



Herbert, Rowland & Grubic, Inc.
369 East Park Drive
Harrisburg, PA 17111
717.564.1121
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March 31, 2023

Clean Water Program
PA Department of Environmental Protection
Southcentral Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110

Re: [Halifax Area Water and Sewer Authority
Chapter 94 Municipal Wasteload Management Report
Calendar Year 2022](#)

Dear Clean Water Program:

On behalf of the Halifax Area Water and Sewer Authority (HAWASA), we are submitting the HAWASA Chapter 94 Report for Calendar Year 2022.

Should you have any questions or comments regarding the Chapter 94 Report or any of the included attachments for HAWASA, please do not hesitate to contact me at (717) 564-1121. Thank you.

Sincerely,

[Herbert, Rowland & Grubic, Inc.](#)

A handwritten signature in black ink that reads "Brenden Miller".

Brenden Miller, EIT
Staff Professional | Water & Wastewater

BM/LJ/rb
001650.0425

P:\0016\001650_0425\Admin\Chapter 94 Reports\Chapter 94 Report - CY2022\Cover Letter to DEP.docx

Enclosures

c: HAWASA Board
Mr. Jeffrey Grosser, HAWASA
HRG File (w/Encl.)



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CHAPTER 94 WASTELOAD MANAGEMENT REPORT FOR CALENDAR YEAR 2022

Submitted to: Pennsylvania DEP Southcentral Regional Office
ATTN: Clean Water Program
909 Elmerton Avenue, Harrisburg, PA 17110

On Behalf of: Halifax Area Water and Sewer Authority,
Dauphin County, PA

[001650-0425]

Submitted: March 2023

Herbert, Rowland & Grubic, Inc.
Engineering | Planning | Infrastructure Solutions

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 - Organic Loading Graph
- B. Sanitary Sewer System Extension
 - Act 537 Recommended Alternative Map
 - Sycamore Ridge Parcel Map
- C. Condition of the Sewer System
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CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: **2022**

- 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:	April 1, 2023
City, State, Zip:	Halifax, PA 17032	Expiration Date:	March 31, 2028
Contact Person:	Jeffrey Grosser	Renewal Due Date:	March 31, 2028 - 180 days
Title:	Operator	Municipality:	Halifax Borough, Halifax Twp
Phone:	(717) 896-3886	County:	Dauphin
Email:	kgrosser@hawasaonline.com	Consultant Name:	Herbert, Rowland & Grubic, Inc.
CHAPTER 94 REPORT COMPONENTS			
<p>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. <u>(25 Pa. Code § 94.12(a)(1))</u></p> <p>Check the appropriate boxes:</p> <p><input checked="" type="checkbox"/> Line graph for flows attached (Attachment A)</p> <p><input checked="" type="checkbox"/> DEP Chapter 94 Spreadsheet used (Attachment A)</p> <p><input type="checkbox"/> Section 1 is not applicable (report is for a collection system).</p>			
<p>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. <u>(25 Pa. Code § 94.12(a)(2))</u></p> <p>Check the appropriate boxes:</p> <p><input checked="" type="checkbox"/> Line graph for organic loads attached (Attachment A)</p> <p><input checked="" type="checkbox"/> DEP Chapter 94 Spreadsheet used (Attachment A)</p> <p><input type="checkbox"/> Section 2 is not applicable (report is for a collection system).</p>			

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 2022.

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 with an ultimate buildout to 407 EDUs. 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 Spring 2023 (construction started in Summer 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 has begun in February 2023. Lenker Estates is anticipated to be the first connection from the extension and accounts for approximately 50 EDUs in 2023. An additional 100 EDUs are assumed in 2023 with the remaining EDUs in the extension is expected to be completed in 2024.

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 a 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 included upgrades to the previously hydraulically overloaded Main Pumping Station. The new Main PS that was constructed in Fall 2022 and greatly increased the capacity of the pump station. The Sycamore Ridge development will add 124 new EDUs to the WWTP. However, no planning progress has occurred in this project within the past two years because of a the PADEP CAP on the Main PS. It is anticipated that the PADEP CAP on any new connections to the Main PS will be lifted in 2023. It is assumed the Sycamore Ridge Community will be added onto the system in 2025. Land development plans for Sycamore Ridge have been submitted to the Authority, the location of the development is outlined in Attachment B. Construction of the project will not move forward until approval from DEP is given.

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 stations 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. The maintenance teams conduct regular inspections of the gravity system, and jet clean the system where needed.

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 2022 calendar year.

PA DEP had 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 had 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 are in the process of being 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.

HAWASA is moving forward with the Wastewater Treatment Plant Upgrade Project, in Spring 2023 the contractor is concluding construction. The project included 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 upon completion. In addition to treatment plant upgrades, the project also entailed upgrades to the hydraulically overloaded Main Pumping Station. The Main Pumping Station concluded construction and was placed into service on August 17, 2022.

