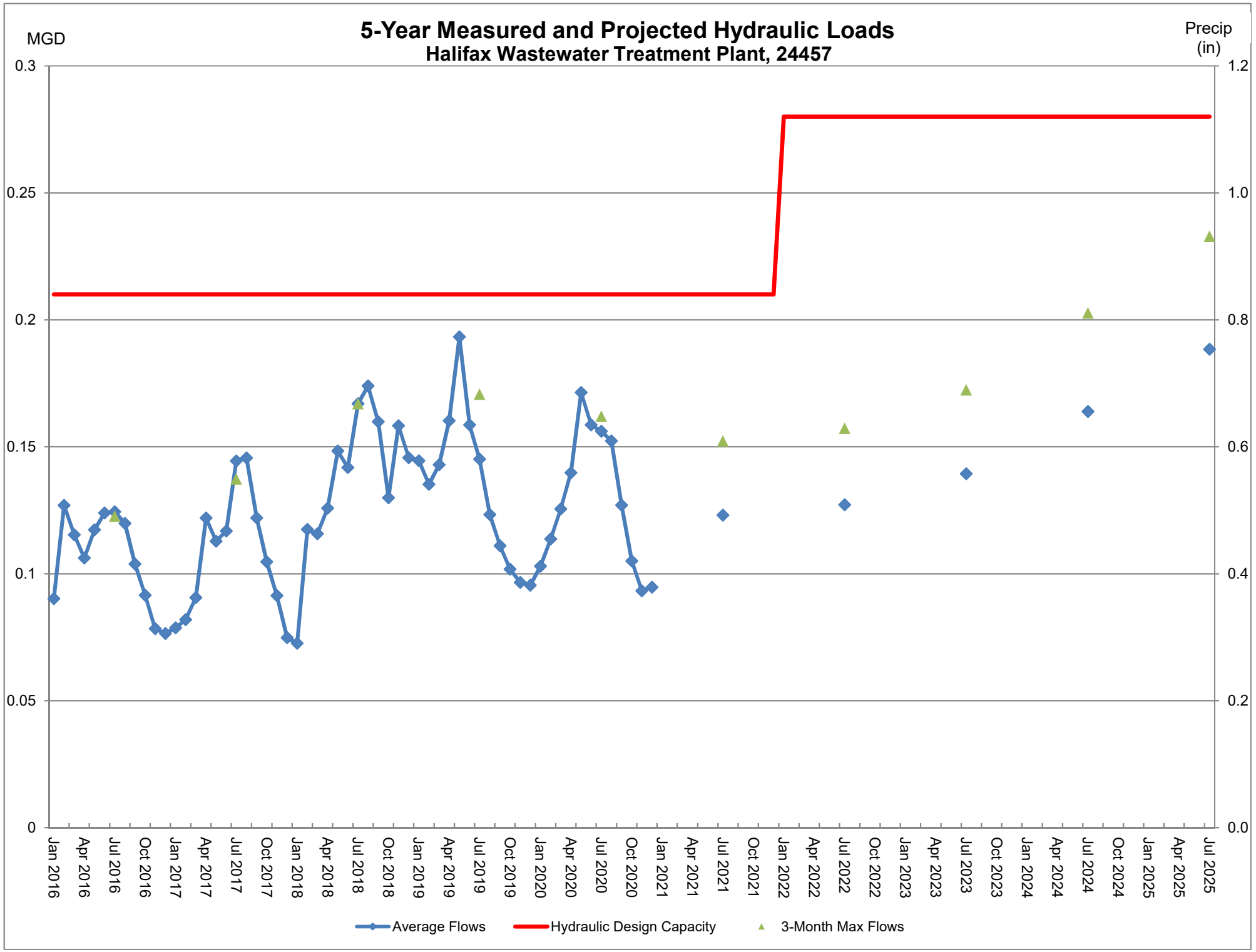
	2021	2022	2023	2024	2025
New EDUs	2	25	75	150	150
New EDU Load	0.456	5.704	17.111	34.222	34.222
Proj. Annual Avg	172	178	195	229	263
Proj. Max Avg	299	309	339	399	458
Proj. Overload?	**NO**	**NO**	**NO**	**NO**	**NO**

Show Precipitation Data on Hydraulic Graph?

Total Monthly Precipitation for Past Five Years (Inches)

Month	2016	2017	2018	2019	2020
January	2.0			2.46	2.77
February	3.5			2.83	2.53
March	1.6			2.22	3.46
April	1.7			4.31	3.5
May	5.15			5.05	4.3
June	2.75			2.47	2.86
July	4.8			5.44	0.92
August	1.35			3.94	3.96
September	2.05			2.29	1.71
October	1.5			5.0	3.69
November	1.5			2.11	2.12
December	3.2			3.81	5.11


5-Year Measured and Projected Organic Loads
Halifax Wastewater Treatment Plant, 24457
700
600
500
400
300
200
100
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
Apr 2020
Jul 2020
Oct 2020
Jan 2021
Apr 2021
Jul 2021
Oct 2021
Jan 2022
Apr 2022
Jul 2022
Oct 2022
Jan 2023
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


5-Year Measured and Projected Hydraulic Loads
Halifax Wastewater Treatment Plant, 24457
MGD
Precip (in)
0.3
0.25
0.2
0.15
0.1
0.05
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
Apr 2020
Jul 2020
Oct 2020
Jan 2021
Apr 2021
Jul 2021
Oct 2021
Jan 2022
Apr 2022
Jul 2022
Oct 2022
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

B

ATTACHMENT B

GENERAL PLAN/SEWER EXTENSIONS

LIMIT OF CONNECTION RESTRICTION PER
JUNE 20, 2017 CORRECTIVE ACTION PLAN

SYCAMORE RIDGE
DEVELOPMENT AREA

MOUNTAINVIEW DR

HALIFAX TOWNSHIP
HALIFAX BOROUGH

RIVERVIEW DRIVE

R/W "A"

R/W "B"

FIFTH ST.

SIXTH ST.

FOURTH ST.

THIRD ST.

SECOND ST.

FRONT ST.

MARKET ST.

RISE ST.

ARMSTRONG ST.

MAPLE ST.

GILBERT ST.

BOYERS ST.

GREEN ST.

LOCUST ST.

HILL CIRCLE

RAILROAD ALLEY

HOFFMAN ROAD

PETERS MOUNTAIN ROAD

HALIFAX PLAZA

S.R. 0147 L.R.1

S.R. 4013 POWELLS VALLEY ROAD

GEORGE STREET

PARMER DRIVE

NORFOLK SOUTHERN RAILWAY

BOYER STREET PUMPING STATION AND FORCE MAIN WITH AIR RELEASE VALVE

SEWAGE TREATMENT PLANT

MAIN PUMPING STATION

SUSQUEHANNA RIVER

HALIFAX TOWNSHIP
HALIFAX BOROUGH

GRAPHIC SCALE

800 0 400 800 1600 3200

(IN FEET)
1 inch = 800 ft.
(APPROXIMATE)

Refer to Halifax Township Sewer Extension Map for location of new proposed collection and conveyance facilities to be constructed as part of future sewer extension project.

COMPUTER DRAWING FILE NAME:
S–GENPLAN – CAP.DWG

HALIFAX AREA WATER AND SEWER AUTHORITY
DAUPHIN COUNTY, PENNSYLVANIA

GENERAL PLAN OF
SANITARY SEWERAGE FACILITIES
FOR CORRECTIVE ACTION PLAN

SCALE	DATE	FILE CODE	PLAN NO.
1"=800'	OCT., 2015	6071502	3

GLACE ASSOCIATES, INC., CAMP HILL, PA.

O:\CAD DRAWINGS\607\6071502\S–GENPLAN – CAP.DWG, 10/2/2015 9:23 AM

Powells Valley Road

Hoffman Road

Powells Valley Road

Parmer Drive

South River Road (S.R. 0147)

Pine Mountain Road (S.R. 2029)

Sycamore Avenue

Oak Avenue

Sycamore Avenue

Elm Ave

Sycamore Avenue

Maple Avenue

Maple Avenue

Dustin Drive

Michele Court

Dustin Drive

LENKER PUMP STATION

Maple Avenue

Hickman Run Road

Williams Street

Williams Street

Williams Road (S.R. 4017)

Roadcap Lane

ROADCAP LANE PUMP STATION

Leaman Road (T-2

Creek Rd-1 (T-353)

Creek Road (T-353)

Camp Hebron Road (T-551)

CREEK ROAD PUMP STATION

HALIFAX TOWNSHIP SANITARY SEWER EXTENSION
PRELIMINARY DESIGN
01/16/2020

GRAVITY SEWER

FORCE MAIN SEWER

LOW PRESSURE SEWER

Tax Parcel Map

2/3/2021, 1:22:10 PM

Parcels

1:4,514

0 0.03 0.06 0.11 mi

0 0.04 0.09 0.18 km

Dauphin County, PA Web Map

C

ATTACHMENT C

CONDITION OF PUMP STATIONS

CONDITION OF THE PUMP STATIONS

HAWSA utilizes two (2) pump stations throughout the sanitary sewer system. The pump stations are maintained and inspected by the operators on a regular basis. Cleaning, repairs, and routine maintenance items are performed as needed.