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. – **The Main PS was reconstructed in Fall 2022, and is therefore no longer hydraulically overload.**
- 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.

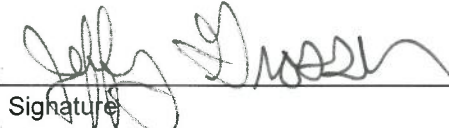
- Sewage Sludge Management Inventory attached (**Attachment D**)

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 Grosser, Lead Operator



Name of Responsible Official

Signature

(717) 896-3886

3-21-23

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).

Justin Mendinsky, P.E.



Name of Preparer

Signature

(717) 564-1121

03/10/2023

Telephone No.

Date

ATTACHMENT A:
Hydraulic And Organic Loading Data And
Line Graphs





**PADEP Chapter 94 Sprea
Sewage Treatment**

Reporting Year:

Facility Name:

Permit No.:

Persons/EDU:

Existing Hydraulic Design Capacity: MGD
 Upgrade Planned in Next 5 Years? Year:
 Future Hydraulic Design Capacity: MGD

Existing Organic Design Capacity: lbs BOD5/day
 Upgrade Planned in Next 5 Years? Year:
 Future Organic Design Capacity: lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2018	2019	2020	2021	2022
January	0.0726	0.1445	0.103	0.0952	0.0803
February	0.1175	0.1352	0.1137	0.0918	0.1144
March	0.1157	0.1429	0.1255	0.1298	0.126
April	0.1258	0.1603	0.1398	0.1405	0.147
May	0.1484	0.1933	0.1714	0.1344	0.1804
June	0.1418	0.1586	0.1586	0.1382	0.1316
July	0.167	0.1451	0.1561	0.221	0.1429
August	0.174	0.1233	0.1523	0.1892	0.1037
September	0.1599	0.111	0.127	0.2177	0.0826
October	0.1299	0.1018	0.105	0.1417	0.085
November	0.1583	0.0966	0.0933	0.1017	0.0798
December	0.1457	0.0955	0.0947	0.0842	0.096

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

Month	2018	2019	2020	2021	2022
January	151	102	125	126	120
February	127	114	181	147	148
March	114	108	86	155	98
April	53	133	89	176	115
May	42	71	73	193	138
June	39	103	156	230	63
July	66	177	232	149	123
August	101	146	332	214	207
September	165	169	423	132	180
October	149	131	157	252	177
November	137	157	175	115	113
December	139	136	148	149	169

Annual Avg	0.1381	0.134	0.1284	0.1405	0.1141
Max 3-Mo Avg	0.167	0.1707	0.162	0.2093	0.153
Max : Avg Ratio	1.21	1.27	1.26	1.49	1.34
Existing EDUs	753.0	753.0	753.0	753.0	753.0
Flow/EDU (GPD)	183.4	178.0	170.5	186.6	151.5
Flow/Capita (GPD)	52.4	50.8	48.7	53.3	43.3
Exist. Overload?	NO	NO	NO	NO	NO

Annual Avg	107	129	181	170	138
Max Mo Avg	165	177	423	252	207
Max : Avg Ratio	1.54	1.37	2.33	1.48	1.50
Existing EDUs	753	753	753	753	753
Load/EDU	0.142	0.171	0.241	0.226	0.183
Load/Capita	0.041	0.049	0.069	0.064	0.052
Exist. Overload?	NO	NO	NO	NO	NO

Projected Flows for Next Five Years (MGD)

	2023	2024	2025	2026	2027
New EDUs	150.0	150.0	124.0	2.0	2.0
New EDU Flow	0.0261	0.0261	0.0216	0.0003	0.0003
Proj. Annual Avg	0.1571	0.1832	0.2048	0.2051	0.2054
Proj. Max 3-Mo Avg	0.2066	0.2409	0.2693	0.2697	0.2701
Proj. Overload?	NO	NO	NO	NO	NO

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

	2023	2024	2025	2026	2027
New EDUs	150	150	124	2	2
New EDU Load	28.871	28.871	23.867	0.385	0.385
Proj. Annual Avg	174	203	227	227	227
Proj. Max Avg	286	334	373	374	374
Proj. Overload?	NO	NO	NO	NO	NO

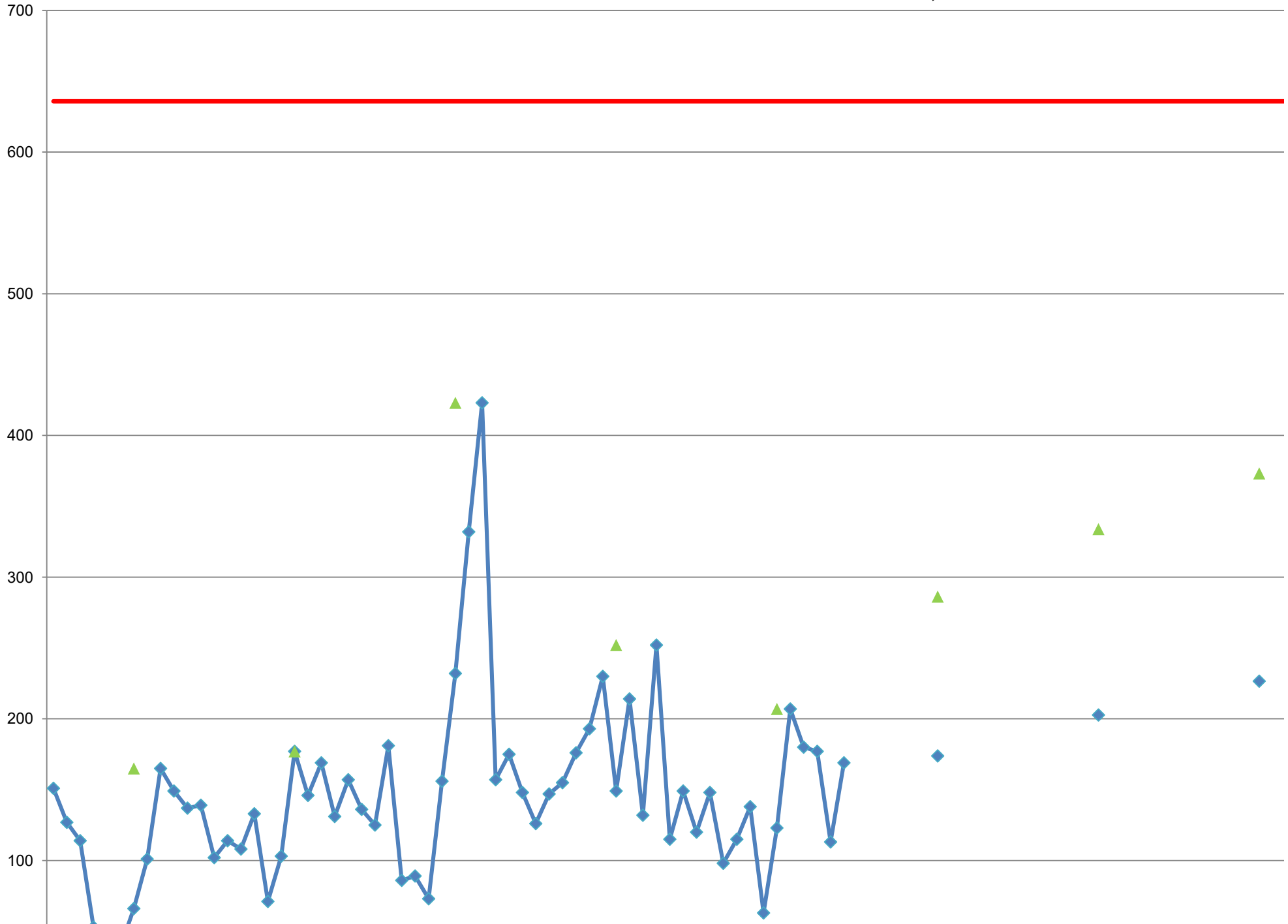
Show Precipitation Data on Hydraulic Graph?

Total Monthly Precipitation for Past Five Years (Inches)

Month	2018	2019	2020	2021	2022
January	2.56	2.46	2.77	2.9	2.73
February	5.56	2.83	2.53	2.9	2.92
March	3.01	2.22	3.46	5.3	1.66
April	4.78	4.31	3.5	3.9	4.46
May	5.37	5.05	4.3	5.25	6.67
June	4.12	2.47	2.86	2.4	4.31
July	13.0	5.44	0.92	10.0	2.81
August	8.29	3.94	3.96	11.5	1.66
September	7.82	2.29	1.71	14.55	3.96
October	2.34	5.0	3.69	3.9	3.2
November	8.38	2.11	2.12	2.6	2.71
December	5.21	3.81	5.11	1.25	4.02