Boyer Street Pumping Station - Location: Boyer Street, Halifax Township

Design Capacity:	50 gpm (1 pump basis)
Present Flows:	Average: 3.9 gpm Maximum (Peak Hourly Flow estimated): 50 gpm Projected two-year maximum peak hourly flow estimated: 50 gpm (Design basis of new Boyer Street Pump Station for maintaining velocity in 4-inch force main)

The Boyer Street Pump Station was upgraded to submersible pumps at the end of 2014 and began operations in 2015. The single phase pumps run full speed. Attached runtime records indicate total runtime for the station averages to approximately 13.1 hours per week, usually divided equally between the pumps.

There are no known future connections to the pump station in the next 2-year planning period. Therefore, a hydraulic overload condition is not expected to occur at the pump station in the next 2 years.

Main Pumping Station - Location: At the Treatment Plant, conveying all flow from the Borough and the northern Halifax Township service area (including flows from Boyer Street Pumping Station).
There are two (2) suction lift pumps with separate 4-inch suction lines, discharging into a single 4-inch force main. The pumps are variable speed based on use of variable frequency drives, so only maximum flows can be estimated based on runtime. Due to the small size of the force main, 2 pumps on represents a much lower flow rate than twice one-pump flow.

Design Capacity:	175 gpm (1 pump basis)
Present Flows:	Average: 198 gpm (estimated based on plant flow) Maximum (Peak Hourly Flow estimated): 240 gpm Projected two-year maximum peak hourly flow estimated: 240 gpm (based on effective capacity of 2 pumps together into small 4-inch force main) *As noted plant return flows are included.*

The recorded pump hours attached indicate an overloaded pump station condition with Pump 2 (or lag pump) typically operating between 4-20 hours each day. In accordance with the Consent Order and Agreement (COA) developed for the WWTP, improvements to the Main Pumping Station will be addressed as part of the Wastewater Treatment Plant Upgrades Project. See Attachment F for information regarding the COA status.

Wastewater from the Halifax School and southern Halifax Township service area flows directly to the headworks. The Peak Hourly Flow at the WWTP is determined to be 360 gpm based on analysis of effluent WWTP flow meter charts for this flow-through treatment plant.

As part of the ongoing Wastewater Treatment Plant Upgrades project, the Main Pumping Station will receive improvements. The existing pump station is being replaced with a suction lift station designed for 300 gpm capacity. The upgraded pump station will have an effective wet well volume of approximately 788 gallons, based on the design pump rate of 300 gpm and a minimum allowable cycle time of 10 minutes per pump. A 6-inch diameter ductile iron force main will convey all flow from the Main Pumping Station approximately 175 feet to the proposed distribution box upstream of the proposed WWTP headworks.

Future Sanitary Extension – As previously indicated, a sanitary sewer extension to the HAWSA system was approved during the 2020 calendar year. A Water Quality Management Permit for the extension was issued on November 2, 2020. The extension will include the construction of three new pump stations. These stations are currently identified as the Lenker Estates Pump Station, the Creek Road Pump Station, and the Road Cap Lane Pump Station. Construction of the extension is expected to begin during the 2021 calendar year and all three pump stations are anticipated to be connected to the existing HAWSA system by February, 2022, pending funding.

PUMP HOURS

BOYER STREET PUMPING STATION

BOYER STREET PUMP STATION

DATE	TIME	HOURS #1	HOURS RAN	HOURS #2	HOURS RAN	TOTAL
1-3-20	1050	1497.3	2.6	1153.8	2.4	5.0
1-10-20	1040	1499.7	2.4	1156.1	2.3	4.7
1-17-20	0900	1502.2	2.5	1159.4	2.3	4.8
1-24-20	1020	1504.9	2.6	1160.7	2.3	4.9
1-31-20	1000	1508.1	3.3	1163.7	3.0	6.3
2-7-20	1045	1511	2.9	1166.1	2.4	5.3
2-14-20	1050	1514.5	3.5	1169.1	3.0	6.5
2-21-20	1035	1517.7	3.2	1171.9	2.8	6.0
2-28-20	1020	1521.2	3.5	1174.7	3.0	6.5
3-6-20	1030	1524.7	3.5	1178.3	3.4	6.9
3-13-20	1045	1527.9	3.2	1181.6	3.3	6.5
3-20-20	1020	1531.2	3.3	1184.8	3.2	6.5
3-27-20	0935	1534.3	3.1	1188.2	3.4	6.5
4-3-20	1130	1541.7	7.4	1195.8	7.6	15
4-10-20	1100	1547.2	5.5	1201.5	5.7	11.2
4-17-20	1020	1553.1	5.7	1207.6	6.1	11.8
4-24-20	1100	1558.3	5.4	1213.7	6.1	11.5
5-1-20	1100	1565.1	6.8	1221.8	8.1	14.9
1630 5-3-20	BACK-UP	PUMP NOT COMING ON (BREAKER)				
5-4-20		1567.7	2.6	1224.4	2.6	5.2
5-5-20	1015	1568.9	1.2	1225.6	1.2	2.4
5-6-20	0800	1569.9	1.0	1226.6	1.0	2.0
5-7-20	0940	1571.3	1.4	1228.0	1.3	2.7
5-9-20	1030	1572.4	1.1	1229.0	1.1	2.2
5-11-20	1040	1576.3	3.8	1233.1	3.1	6.9
5-15-20	1050	1580.7	4.5	1235.8	3.7	8.2
5-22-20	0950	1587.0	6.3	1240.6	4.8	11.1
5-29-20	1040	1591.8	4.8	1244.4	3.8	8.6
6-5-20	1040	1596.4	4.6	1249.0	3.6	8.2
6-12-20	1045	1601.1	4.7	1252.3	4.3	9.0

BOYER STREET PUMP STATION

DATE	TIME	HOURS #1 (1601.1)	HOURS RAN	HOURS #2 (1252.3)	HOURS RAN	TOTAL
6-19-20	0930	1604.4	3.3	1255.4	3.1	6.4
6-26-20	1020	1607.1	2.7	1257.9	2.5	5.2
7-3-20	0935	1609.2	2.1	1260.1	2.2	4.3
7-10-20	1040	1611.3	2.1	1262.6	2.5	4.6
7-17-20	1030	1613.3	2.0	1264.7	2.1	4.1
7-24-20	1030	1615.3	2.0	1266.5	1.8	3.8
7-31-20	1045	1617.2	1.9	1268.3	1.8	3.7
8-7-20	1125	1618.9	1.7	1270.1	1.8	3.5
8-14-20	1035	1620.6	1.7	1272	1.9	3.6
8-21-20	1040	1622.4	1.8	1273.7	1.7	3.5
8-28-20	1030	1624.1	1.7	1275.4	1.7	3.4
9-4-20	1025	1626.1	2.0	1277.2	1.8	3.8
9-11-20	1040	1627.9	1.8	1279.9	1.7	3.5
9-18-20	0945	1629.8	1.9	1280.5	1.6	3.5
9-25-20	1200	1631.6	1.8	1282.2	1.7	3.5
10-2-20	1030	1633.3	1.7	1283.6	1.4	3.1
10-9-20	1030	1635.6	2.3	1285.4	1.8	4.1
10-16-20	1050	1637.6	2.0	1287.5	2.1	4.1
10-23-20	1055	1639.4	1.8	1289.3	1.8	3.6
10-30-20	1055	1641.4	2.2	1291.1	1.8	4.0
11-6-20	1045	1643.5	1.9	1292.9	1.8	3.7
11-13-20	1030	1645.4	1.9	1294.7	1.8	3.7
11-20-20	1040	1647.3	1.9	1296.3	1.6	3.5
11-28-20	1045	1649.4	2.1	1298	1.7	3.8
12-4-20	1105	1651.4	2.0	1299.7	1.7	3.7
12-11-20	1030	1653.2	1.8	1301.3	1.6	3.4
12-18-20	11:15	1655.2	2.0	1303.1	1.8	3.8
12-25-20	0915	1655.2	0	1303.1	0	0
~~1-4-21~~	~~1050~~	~~1658.8~~	~~3.6~~	~~1306.3~~	~~3.2~~	~~6.8~~
~~1-11-21~~	~~1000~~	~~1661.8~~	~~3.0~~	~~1308.9~~	~~2.6~~	~~5.6~~