5-Year Measured and Projected Organic Loads

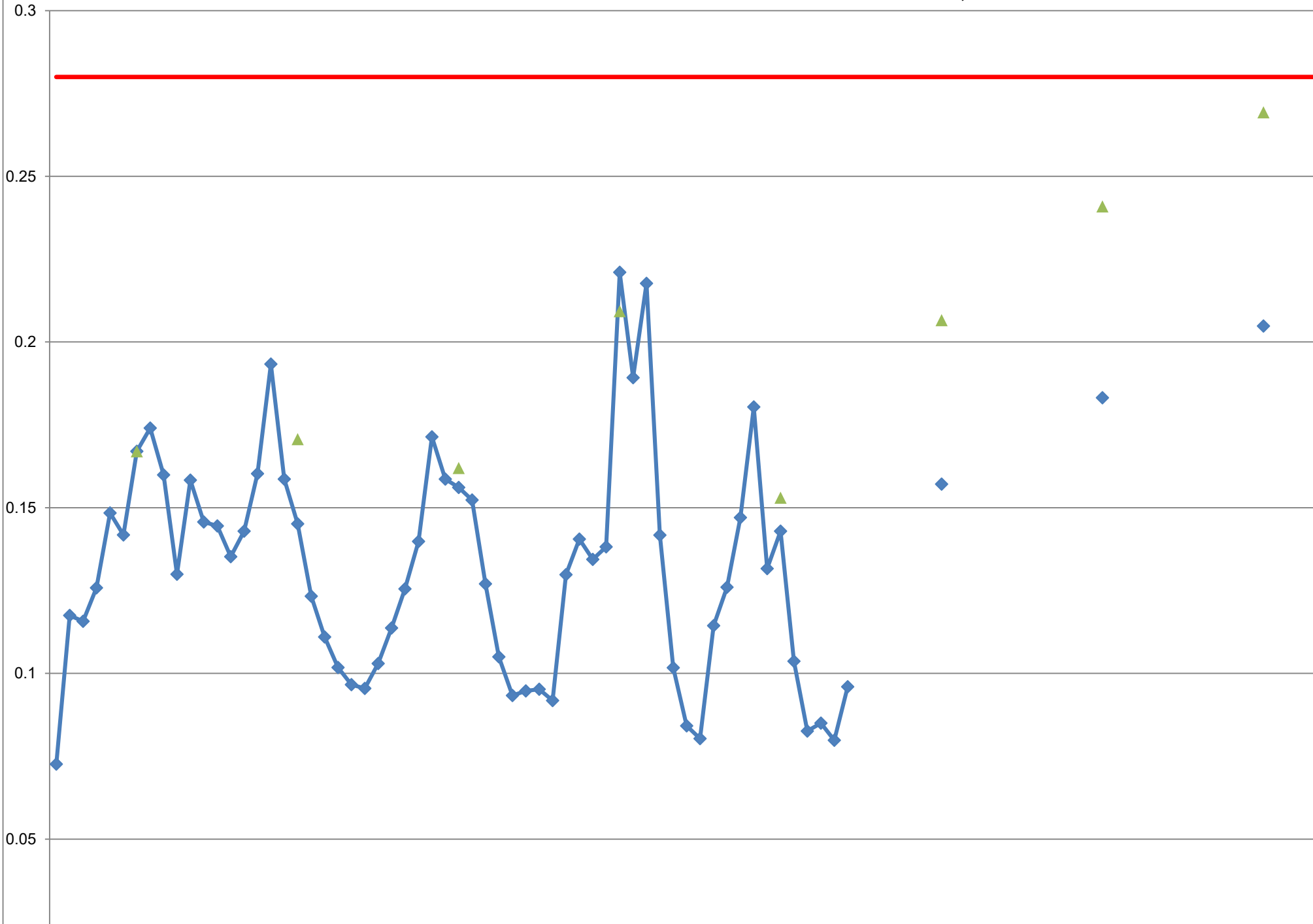
Halifax Wastewater Treatment Plant, 24457



5-Year Measured and Projected Hydraulic Loads

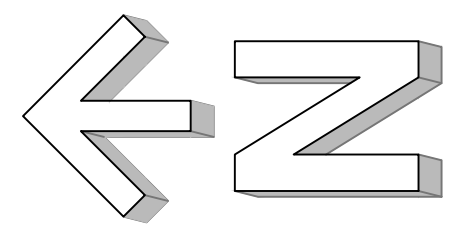
Halifax Wastewater Treatment Plant, 24457