Breakers kicked in panel

Last two lines removed because they fall in the 2021 calendar year

PUMP HOURS

MAIN PUMPING STATION

JANUARY 2020

PUMP RUN TIME

DATE:	#1. PUMP	RUN TIME	#2. PUMP	RUN TIME	INCHES
JAN. 1	20591.9	16.1	12696.2	8.4	40.2
2	20610.5	18.6	12705.6	9.4	45.5
3	20616.1	5.6	12724.1	18.5	50.8
4	20626.8	10.7	12738.6	14.5	49.5
5	20633.6	6.8	12756.5	17.9	53.9
DECANT → 6	20654.3	20.7	12763.7	7.2	50.0
" → 7	20678.3	24.0	12765.2	1.5	52.8
8	20694.8	16.5	12773.0	7.8	41.4
9	20710.8	16	12781.1	8.1	32.4
10	20726.2	15.4	12789.8	8.7	51.5
11	20751.0	24.8	12790.6	0.8	52.9
12	20755.4	4.4	12813.6	23	50.9
13	20769.3	13.9	12826.8	13.2	30.3
14	20773.1	13.8	12847.1	20.3	45.3
15	20790	16.9	12855.1	8	43.1
16	20812.9	22.9	12857.3	2.2	47.4
17	20836.7	23.8	12857.9	.6	49.7
18	20860.9	24.2	12858.2	.3	38.9
19	20876.9	16.0	12869.6	11.4	43.6
20	20883.7	6.8	12892.9	23.3	50.4
21	20886.9	3.2	12915.3	22.4	41.3
22	20886.9	0	12939.3	24	39.6
23	20899	2.1	12962.4	23.1	49.1
24	20890.7	1.7	12984.9	22.5	50.2
1½" RAIN 25	20893.8	3.1	13008.6	18.7	76.1
26	20914.3	20.5	13027.2	18.5	51.4
27	20941.3	27	13045.4	18.2	54
28	20956.4	15.1	13064	18.6	49.4
29	20966.8	10.4	13082.5	18.5	47.8
30	20986.8	20	13091.1	8.6	52.8
31	20999.4	12.6	13107	15.9	50.3

FEBRUARY 2020
PUMP RUN TIMES

	DATE:	#1 PUMP	RUN TIME	#2 PUMP	RUN TIME	INCHES
	FEB. 1	21021.5	22.1	13112.4	5.4	52.3
	2	21035.0	13.5	13131.3	18.9	53.3
DECANT →	3	21057	22	13145.8	14.5	52.6
DECANT →	4	21070.7	13.7	13166.9	21.1	56.6
	5	21083.1	12.4	13187.7	20.8	50.8
	6	21098.5	15.4	13201.2	13.5	54
RAIN →	7	21114	15.5	13214.6	13.4	73.2
	8	21131.3	17.3	13238.4	23.8	57.7
	9	21154.5	23.2	13253.2	14.8	58.7
	10	21170.1	15.6	13276	22.8	56.4
	11	21192.1	22	13289.5	13.5	50.1
	12	21214.7	22.6	13304.5	15	48.3
	13	21236.8	22.1	13321.6	17.1	56.5
	14	21260.4	23.6	13337	15.4	48.9
	15	21285.4	25.0	13353.3	16.3	54.2
	16	21308.0	22.6	13369.1	15.8	60.3
	17	21331.5	23.5	13385.4	16.3	58.1
	18	21348.5	17	13408.0	22.6	56.3
	19	21370.5	22	13422.4	14.4	48.4
	20	21391.7	21.2	13435.4	13	48.6
	21	21405.8	14.1	13454.7	19.3	56.3
	22	21428.1	22.3	13466.7	12	62.0
	23	21443.2	15.1	13489.2	22.5	58.4
DECANT	24	21458.4	15.2	13511.3	22.1	60.6
DECANT	25	21475.1	16.7	13534	22.7	59.2
DONE.	26	21499.3	23.2	13548.3	14.3	62.8
	27	21518.1	19.8	13568.5	20.2	67.9
	28	21541.5	23.4	13584.3	15.8	63.1
	29	21563.1	21.6	13598.3	14	55.4

MARCH 2020

PUMP RUN TIME

DATE:		#1 PUMP	RUN TIME	#2 PUMP	RUN TIME	INCHES	
MARCH	1	21588.5	25.4	13614.9	16.6	51.5	
	2	21610.8	22.3	13629.8	14.9	61.6	
	3	21633.5	22.7	13644.5	14.7	59.8	
WORK ON #2 PUMP →	4	21652.7	29.2	13660.4	15.9	58.1	
HR JUMP?	5	21683.2	20.5	13670.6	10.2	53.1	W O PU
	6	21702.7	19.5	13680.4	9.8	54.0	
	7	21712.6	9.9	13699.1	18.7	55.2	
	8	21735.8	23.2	13710.6	11.5	54.8	
DECANT →	9	21758.2	22.4	13723.7	13.1	54.3	
CLEAN-OUT DEEP WELL	10	21780.1	21.9	13731.9	8.2	68.7	K
	11	21791.5	11.4	13751	19.1	51.5	
	12	21803.1	11.6	13764.3	13.3	39.5	
	13	21816.4	13.3	13775.9	11.6	50.1	
	14	21823.4	7.0	13791.7	15.8	41.6	
	15	21846.7	23.3	13798.9	7.2	52.2	
	16	21867.9	21.2	13806.7	7.8	54.0	
	17	21878.2	10.3	13821.8	15.1	38.9	
	18	21878.3	.1	13845.6	23.8	45.3	
	19	21899.8	21.5	13850.8	5.2	51	
	20	21903.7	3.9	13872.1	21.3	43	
	21	21906.2	2.5	13894.9	22.8	48.9	
	22	21919.1	12.9	13908.7	13.8	50.2	
	23	21940.1	21	13915	6.3	40	
	24	21948.5	8.4	13932.7	17.7	39.2	
	25	21952.5	4	13952.6	19.9	45.5	
	26	21976.7	24.2	13953.0	0.4	47.8	
	27	21990.2	13.5	13964.5	11.5	42.4	
	28	21994.3	4.1	13985.7	16.2	55.6	
	29	22018.1	23.8	14008.5	22.8	68.7	
	30	22032.7	14.6	14031.2	22.7	53.2	
	31	22052.8	20.1	14042.0	10.8	48.8	
APRIL	1	22073.5	20.7	14046.1	4.1	45.8	

APRIL 2020
PUMP RUN TIMES

DATE:	#1 PUMP	RUN TIME	#2 PUMP	RUN TIME	INCHES	
APRIL 1	22073.5	20.7	14046.1	4.1	45.8	
2	22082.6	9.1	14061.4	15.3	40.5	
3	22082.6	0	14085.2	23.8	48.8	
4	22082.6	0	14108.7	23.5	43.7	
5	22091.9	10.3	14127.3	18.6	53.5	
6	22102.7	10.8	14143.3	16	48.6	
7	22105.8	3.1	14165.3	22	40.8	
DECANT 8	22105.8	0	14189.3	24	43.8	
9	22128.5	22.7	14199.7	10.4	49.8	
10	22132.5	4	14220.7	21	41.5	
11	22135.4	3.4	14239.1	18.4	40.5	
12	22142.7	6.8	14259.5	20.4	40.7	
13	22142.7	0	14283.6	24.1	42.2	
14	22152.7	10	14301.2	17.6	40.3	
15	22172.4	19.7	14304.9	3.7	40.2	
TIME @ #2 ??? 16	22175.1	2.7	14349.7	44.8 = 24.8	40.1	
17	22190.3	15.2	14349.7	0	41.0	
18	22200.3	10	14349.7	0	41	
19	22222.7	22.4	14350.3	0.6	42.9	
DECANT 20	22246.6	23.9	14350.7	0.4	44.8	
DECANT 21	22258.2	11.6	14365.2	14.5	52.7	← CLE OUT
22	22279.8	21.6	14369.5	4.3	39.6	Cly
23	22303.6	23.8	14369.7	.2	39.5	CONTA
24	22327.6	24.0	14369.9	.2	56.0	TAN
25	22329.1	1.5	14393.7	23.8	40.0	
26	22329.3	0.2	14418.3	24.6	42.7	
27	22344.3	15	14428.4	10.1	40.4	
28	22367.9	23.6	14428.4	0	39	
29	22390.6	22.7	14437.9	9.5	50.1	
30	22401.8	11.2	14454	16.1	56.2	

MAY 2020

PUMP RUN TIMES

DATE:	#1 PUMP	RUN TIME	#2 PUMP	RUN TIME	INCHES
MAY 1	22425.8	24	14477.4	23.4	56.2
2	22448.2	22.4	14499.7	22.3	55.1
3	22464.7	16.5	14520.4	20.7	54.4
4	22487.6	22.9	14541.4	21	57
5	22503.2	15.6	14563.4	22	54.9
CLEAN-OUT CL2 → 6	22517.8	14.6	14584.6	21.2	90.2
CONTACT TANK 7	22539.3	21.5	14603.4	18.8	57.1
8	22562.9	23.6	14615.6	12.2	56.1
9	22587.2	24.3	14632.6	17	58.6
10	22610.0	12.8	14646.2	13.6	56.0
11	22627.8	17.8	14667.9	21.7	52.8
12	22645	17.2	14689	21.1	53.2
13	22667.5	22.5	14700.8	11.8	54.4
14	22681.9	14.4	14720.3	19.5	51.7
15	22705	23.1	14730.4	10.1	55.1
16	22727.1	22.1	14740.9	10.5	57.5
17	22749.0	21.9	14752.2	11.3	54.6
18	22772.6	23.6	14764.8	12.6	54.9
19	22784.2	11.6	14786.5	21.7	55.1
20	22804.6	20.4	14798.3	11.8	54.9
21	22818.2	13.6	14817.4	19.1	52.2
22	22839.8	21.6	14828.4	11.0	51.6
23	22861.1	21.3	14840.3	11.9	56.4
24	22882.7	21.6	14850.6	10.3	56.6
25	22905.8	23.1	14858.3	7.7	65.0
26	22928.1	22.3	14870.2	21.9	55.2
27	22952.1	24	14879.9	9.7	55.6
28	22963.6	11.5	14895.8	15.9	52.5
29	22979.9	11.3	14916	20.2	54
30	22997.3	17.4	14926.4	10.4	52.2
31	23010.5	13.2	14944.3	17.9	55.3

JUNE 2020

PUMP RUN TIMES

DATE:		#1 PUMP	RUN TIME	#2 PUMP	RUN TIME	INCHES
JUNE	1	23032.6	22.1	14954.6	10.3	55.4
	2	23053.2	20.6	14963.5	6.9	51.3
	3	23075.9	22.7	14972.3	8.8	55.7
	4	23096.[illegible]	21	14984.8	12	55.3
	5	[illegible]114.4	17.5	15003.3	18.5	56
	6	23122.8	8.4	15026.0	22.7	54.4
	7	23127.2	4.4	15049.6	23.6	52.4
DECANT	8	23147.1	19.9	15059.4	9.8	54.7
DECANT	9	23166.5	19.4	15071.7	12.3	56.3
	10	23190	23.5	15077.2	5.5	53
	11	23207.6	17.6	15086.5	9.3	49.8
	12	23216.8	9.2	15102.5	16	42.4
	13	23226.7	9.9	15118.7	16.2	48.9
	14	23235.2	8.5	15140.4	21.7	54.4
	15	23245.7	10.5	15159.3	18.9	51.7
	16	23263.7	18	15169.1	9.8	52
	17	23279.5	15.8	15177.1	8	53.1
	18	23298.2	18.7	15185.7	8.6	54.2
	19	23321.3	23.1	15189.5	3.8	53.1
	20	23324.1	2.8	15210.7	21.2	40.1
	21	23335.1	11.0	15228.8	18.1	42.4
	22	23335.1	0	15249.1	24.3	42.7
	23	23347.3	12.2	15261.6	12.5	48.9
	24	23366.9	19.6	15266.8	5.2	48.2
	25	23372.3	5.4	15286.2	19.4	40.1
	26	23372.3	0	15310.2	24	43.8
	27	23372.3	0	15334.7	24.5	40.5
	28	23377.6	4.3	15358.2	23.5	47.6
	29	23395.6	18	15380.5	22.3	52
	30	23411.7	16.1	15403.8	23.3	49.4

JULY 2020
PUMP RUN TIMES

	DATE:	#1 PUMP	RUN TIME	#2 PUMP	RUN TIME	INCHES
CLEAN OUT CONTACT →	JULY 1	23413.1	1.4	15427.8	24	89.1
	2	23430.1	17	15451.8	24	45.7
	3	23443.7	13.6	15475.8	24	44.3
	4	23451.0	7.3	15498.0	22.2	40.5
	5	23468.8	17.9	15523.5	5.5	41.2
	6	23487.4	18.5	15547.8	24.3	49.6
DECANT	7	23496.5	9.1	15571.5	23.7	43.6
DECANT	8	23507.5	11	15595.5	24	82.1
	9	23517.5	10	15619.5	24	50.8
	10	23524.0	6.5	15643.5	24	55.4
	11	23524.3	0.3	15667.8	24.3	41.9
	12	23531.0	6.7	15685.7	17.9	43.9
	13	23545.7	14.7	15693.5	7.8	39.8
	14	23546.7	1	15717.5	24	42.5
	15	23547.6	.9	15739.3	21.8	40.1
	16	23559.3	11.7	15751.1	11.8	38.8
	17	23561.7	2.4	15771.3	20.2	37.3
	18	23563.9	2.2	15792.5	21.2	42.0
	19	23566.0	2.1	15811.1	18.6	45.2
	20	23568.6	2.6	15833.8	22.7	41.2
	21	23569.7	1.1	15856.5	22.7	42.3
CLEAN-OUT OLD CONTACT	22	23571.3	1.6	15878.2	21.7	80.8
	23	23592.8	21.5	15887.5	9.3	65.4
	24	23595.4	2.6	15909.7	22.2	39.5
	25	23595.4	0	15935.4	25.7	28.6
	26	23600.3	4.9	15959.4	24	39.9
DECANT	27	23601.3	1	15976.6	17.2	38.6
DECANT	28	23608.5	7.2	15995.9	19.3	52.9
	29	23618.1	9.6	16012.3	16.4	38.5
	30	23618.9	.8	16035.9	23.6	41.2
	31	23624.1	5.2	16054.4	18.5	40.1

AUGUST 2020
PUMP RUN TIMES

DATE:		#1 PUMP	RUN TIME	#2 PUMP	RUN TIME	INCHES	
AUG.	1.	23627.0	2.4	16075.8	21.4	46.0	
	2.	23645.4	18.4	16079.0	4.2	47.8	
	3.	23663.7	18.3	16084.3	5.3	43.8	
	4.	23669.3	5.6	16102.1	17.8	42.0	
	5.	23686.1	16.8	16109.7	7.6	47.4	
	6.	23688.4	2.3	16130.9	21.2	38.7	
	7.	23689.6	1.2	16153.5	22.6	38.8	
	8.	23691.3	1.7	16173.9	20.4	42.1	
	9.	23693.5	2.2	16197.4	23.5	39.6	
	10.	23696.4	2.9	16216.8	19.4	39.8	
	11.	23697.8	1.4	16239.1	22.3	38.8	
	12.	23709.9	12.1	16251.1	12	39.9	
	13	23716.6	6.7	16267.8	16.7	40.1	
	14.	23722.3	5.7	16285.5	17.7	42.1	
	15.	23724.2	3.4	16305.1	19.6	43.4	
	16.	23748.2	20	16308.7	3.6	42.6	
	17.	23748.1	1.9	16330.7	22	40.4	
	18.	23759.5	11.4	16342.5	11.8	40.6	
	19.	23761.5	2	16364.2	21.7	39.6	
	20.	23763.2	1.7	16386.2	22	43.1	
	21.	23765.4	2.2	16407.3	21.1	40.8	
	22.	23776.4	11.0	16418.1	10.8	40.0	
	23.	23778.6	1.7	16440.5	22.4	40.9	
	24.	23783.5	4.9	16464	19.9	76.1	← OLD CONTACT TANK
DECANT	25.	23789.1	5.6	16479.1	18.7	41.7	
DECANT	26.	23807	17.9	16486.2	7.1	54.9	
	27.	23817.4	10.4	16499.1	12.9	36.2	
	28.	23834.5	17.1	16505.3	6.2	41.0	
	29.	23852.3	17.8	16512.9	7.6	41.7	
	30.	23857.4	5.1	16532.2	19.3	36.0	
	31.	23872.8	15.4	16538.2	6	40.3	