MGD



ATTACHMENT B:
General Plan/Sewer Extensions



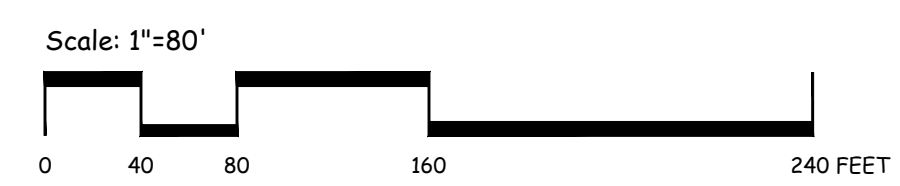
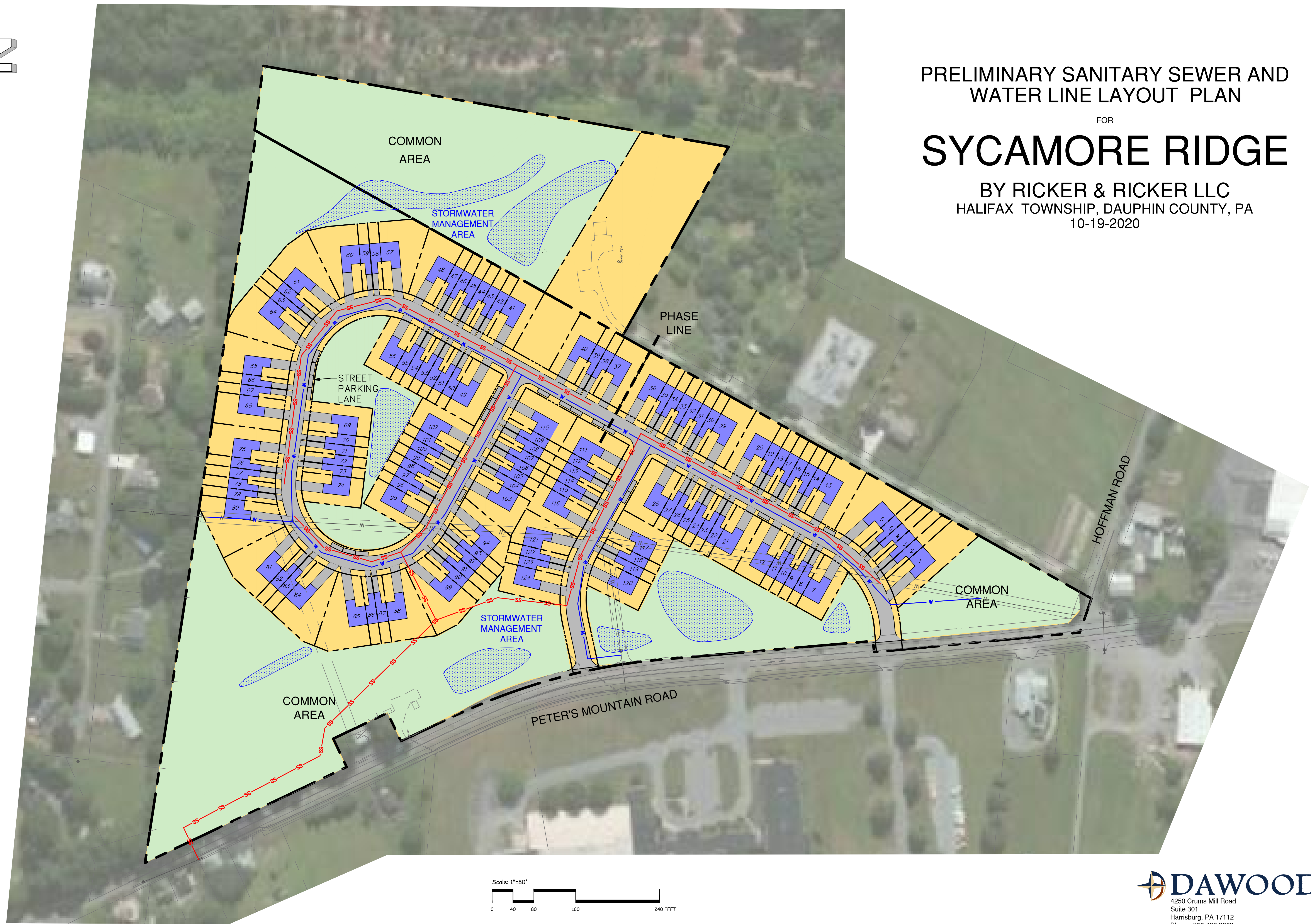


PRELIMINARY SANITARY SEWER AND
WATER LINE LAYOUT PLAN

FOR

SYCAMORE RIDGE

BY RICKER & RICKER LLC
HALIFAX TOWNSHIP, DAUPHIN COUNTY, PA
10-19-2020





LENKER PUMP STATION

ROADCAP LANE PUMP STATION

CREEK ROAD PUMP STATION

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

- GRAVITY SEWER
- FORCE MAIN SEWER
- LOW PRESSURE SEWER

ATTACHMENT C: Condition Of Pump Stations



CONDITION OF THE PUMP STATIONS

HAWASA 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)
Average flow:	4100 gpd (estimated from pump hours and design point)
Maximum:	50 gpm (Peak Hourly Flow estimated)

The Boyer Street Pumping Station was upgraded to submersible pumps at the end of 2014 and began operation in 2015. Attached runtime records indicate total runtime for the station averages to approximately 9.52 hours per week, usually divided equally between the pumps.

There are no known future connections tributary to the Boyer Street Pumping 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. Pump run hours for the Boyer Street Pumping Station are attached.

ORIGINAL MAIN PUMPING STATION (DECOMISIONED JUNE 2022)

The Main Pumping Station is located at the HAWASA WWTP, conveying all flow from the Borough and the northern Halifax Township service area (including flows from Boyer Street Pumping Station). There were two (2) suction lift pumps with separate 4-inch suction lines, discharging into a single 4-inch force main. The pumps were 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. This Pump Station was decommissioned and upgraded in Summer 2022.

The recorded pump hours from January 1, 2022 to May 12, 2022, 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 were addressed as part of the Wastewater Treatment Plant Upgrades Project. On May 12, 2022 the Main Pumping Station was removed from normal duty. Bypass pumping was established to accommodate the sanitary flow during construction of the Upgrades Project. The existing pumps were used intermittently to allow for bypass pumps to be moved during various stages of the project.

Design Capacity:	175 gpm (1 pump basis)
Daily run time:	29.5 hours (both pumps combined)

UPGRADED MAIN PUMPING STATION (PLACED INTO OPERATION AUGUST 2022)

The Main Pumping Station is now composed of two (2) suction lift pumps within the pump station building at the Halifax WWTP. One (1) pump is dedicated as the duty pump, while the second

pump is dedicated as a standby pump. The pumps have a design point of 300gpm. The upgraded pump station has 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 conveys all flow from the Main Pumping Station approximately 175 feet to the distribution box upstream of the proposed WWTP headworks.

Design Capacity:	300 gpm (1 pump basis)
Daily run time:	4.72 hours (both pumps combined)

On August 17th, the Upgraded Main Pump Station was brought online. The new pump station has a design capacity of 300gpm (one pump) with a larger 6in forcemain. The attached pump run hours from August 17th, 2022 to the end of 2022 show a much lower average daily run time of 4.72 hours (both pumps combined), as opposed to the average pump run time of 29.5 hours of the previously overloaded main pump station.

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 2023 calendar year and all three pump stations are anticipated to be connected to the existing HAWSA system by 2024-2025. These flows will enter the HAWASA WWTP through an influent gravity line into the headworks, and won't be conveyed through the Main Pumping Station.

BOYER STREET PUMPING STATION

PUMP RUN HOURS 2022

2022

BOYER STREET PUMP STATION

DATE	TIME	HOURS #1	HOURS RAN	HOURS #2	HOURS RAN	TOTAL
1-3-22	1110	1872.8	1.4	1528.2	4.1	5.5
1-8-22	1100	1874.2	1.4	1531.7	3.5	4.9
1-10-22	1045	1875.4	1.2	1534.0	2.3	3.5
1-14-22	1015	1876.9	1.5	1536.3	2.3	3.8
1-17-22	1020	1878.1	1.2	1538.0	1.7	2.9
1-21-22	1105	1880.3	2.2	1541.5	3.5	5.7
1-24-22	1040	1882	1.7	1544	2.5	4.2
1-28-22	0930	1883.8	1.8	1546.7	2.7	4.5
1-31-22	1100	1885.4	1.6	1548.9	2.2	3.8
2-4-22	1115	1889.5	3.1	1553.7	4.8	7.9
2-7-22	1015	1890.4	2.9	1556.7	3	4.9
2-11-22	1040	1892.5	2.1	1560	3.3	5.4
2-14-22	1105	1894.0	1.5	1562.7	2.9	4.2
2-18-22	1015	1897	3.0	1567.1	4.4	7.4
2-21-22	1150	1899.6	2.6	1570.3	3.2	5.8
2-25-22	1045	1902.4	2.9	1574.8	4.5	7.3
2-28-22	0815	1904.6	2.2	1579.5	4.7	6.9
3-4-22	1045	1907.9	3.3	1583.5	4.0	7.3
3-7-22	1050	1911.0	3.1	1586.3	2.8	5.9
3-11-22	1105	1913.1	2.1	1591.0	4.7	6.8
3-14-22	1050	1915.5	2.4	1594.3	3.3	5.7
3-18-22	0815	1919.1	3.6	1598.9	4.6	8.2
3-21-22	1100	1923.2	4.1	1602.9	4	8.1
3-25-22	0845	1928.6	5.4	1608	5.1	10.5
3-28-22	1050	1932.3	3.7	1611.7	3.7	7.4
3-31-22	1020	1934.8	2.5	1614.7	3.0	5.5
4-4-22	1145	1938.8	4	1619.5	4.8	8.8
4-8-22	1045	1943	4.2	1625.4	5.9	10.1
4-11-22	1130	1947.2	4.2	1630.9	5.5	9.7
4-15-22	1010	1952	4.8	1636.7	6.8	10.6