SEPTEMBER 2020

PUMP RUN TIMES

DATE:		#1. PUMP	RUN TIME	#2. PUMP	RUN TIME	INCHES
SEPTEMBER	1.	23876.3	3.5	16558.6	20.4	39.9
	2.	23895	18.7	16563.6	5	44.3
	3.	23899.3	4.3	16583.1	19.5	39.9
	4.	23906.8	7.5	16599.6	16.5	42.9
	5.	23923.8	18	16607.1	7.5	40.2
	6.	23927.1	4.3	16627.2	20.1	38.6
	7.	23931.4	4.3	16644.3	17.1	43.7
	8.	23934.3	2.9	16665.3	21	44.1
CLEAN-OUT → Cl2 CONTACT	9.	23951.7	17.4	16672.7	7.4	50.2
DECANT →	10.	23957.6	5.9	16689.3	16.6	41.4
DECANT →	11.	23970.5	12.9	16699.1	9.8	50.6
	12.	23982.1	11.6	16708.8	9.7	42.8
	13.	23985.8	3.7	16728.9	20.1	42.7
	14.	23987.1	1.3	16750	21.1	39
	15.	23990.8	3.7	16772	22	37.4
	16.	23992.8	2	16792	20	36.9
	17.	23995.5	2.7	16812.1	20.1	40.7
	18.	23996.9	1.4	16834.1	22.0	38.8
	19.	23999.5	2.6	16854.0	19.9	38.4
	20.	24005.0	5.5	16871.4	17.9	39.0
	21.	24009.6	4.6	16889.5	17.6	46.8
	22.	24018.1	8.5	16901.3	11.8	39.6
	23.	24024.5	6.4	16918.2	16.9	38.2
	24.	24027.8	3.3	16937.3	19.1	44.4
	25.	24033.0	5.2	16954.8	17.5	45.6
	26.	24039.5	6.5	16971.3	16.5	45.1
	27.	24043.2	3.7	16990.2	18.9	35.5
OUTSIDE NEW BATT. PANEL →	28.	24045.3	2.1	17010	19.8	42.8
	29.	24048.2	2.9	17029.9	19.9	36.9
	30.	24051.4	3.2	17049.5	19.6	42.3

OCTOBER 2020

PUMP RUN TIME

DATE:		#1 PUMP	RUN TIME	#2 PUMP	RUN TIME	INCHES
OCTOBER	1.	24053.6	2.2	17070.7	21.2	37.9
	2.	24057.3	3.7	17090.6	19.9	43.8
	3	24074.1	16.8	17099.9	9.3	36.2
	4.	24076.6	2.5	17118.7	18.8	43.3
	5.	24077.	.5	17141.3	22.6	43
	6.	24082.5	5.4	17159.1	17.8	38.3
DECANT	7.	24105	22.5	17160.1	1	42.4
DECANT	8.	24114	9	17174.5	14.4	46.1
	9.	24117.7	6.7	17193.9	19.4	37.2
	10.	24132.7	15	17203.7	9.8	40.8
	11.	24136.7	4	17221.0	17.3	41.5
	12.	24160.8	24.1	17221.0	0	40.3
	13.	24177.9	17.1	17227.5	6.5	42.1
	14.	24182.8	4.9	17245.9	18.4	37.9
	15.	24200.7	17.9	17251.8	5.9	40.2
UN-BLOCKING (#2)	16.	24205.9	5.2	17271.2	19.4	51.7
	17-	24217.5	11.6	17283.5	12.3	39.4
	18.	24237.9	20.4	17287.4	3.9	36.5
CLEAN-OUT CONTACT TANK →	19.	24242.7	4.8	17306.5	19.1	46.5
	20.	24259.7	17	17313.3	6.8	40.5
	21.	24263.9	4.2	17333	19.7	38.4
	22.	24286.1	22.2	17334.7	1.7	39.5
	23.	24306.3	20.2	17338.3	3.6	41.7
	24.	24312.6	6.3	17356	17.7	40.9
	25.	24318.8	6.2	17373.1	17.1	39
	26.	24327.5	8.7	17388.7	15.6	38.8
DECANT →	27.	24331.6	4.1	17408.5	19.8	41.6
DECANT →	28.	24347.1	15.5	17417	8.5	42.9
	29.	24347.1	0	17441.1	24.1	48.7
	30.	24369.7	22.6	17447.1	6.0	39.9
	31.	24375.2	25.5	17447.1	0	38.0

NOVEMBER 2020

PUMP RUN TIMES

DATE:		#1 PUMP	RUN TIME	#2 PUMP	RUN TIME	INCHES
NOVEMBER	1.	24411.0	16.7	17454.6	7.5	43.7
	2.	24411.9	0	17477.8	23.2	39.2
	3.	24411.9	0	17501.7	23.9	40.3
	4.	24411.9	0	17525.7	24	39.2
	5.	24411.9	0	17549.8	24.1	37.4
	6.	24411.9	0	17573.8	24	37.7
	7.	24416.3	4.4	17597.2	13.4	39.2
	8.	24417.4	1.0	17618.1	20.9	52.1
	9.	24421.2	3.8	17639	20.9	39.4
	10.	24426.4	5.2	17658.6	19.6	38.6
	11.	24432.1	5.7	17678.4	19.8	37.5
	12.	24440.1	8.0	17700.9	22.5	43.6
	13.	24444.9	4.8	17720.5	19.6	41.7
	14.	24452.7	7.8	17742.1	21.6	46.3
	15.	24458.6	5.4	17760.4	18.3	38.5
	16.	24462.2	3.6	17778.3	17.9	39.1
	17.	24468.2	6	17795.4	17.1	42.9
DECANT →	18.	24485.9	17.7	17801.2	5.8	44.3
DECANT →	19.	24502.0	16.1	17808.5	7.3	51.2
	20.	24506.6	4.6	17827.6	19.1	44.3
	21.	24524.7	18.1	17835.0	7.4	41.4
	22.	24530.0	5.3	17851.3	15.3	41.0
	23.	24546.0	16.0	17858.1	6.8	51.9
	24.	24549.2	3.2	17878.5	20.4	41.0
	25.	24551.4	2.2	17899.9	21.4	42.1
	26.	24552.8	1.4	17922.1	22.2	45
	27.	24565.8	13	17932.3	10.2	41.8
	28.	24566	.2	17955.6	23.3	40.9
	29.	24568.1	2.1	17977.3	21.7	42
	30.	24569.1	1	18001.7	24.4	62.3

DECEMBER 2020

PUMP RUN TIMES

DATE:	#1 PUMP	RUN TIME	#2 PUMP	RUN TIME	INCHES
DECEMBER 1.	24574.2	5.1	18025.5	23.9	41.8
2.	24578.7	4.5	18044.9	19.4	38.5
3.	24599	20.3	18048.5	3.6	40.1
4.	24609.1	10.1	18063.0	14.5	41.5
5.	24609.1	0	18083.2	20.2	37.8
6.	24624.3	15.2	18094.4	11.2	43.8
7.	24642.2	17.9	18102.1	7.7	44
8.	24642.9	.7	18126.1	24.0	87.1
9.	24650.5	7.6	18146.5	20.4	40.6
10.	24650.6	.1	18170.4	23.9	42.7
11.	24656.4	5.8	18188.5	18.1	43.5
12.	24672.6	16.2	18192.7	4.2	45.1
13.	24673.9	1.3	18218.6	25.9	42.2
14.	24678.1	4.2	18234.9	18.3	42
DECANT 15.	24683.5	5.4	18255.2	18.3	54.3
16.	24701.6	18.1	18260.8	5.6	41.2
17.	24703.0	1.4	18283.3	22.5	39.2
18.	24703.5	.5	18305.6	22.3	43.2
19.	24703.5	0	18330.8	25.2	~~42.4~~
20.	24703.5	0	18354.8	24	40.0
21.	24704.4	.9	18375.9	21.1	41.2
22.	24704.4	0	18399.9	24	39.4
23.	24724.4	20.0	18404.5	4.6	41.3
24.	24742.5	18.1	18409.9	5.4	46.6
25.	24765.0	22.5	18433.1	23.2	87.4
26.	24789.7	24.7	18447.2	14.1	41.0
27.	24803.0	13.3	18461.5	14.3	53.6
28.	24807.2	4.2	18482.4	20.9	38.7
29.	24814.6	7.4	18499	16.6	54.1
30.	24831.8	17.2	18507.7	8.7	42.8
31.	24839.7	7.9	18523.8	16.1	54.5

D

ATTACHMENT D

SEWAGE SLUDGE MANAGEMENT INVENTORY

	Influent BOD (mg/L)	Effluent CBOD (mg/L)	Liquid Sludge Disposed Off-Site (dry ton)	Liquid Sludge Disposed Off-Site (gal)	% Solids
Jan	158	5.1	1.554	21,000	1.8
Feb	185	4.1	0.000	0	0.0
Mar	87	3.5	0.259	2,700	2.3
Apr	76	3.4	0.000	0	0.0
May	58	3.7	0.000	0	0.0
Jun	114	6.6	0.000	0	0.0
Jul	185	9.3	0.560	15,500	0.9
Aug	276	6.9	0.000	0	0.0
Sep	401	8.3	0.000	0	0.0
Oct	166	5.0	0.751	10,600	1.7
Nov	202	9.3	0.000	0	0.0
Dec	200	6.7	0.000	0	0.0
Tot	2108	71.9	3.124	49800	6.7
Avg	**175.6666667**	**6.0**	**0.3**	**4150**	**1.7**

SLUDGE GENERATION CALCULATION

Facility Name: Halifax Wastewater Treatment Plant
Permit Number: PA0024457
Date of Calculation: 2/4/2021

Required Information For Calculation

Average Daily Flow (mgd):	0.1284	Digester Capacity (gal):	42000
Influent BOD (mg/l):	175.7	%Solids of Outgoing Sludge:	1.7
Effluent BOD (mg/l):	6	Monitoring Period (days):	365

Wastewater Treatment Processes

Place an "X" in the box beside the corresponding treatment process. Select a maximum of Primary Clarification and one other treatment process.