BOYER STREET PUMP STATION

NET
SEN
REGIST

DATE	TIME	HOURS #1	HOURS RAN	HOURS #2	HOURS RAN	TOTAL
4-18-22	1100	1955.3	3.3	1640.6	3.9	7.2
4-22-22	1220	1963.3	8.0	1647.8	7.2	15.2
4-25-22	1045	1966.9	3.6	1652.5	4.7	8.3
4-29-22	0945	1970.8	3.9	1657.9	5.4	9.3
5-2-22	1050	1973.5	2.7	1661.6	3.7	6.4
5-6-22	1025	1976.9	3.4	1666.7	5.1	8.5
5-9-22	1020	1983.6	6.7	1677.3	10.6	17.3
5-13-22	1025	1989.5	5.9	1686.5	9.2	15.1
5-16-22	1040	1993.7	4.2	1691.8	5.3	9.5
5-20-22	1100	1999	5.3	1698.2	6.4	11.7
5-23-22	1035	2002.4	3.4	1702.9	4.7	8.1
5-27-22	1025	2006.1	3.7	1708.6	5.7	9.4
6-3-22	1030	2013.2	7.1	1716.9	8.3	15.4
6-6-22	1015	2015.7	2.5	1719.9	3.0	5.5
6-10-22	1020	2018.3	2.6	1724.1	4.2	6.8
6-13-22	1050	2020.1	1.9	1726.7	2.6	4.4
6-17-22	1025	2022.8	2.7	1730.0	3.3	6.0
6-20-22	1055	2024.8	2	1732.3	2.3	4.3
6-24-22	1035	2027.3	2.5	1734.9	2.6	5.1
6-27-22	1000	2028.9	1.6	1736.8	1.9	3.5
7-1-22	1010	2031.0	2.1	1738.9	2.1	4.2
7-4-22	0950	2032.4	1.4	1740.3	1.4	2.8
7-8-22	1025	2034.2	1.8	1742.3	2	3.8
7-11-22	1050	2035.4	1.2	1743.5	1.2	2.4
7-15-22	1030	2037.1	1.7	1745.1	1.6	3.3
7-18-22	1045	2038.2	1.1	1746.3	1.2	2.3
7-22-22	1035	2039.6	1.4	1747.9	1.6	3.0
7-25-22	1035	2040.7	1.1	1749.0	1.1	2.2
7-29-22	1035	2042.3	1.6	1750.6	1.6	3.2

BOYER STREET PUMP STATION

DATE	TIME	HOURS #1	HOURS RAN	HOURS #2	HOURS RAN	TOTAL
8-1-22	1040	2043.4	1.1	1751.7	1.1	2.2
8-5-22	0945	2045	1.6	1753.5	1.8	3.4
8-8-22	0900	2046.9	1.9	1755.4	1.9	3.8
8-12-22	0910	2048.5	1.6	1757	1.6	3.2
8-15-22	1045	2049.5	1	1758	1	2
8-19-22	0940	2050.9	1.4	1759.3	1.3	2.7
8-22-22	0955	2052	1.1	1760.4	1.1	2.2
8-26-22	1210	2053.6	1.6	1762.2	1.8	3.4
8-29-22	0740	2054.5	.9	1763.1	.9	1.8
9-2-22	1110	2056.1	1.6	1764.7	1.6	3.2
9-5-22	0950	2057.9	1.8	1766.5	1.8	3.6
9-9-22	1025	2059.7	1.3	1768.0	1.5	3.3
9-12-22	1025	2060.7	1.0	1769.0	1.0	2.0
9-16-22	0930	2061.9	1.2	1769.9	.9	2.1
9-19-22	0950	2063	1.1	1770.6	.7	1.8
9-23-22	1005	2064.3	1.3	1771.6	1.0	2.3
9-26-22	1045	2065.2	.9	1772.5	.9	1.8
9-30-22	1115	2066.7	1.5	1773.5	1.0	2.5
10-3-22	1105	2067.8	1.0	1774.4	.9	2.0
10-7-22	1040	2069.4	1.6	1775.8	1.4	3.0
10-10-22	1045	2070.4	1.0	1776.6	.8	1.8
10-14-22	1040	2072.0	1.6	1777.9	1.3	2.9
10-17-22	1045	2073.1	1.1	1778.7	0.8	1.9
10-21-22	1010	2074.7	1.6	1780.0	1.3	2.9
10-24-22	1040	2075.6	.9	1780.8	.8	1.7
10-27-22	1030	2076.8	1.3	1781.8	1.0	2.3
10-31-22	0950	2077.7	.8	1782.5	.7	1.5
11-4-22	1045	2079.1	1.4	1783.5	1.0	2.4
11-7-22	1045	2080	.9	1784.2	.7	1.6
11-11-22	1015	2081.1	1.1	1785.2	1	2.1
11-14-22	1105	2082	.9	1786	.8	1.7
11-18-22	1025	2083.2	1.2	1786.9	.9	2.1
11-21-22	1035	2084.1	.9	1787.7	.8	1.7