Primary Clarification		Contact Stabilization		RBC	
Conventional Activated Sludge		SBR		ABF	
Extended Aeration	X	Trickling Filter		Small Plant with low SOR (<500 gpd/sq ft)	

Operational Information

BOD Removed (lbs/day):	182	TSS Removed (lbs/day):	118

Digester Information

Type of Digester

Place an "X" in the box beside the corresponding treatment process.

Aerobic Digestion	X	Anaerobic Digestion		None	

Sludge Feed Rate to Digesters (gpd):	1888.4216
Digester Hydraulic Detention Time (days):	22
Estimated Total Solids Reduction (%):	0.35

Sludge Generation

dry lbs/day	77	wet lbs/day	4516
dry tons/monitoring period	14	wet tons/monitoring period	824
gal/day	542	gal/monitoring period	197659

Amount of Sludge Reported as Being Generated by the Facility

wet tons/monitoring period: 0

OR

dry tons/monitoring period: 3.124

Enter only one of the above values. The remaining value should be "0".

Is the amount reported by the generator within 15% of the calculated value? NO

NO explanation: LESS THAN 15% RANGE

What type of information was used to calculate the above information: 2020 DMR Supplemental Reports

Dates used: 1.1.2020 TO 12.31.2020

Name of person performing the calculation: Keith W. Rhodes II

ATTACHMENT E

FLOW METER CALIBRATION REPORT

WG Malden

P.O. BOX 196, EAST EARL, PA 17519
PHONE: (717) 768-0800 FAX: (717) 768-0802

*** SERVICE REPORT ***

HALIFAX MUNICIPAL AUTHORITY
SOUTH FRONT STREET
HALIFAX, PA 17032

SERVICE DATE: DECEMBER 28, 2020 **SERVICE CONTRACT:** ANNUAL (A12)
LOCATION: WASTEWATER - EFFLUENT
METER #: C8201 AA

PRIMARY: WEIR V-NOTCH 90°
MAXIMUM CAPACITY: 347.2 GPM

METER: BADGER	**MODEL #:** 2210	**SERIAL #:** 12286
RECORDER: CHESSELL	**MODEL #:** 392	**SERIAL #:** 9404-31238-B02

*** WORK PERFORMED ***

METER CALIBRATION	**ERROR:** 0.15 INCHES	**TOLERANCE:** ±0.125 INCHES
METHOD: LEVEL MEASUREMENTS AND FLOW CHECKS		
RECORDER CALIBRATION	**ERROR:** 0%, 0%, 0%	**TOLERANCE:** ±1.000 %
CHECKED AT: 0%, 50%, 100%		
TOTALIZER CALIBRATION	**ERROR:** 0%	**TOLERANCE:** ±1.000 %
CHECKED AT: 0%, 50%, 100%		

*** TECHNICIAN COMMENTS ***

PERFORMED ANNUAL CALIBRATION
CLEANED PRIMARY
VERIFIED TOTALIZER (PASSED)
TESTED 4-20MA LOOP
ADJUSTED EQUIPMENT
LEFT EQUIPMENT OPERATING PROPERLY

SERVICE REPRESENTATIVE(S): KYLE RANKIN

ATTACHMENT F

CONSENT ORDER AND AGREEMENT PROGRESS REPORT

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services
AN EMPLOYEE-OWNED COMPANY

369 East Park Drive
Harrisburg, PA 17111
717.564.1121
www.hrg-inc.com

VIA ELECTRONIC DELIVERY

December 28, 2020

Mr. Erick Ammon
Clean Water Program
PA Department of Environmental Protection
Southcentral Regional Office
909 Elmerton Avenue
Harrisburg, Pennsylvania 17110-8200

Re: NPDES Permit No. PA0024457
Consent Order & Agreement: Quarterly Progress Report
Main Pumping Station and Wastewater Treatment Plant
Halifax Area Water and Sewer Authority

Dear Mr. Ammon:

On behalf of the Halifax Area Water and Sewer Authority (HAWASA), Herbert, Rowland & Grubic, Inc. (HRG) hereby submits this Consent Order and Agreement (COA) Quarterly Progress Report in accordance with the requirements outlined in the April 20, 2018 COA executed by the Department and HAWASA.

The Main Pumping Station located at the HAWASA Wastewater Treatment Plant (WWTP) is considered to be hydraulically overloaded in accordance with 25 Pa. Code § 94.12. HAWASA and the Department executed the above referenced COA to eliminate the overload condition at the Main Pumping Station. Modifications to the Main Pumping Station will be undertaken as part of a WWTP Upgrade Project to be completed by HAWASA.

For ease in reporting HAWASA progress in meeting the Corrective Action schedule contained in the COA, this Progress Report provides the status of the Tasks which were identified in the Implementation Schedule contained in the HAWASA Corrective Action Plan (CAP) and have been updated to reflect the required compliance dates identified within the COA. This Progress Report also summarizes any new connections to the portion of the HAWASA system which is tributary to the overloaded sewerage facilities.

Implementation Schedule – Update

WWTP UPGRADE PROJECT CONTRACT AWARD & PENNVEST FUNDING STATUS:

- As noted in our September 30, 2020 Progress Report, Bids for construction of the WWTP Upgrade Project were received by HAWASA on August 11, 2020. Following the receipt of bids, HAWASA applied to PENNVEST for additional funds required to construct the project for the bids received, with the additional funds awarded by PENNVEST at their October 21,

2020 Board meeting. Settlement of the PENNVEST loan was completed by representatives of HAWASA, Halifax Borough and Halifax Township on November 24, 2020.

- Notice of Award letters and executed Contract Documents were transmitted to the low bidders of the three (3) construction contracts on November 25, 2020. The Contract Times (Notice to Proceed) for the project began on November 30, 2020. Substantial Completion, per the Contract Times, must be achieved on or before February 23, 2022; Final Completion must be achieved on or before April 9, 2022.
- A Pre-construction Conference for the project with the awarded contractors was held virtually on December 9, 2020 and was attended by Representatives of PENNVEST and PA DEP. A copy of the meeting minutes from the Pre-construction Conference are attached to our Report.
- It is anticipated that construction activities at the site will begin in February/March 2021 following the approval of contractor submittals and mobilization of materials, equipment and job trailers. Construction status will be identified in future Progress Reports submitted by HAWASA.

HALIFAX TOWNSHIP SEWER EXTENSION STATUS (NOT REQUIRED UNDER COA):

In conjunction with the design of the WWTP Upgrade Project, HRG has completed the Preliminary Design Phase for the Halifax Township Sewer Extension Project. This Project is not mandated by the COA. However, the Part II Permit Application for the WWTP Upgrade Project includes capacity for the additional flows which will be generated by the construction of this sewer extension.

The Permit Applications required for construction of the project and their respective status are indicated below:

- The Water Quality Management Permit was issued by PA DEP on November 2, 2020.
- The PennDOT Highway Occupancy Permit was issued on November 7, 2020.
- The Application (NOI) under the General PAG-02 NPDES Permit was submitted to PA DEP in September 2020. HRG has received and responded to technical comments issued by the Dauphin County Conservation District.
- The Joint Application for PA Chapter 105 Water Obstruction and Encroachment Permit and U.S. Army Corps of Engineers Section 404 Permit for this project was submitted to PA DEP in September 2020.

The Implementation Schedule below is included in the HAWASA CAP; the required completion dates have been updated to reflect those contained in the COA. For the purpose of this Report, the "Status/Update" column has been updated to demonstrate HAWASA's compliance with the Implementation Schedule. Items in red text are updates since the last COA quarterly report submission.

IMPLEMENTATION SCHEDULE FOR HAWASA WWTP UPGRADE [Taken from approved CAP and modified per the Corrective Action schedule included in the COA]		
TASK DESCRIPTION	*COMPLETION / SUBMISSION DATE*	***STATUS/ UPDATE***
HAWASA and PA DEP Execution of Consent Order and Agreement	April 20, 2018	***[Task Completed]***
Submit a Wastewater Treatment Plant Alternatives Review, Design Engineer's Report and an administratively and technically complete Uniform Environmental Report for the upgrade of the Plant and main pumping station Design Engineer's Report will include the following key components: • Review previous HAWASA evaluation of WWTP improvement alternatives • Prepare existing and future flow and loading projections including flow metering study as required • Request and receive preliminary effluent discharge limits for WWTP Upgrade from PA DEP • WWTP Improvements alternatives review • Identification and selection of recommended improvements • User rates analysis for recommended improvements	December 31, 2018	***[Task Completed; Wastewater Treatment Plant Alternatives Review & Design Engineer's Report was submitted to PA DEP on December 28, 2018; Categorical Exclusion request for WWTP Upgrade Project approved by PA DEP on December 31, 2019; Task Completed]***
Submission of administratively and technically complete Water Quality Management Part II Permit Application for the upgrade of the Plant and main pumping station	Within 180 Days of PA DEP approval of UER	***[Task Completed; WQM Part II Permit Application, review fee and supporting documents were submitted to PA DEP on September 13, 2019; WQM Permit issued by PA DEP on March 12, 2020]***
Begin construction of the Plant upgrade in accordance with the Part II Permit	Within 205 Days of PA DEP issuance of Water Quality Management Part II Permit	***[Task Completed – Contract Awards were issued by HAWASA on November 25, 2020. The Contract Times commenced on November 30, 2020. Substantial Completion to be achieved by February 23, 2022; Final Completion to be achieved by April 9, 2022.]***
Complete Construction	Within 705 Days of PA DEP issuance of Water Quality Management Part II Permit	
Verify completion of construction by submission of the Sewage and Industrial Wastewater Facilities Construction Certification	Within 30 days of completed construction operations	
Submission of quarterly Progress Reports until termination of COA		***Quarterly Progress Report submitted December 28, 2020***. Previous Quarterly Progress Report Submitted September 30, 2020

Restriction on Connections Tributary to Overloaded Sewerage Facilities

Per the terms of the approved CAP, HAWASA will limit new connections within the area tributary to the Main Pumping Station to a total of twenty-five (25) new EDUs (not otherwise meeting the definitions of 25 Pa Code §§ 94.55, 94.56 and 94.57) until the hydraulic overload condition is eliminated. There have not been any new connections made within the area tributary to the Main Pumping Station as of the date of this Progress Report. There is no restriction on connections in the southern portion of the HAWASA collection system located in Halifax Township as this area is not tributary to the Main Pumping Station.

As noted in our September 30, 2020 Progress Report, a new residential development along S.R. 147 across from the Halifax Area School District is being proposed for construction in Halifax Township. This parcel is identified in the Dauphin County GIS Parcel Viewer as 29-013-022 with an approximate size of 23.9 acres. This project is now known as Sycamore Ridge and proposes the construction of 124 residential townhome units based on information provided by the Developer at the October 20, 2020 HAWASA Board meeting.

Sanitary sewer service to Sycamore Ridge is proposed by the Developer via connection to the existing HAWASA collection system located in S.R. 147 at Manhole 172. This portion of the collection system is tributary to the overloaded Main Pump Station. However, there has been no formal Land Development Plan received by HAWASA as of the date of our Progress Report. The exact timeframe for the construction of the new residential units within this development is currently unknown. We will continue to provide information pertaining to the schedule for new connections within this development in future Progress Reports as additional information is received from the developer.

If you have any questions or comments regarding this COA Progress Report, please do not hesitate to contact me at 717-564-1121. Thank you.

Sincerely,

HERBERT, ROWLAND & GRUBIC, INC.

Justin J. Mendinsky
Water & Wastewater Group Manager

JJM/rb
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Enclosures

cc: HAWASA Board
Jeffrey Grosser, Operator
Joseph D. Kerwin, Esq., Solicitor
HRG File

PRECONSTRUCTION MINUTES
DECEMBER 9, 2020 – 10:30 AM

Halifax Area Water & Sewer Authority (HAWASA)
Wastewater Treatment Plant Upgrade
Contract 20-1 – PSI Pumping Solutions, Inc. (PSI)
Contract 20-2 – PSI Pumping Solutions, Inc. (PSI)
Contract 20-3 – LTS Plumbing and Heating, Inc. (LTS)

ATTENDANCE (Via ZOOM):

Steven Puterbaugh – HRG
Justin Mendinsky – HRG
Yves Pollart – HRG
Matt Moore – HRG
Brooke Semanchik – HRG
Logan Jury – HRG
Donn Dusack – HRG
Matt Aiello – PSI
Aram Moffit – PSI
Jeff Enders – HAWASA
Jeff Grosser – HAWASA
Derrik Grosser – HAWASA
Ben McCollum – LTS
Dharmendra Kumar – DEP
Erick Ammon – DEP

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1. PROJECT SUMMARY

a. Introductions

Introductions were provided by all attendees.

b. Contract Documents

One (1) printed hard copy of the Project Manual and Drawings was provided to Owner. Contractor to be sure they have downloaded all Bidding Documents and Addenda from PennBid.

c. Contract Times

The Agreement has been executed by HAWASA and the Contractor with copies distributed prior to the meeting. The Notice to Proceed was issued on 11/25/2020 and dated 11/30/2020. Commencing on the date of the Notice to Proceed, the Contractor shall start performing your obligations under the Contract Documents.

The Contract Times for this Contract per Article 4 of the Agreement are as follows:

	Date	**Liquidate Damages**
Notice to Proceed	11/30/2020	
Substantial Completion	2/23/2022	$850 per day
Final Completion	4/9/2022	$425 per day

In addition to the Liquidated Damages identified above, Special Damages to reimburse the Owner for fines and penalties as well as engineering, inspection, or construction observation costs per Article 4 of the Agreement.

Mr. Mendinsky stressed that the project is being performed under a Consent Order and Agreement between the Owner and DEP and which does involve penalties for missing stipulated milestones.

2. ADMINISTRATIVE

a. Engineer's Status During Construction

Steven Puterbaugh reviewed the role of the Engineer. HRG designed the Project and will provide Construction Phase services. The HRG Harrisburg office will be the office of administration for the Project Contract. Justin Mendinsky, P.E. will be the Project Manager, Yves Pollart, P.E. will be the Design Engineer, and Steven Puterbaugh, P.E. will be the Construction Administrator.

HRG (Engineer) will function as the Owner's representative during construction and will provide general administration of the Contract. The Engineer will provide clarification and interpretation of the requirements of the Contract Documents, reject defective work, review and approve shop drawings, process and prepare Change Orders, review payment applications and make recommendations for payment, render decisions on disputes, and perform other services as set forth in the General Conditions.

Only the Owner, Halifax Area Water & Sewer Authority, can authorize changes in the Contract Price or Times.

b. Project Communications

All communication will be through the Engineer. The Contractor will communicate directly with the Engineer; the Owner will issue all communications through the Engineer. All communications from subcontractors or suppliers shall be through the Contractor. All communication should be directed to Steven Puterbaugh (sputerbaugh@hrg-inc.com) with a copy to Justin Mendinsky and Donn Dusack (jmendinsky@hrg-inc.com; ddusack@hrg-inc.com).

c. Prevailing Wage and Payroll Certifications

This is a Prevailing Wage contract, Davis Bacon wages. Certified payrolls **must** be submitted with the application for payment. HRG will do only a general review of the certified payrolls for compliance with the wage rates. Contractor is responsible for compliance with all Prevailing Wage Requirements. The form that must be utilized is included in Section 00 73 43 of the Project Manual.

d. Insurances

Insurances are required to be maintained for the duration of the contract. All insurances are in place.

e. Permits and Approvals

HRG brought to Contractors attention the requirements and restrictions for ALL Permits.

- PaDEP Water Quality Management Permit No. 2205401 Dated March 12, 2020 is included in the Contract Documents.
- National Pollutant Discharge Elimination System Permit No. PA0024457, Dated April 27, 2017.
- Building Permits need emergency contacts from all of the Contractors
    1. $25,903.50 made out to the Borough of Halifax, no work can be started until this fee is paid. **Invoice will be issued to Contractor.**
    2. Electrical inspections are required for job trailers.
    3. Weather card must be mounted in field office that lists all inspections.
    4. Building Code Official
       LTL Consultants, Ltd.
       One Town Centre Drive
       P.O. Box 241
       Oley, PA 19547
       610-987-9290

f. Safety

Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs. Compliance with all Safety requirements is the responsibility of the Contractor. Contractors will submit copies of their Safety Programs. Contractor will be issuing at COVID compliance procedure.

g. Control of Work

Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. This includes the protection of his employees and all other persons on the work site, all material and equipment and other property at or adjacent to the site including pavement, landscaping, and utilities, whether underground or exposed.

h. Subcontractors and Products List

Contractor is responsible for providing a list of subcontractors and major material suppliers. Subcontractors and major material suppliers list will not be approved; however, is to be submitted for informational purposes only.

i. AMERICAN IRON AND STEEL CERTIFICATION

American Iron and Steel Certification is to be executed by the Contractor and submitted following the Notice of Intent to Award. **Example is included in the attached "AIS provisions".**

American Iron and Steel Certification is to be executed by each equipment and material supplier for products and materials which fall under the American Iron and Steel Requirements. Certification must be submitted as part of the "Shop Drawing" Submittal Process.

For all equipment and materials which fall under the American Iron and Steel Requirement, the Contractor must include (along with the Shop Drawing submission) certificates from the supplier, fabricator, manufacturer, processor, etc. certifying compliance with the American Iron and Steel Requirement.

j. DEP/PENNVEST

Dharmendra Kumar stated that the requirements of the DEP permit and PENNVEST must be followed. Erick Ammon mentioned that site inspections are limited and will depend on the Contractor and RPR to follow procedures outlined in the **attached agenda**.

k. PP&L Coordination

ATS submittal is required by PP&L. PSI spoke with PP&L and was asked to be included on the ATS submittal.

HRG asked about timing for PP&L and PSI to coordinate all work on site. PSI did not think it would be an issue with construction activities.

3. SITE COORDINATION

a. Access and Material Storage

Contractor should coordinate stockpiling/storage of material with the Owner. Designated material laydown areas and parking areas will be at the direction of the Owner. Traffic throughout the plant must be maintained at all times. Double gate at Digester must be made available for sludge hauling.

HRG explained that there is a gravel roadway that leads to the plant that is also the main access drive to some resident properties further down the road. It will need to be kept open or alternative means of access provided.

Dutchland trailers may cause damage to roadway corners during delivery. Contractor and Dutchland will be responsible for repairs as needed. Owner mentioned that there are routes and procedures that other deliveries have followed.

b. Emergency Phone Numbers

The Contractor is required to have a 24-hour phone number. This number will be furnished to the Owner, and other interested agencies or officials. This phone number is required to be a direct connection to an individual responsible for the work on the project. Numbers for answering machines will not be accepted.

Emergency numbers for each Contractor must be submitted.

c. Resident Project Representative

The duties and responsibilities of the RPR are identified in Article 10.03 in Section 00 72 00 of the Contract Documents. The Engineer will be providing an RPR for this Project. The RPR is NOT authorized to approve changes in cost or time nor to direct the work of the Contractor or their subcontractors.

Donn Dusack will be the primary RPR for duration of Contract. Each Contractor shall be responsible for coordinating site activities directly with him.

d. Construction Progress Reporting

Contractor is responsible for maintaining construction progress reports per Section 01 32 26 of the Contract Documents. HRG will not request that these be submitted regularly, however these reports must be available upon request and with the submission of any claims or change order requests. Construction Progress Reports shall include site photographs.

e. Temporary Controls

Contractor was advised of their responsibility to provide and remove all temporary utilities and facilities they establish/install during the Project. Mr. Puterbaugh also noted to fully read all General Notes and Notes contained on the Contract Drawings.

Contractor and Engineer Field Offices are included in the project and are considered temporary.

f. Multiple Contract Summary

Mr. Puterbaugh brought to Contractors' attention to Section 01 12 00 of the Contract Documents to fully read and understand the coordination that shall occur between all prime Contractors.

4. CONSTRUCTION ADMINISTRATION

a. Changes in Work

No changes will be entertained for Contractor's failure to field verify all dimensions. As previously stated, only the Owner can authorize changes in the Work. Changes are accomplished either by Change Orders or Work Change Directives (WCD). Field Orders can be issued by the Engineer which results in NO CHANGE IN THE CONTRACT PRICE OR TIME. If the Contractor feels that a Field Order issued by the Engineer will result in an increase to the Contract Price or Time, then it is the Contractor's

responsibility to file a claim in accordance with the General Conditions (GC) of the Contract. No changes in the work or claims will be reviewed if they are submitted outside of the requirements of the Contract.

Change Orders of $25,000 or greater need to be approved by PENNVEST before work can begin.

b. Work Schedule

The Contractors will submit a Preliminary Construction Schedule through email by January 3, 2020. All schedules must be in Gantt chart format and cover all time from the Notice to Proceed until Substantial Completion. The preliminary schedule shall also include the submittal schedule. Full payment for Mobilizing and Project Management will not be considered without receipt and approval of the preliminary construction schedule. **HRG emphasized that the Substantial Completion date is a solid date and cannot be extended.**

HRG and Owner asked about Start dates for being onsite to being work. Contractor is expecting to be onsite in March. All of the main equipment suppliers has been contacted.

HRG asked for the UV submittal to be issued early as well as the tank submittals. HRG also offered to meet with vendors to help submittal review.

Contractor expects to be working 5 days a week, 8 hours per day. Site work hours are 7am until 3pm with no work on weekends or holidays.

c. Project Documentation Website

HRG noted the requirements for the General Contractor (20-1) to provide and administer a Construction Documentation Project Web Site for the project to host and manage all project communications and documentation.

Specification section 01 31 23 details how many licenses must be made available to each party (Contractors, Owner, & Engineer). Each party will need to identify the people they want to have access. It was also noted that the Contract requires 8 hours of training at Owner's office for all Users.

Contractor asked if Procore can be used for scheduling and project document website. HRG asked for a submittal or example to review before approval.

d. Shop Drawings / Submittal Procedure / Substitutions

Shop drawings and submittals shall be submitted via the Project Documentation Website. Submittals, per Section 01 33 00, shall have a 4" by 4" space for Engineer review stamps on the submittal, not the transmittal. **Resubmittals to include Engineer comments from original submittal review and clearly identify all changes made since previous submittal**.

The Contract Documents outline the requirements for submission of any substitutions, and they should **not** be submitted as a shop drawing. Substitutions require the Contractor to submit a special request for the Engineer to review and evaluate.

The Engineer will review and return submittals in the order that they are received. If a submittal is a high priority it should be addressed as such in the transmittal.

e. Forms

The forms for this project (RFI, Field Order, WCDs, Change Order, Application for Payment, etc.) are included in the Project Manual. Several were included with the Agenda and are attached to these meeting minutes. Digital copies will be emailed to Contractor upon request.

f. Warranties and Record Documents

The Contractor's attention was called to the requirements for maintaining Record Drawings during the work. The RPR will check the drawings during the course of the work to confirm compliance with the requirements of the Contract. Pay Application approval will be dependent on RPR approval of Record Drawings.

g. Photo Documentation

Requirements are listed in Section 01 32 33. As work will be adjacent to existing structures, Contractor was advised to ensure there is enough photo documentation of the existing conditions. Photographs are to be submitted to the Engineer prior to beginning of Work. These submittals are for informational purposes only and no action will be taken to approve or reject them. Full payment for Mobilizing and Project Management will not be considered without receipt of the preconstruction photographs.

The Contractor is required to submit periodic construction photos showing the status of construction. Photos can be submitted either electronically or by providing on a memory stick. Photos should also be provided to support any proposed changes to the work or claims.

h. Job Conference Schedule

The first job conference will be scheduled shortly after construction is scheduled to begin and will be held at the Borough Building. Additional job conferences will be scheduled as needed. Field meetings will be scheduled as needed.

Early February for the first Job conference and then monthly. First Wednesday of the month is best for all.

i. Applications for Payment

Monthly Draft applications shall be reviewed with and approved by the RPR. Final executed copies can be sent to Steven Puterbaugh after the draft is approved. Three

hard copies of the signed pay application, one copy of the certified payroll, and an updated schedule is due with the final executed copies.
The following items to be submitted/reviewed before any application for payment will be processed:

- **Certified payroll**
- **Construction schedule update**
- **Onsite Record Drawings**

Key Dates:

- Cut off for Work performed is the LAST Tuesday of the month. Contractor shall provide Draft copies to HRG by 1st Tuesday of the month.

- Executed pdf copy of the application for Payment shall be emailed to **Steven Puterbaugh** prior to the 2nd Tuesday of the month.

- Owner's Meeting is the 3rd Tuesday of the month.

5. COMMENTS/NEW BUSINESS

a. Mr. Puterbaugh read the following into the Meeting Minutes:

Safety and OSHA: "Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs."

Control of Work: "Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. This includes the protection of his employees and all other persons on the work site, all material and equipment and other property at or adjacent to the site including pavement, landscaping, and utilities, whether underground or exposed."

b. Owner asked about job trailers and storage area required. LTS said they would need room for a 40 foot Sea Can (storage unit). PSI will be using 2 Sea Cans, one job trailer, and room for the engineer's trailer.

c. PSI asked if spare parts will be accepted throughout project or at the end of the project. Owner asked that they receive them at the end of the project.

I believe these minutes accurately reflect the items discussed at this preconstruction conference. If there are any revisions or corrections to these minutes, please contact the undersigned by December 23, 2020. If no revisions or corrections are required, the minutes will stand as submitted.

Recorded by:

Steven Puterbaugh, P.E.
Team Leader | Water and Wastewater

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ATTACHMENTS:

AIS Provisions
DEP-PENNVEST Revised Pre-Construction Conference Handout
Project Forms (multiple)

DISTRIBUTION (w/Attachments):

All Attendees
HRG File