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BOYER STREET PUMP STATION

MONTH	YEAR	2020			
DATE		PUMP #1	HRS	PUMP #2	HRS
11-21-20	1035	2084.1	.9	1781.7	.9
11-25-20	1010	2085.1	1.0	1788.5	0.8
11-28-20	1050	2086	0.9	1789.1	0.6
12-2-20	0930	2087	1.0	1789.8	0.7
12-5-20	1130	2087.9	0.9	1790.4	0.6
12-9-20	1045	2088.9	1.0	1791.1	0.7
12-12-20	1110	2089.9	1.0	1791.8	0.7
12-17-20	1040	2091.2	1.3	1792.7	.4
12-19-20	1050	2092.2	1.0	1793.4	.7
12-23-20	950	2094.0	1.8	1794.5	1.1
12-26-20	1055	2095.5	1.5	1795.5	1.0
12-30-20	0935	2097.1	1.6	1796.5	1.0

TOTAL

1.7
1.8
1.5
1.7
1.5
1.7
1.7
1.7
1.7
2.2
1.7
2.9
2.6
2.6

MAIN PUMPING STATION

PUMP RUN HOURS

JANUARY 2022 - JUNE 2022

JANUARY 2022

PUMP RUN TIME / PUMP STATION

DATE:	#1 PUMP	RUN TIME	#2 PUMP	RUN TIME	INCHES
JAN. 1.	30487.5	24.1	23998.0	2.8	38.3
2.	30510.9	23.4	24014.5	16.5	51.9
3.	30535.1	24.2	24025	10.5	55.1
4.	30559.1	24	24030.6	5.6	52.3
5.	30582.8	23.7	24035.4	4.8	53
6.	30607	24.2	24040.4	5	51.2
7.	30631.2	24.2	24043.8	3.4	48.3
8.	30656.5	25.3	24046.6	2.8	52.0
9.	30682.7	26.2	24052.2	5.6	73.0
10.	30703.1	20.4	24063.6	11.4	51
11.	30727.1	24	24065.5	1.9	45.2
12.	30751.1	24	24066.4	.9	45.1
13.	30775.1	24	24068.2	1.8	48.5
14.	30799.1	24	24069	.8	50.1
15.	30825.6	26.5	24074	5	54.0
16.	30846.9	21.2	24076.3	2.3	47.5
17.	30871.2	24.3	24084.0	7.7	52.0
18.	30895.1	23.9	24097.9	13.9	46
19.	30919	23.9	24103.8	5.9	53.1
20.	30943.1	24.1	24107.4	3.6	54
21.	30967.5	24.4	24112.2	4.8	56.8
22.	30992.8	25.3	24113.1	0.9	57.7
23.	31015.8	23	24115.2	2.1	51.6
24.	31039	23.2	24120.2	5	53.3
25.	31063.1	24.1	24123.4	3.2	52.1
26.	31087	23.9	24125.5	2.1	51.8
27.	31111.1	24.1	24125.6	.1	51.5
28.	31135	23.9	24125.6	0	38.8
29.	31160.1	25.1	24125.6	0	44.3
30.	31184.7	24.6	24126.1	.5	46.0
31.	31207.3	22.6	24126.4	.3	41.7
	31231	23.7	24126.4	0	39.9

FEBRUARY 2022

PUMP RUN TIME / PUMP STATION

DATE:	#1. PUMP	RUN TIME	#2. PUMP	RUN TIME	INCHES
FEB. 1.	31231	23.7	24126.4	Ø	39.4
2.	31255	24	24126.4	Ø	40
3.	31279	24	24127.8	1.4	59.3
4.	31303	24	24157.8	24	117.3
5.	31327.7	24.7	24174.2	16.4	62.6
6.	31351.7	24	24185.2	11	57.7
7.	31375.1	23.4	24195.4	10.2	56.4
8.	31399	23.9	24210.8	15.4	54.9
9.	31423	24	24227.2	26.4	52.6
10.	31447	24	24234.2	7	53
11.	31471	24	24234.3	.1	47.7
12.	31494	23	24234.8	.5	42.3
13.	31523.9	29.9	24242.0	7.2	56.0
14.	31543.1	19.2	24243.8	1.8	52.6
15.	31567	23.9	24244.4	.6	53.2
16.	31591	24	24245.1	.7	49.7
17.	31615.1	24.1	24245.7	.6	46.2
18.	31639.1	24	24256	10.3	50.8
19.	31664.3	25.2	24265.2	9.2	54.1
20.	31688.5	24.2	24270.2	5	53.6
21.	31713.5	25	24277.5	7.3	57.8
22.	31734.9	21.4	24286.5	9	49.8
23.	31759	24.1	24294.2	7.7	50.1
24.	31783	24	24295.6	1.4	52.2
25.	31806.9	23.9	24297.6	2	63.3
26.	31833.4	26.5	24304.5	11.9	54.5
27.	31856.3	22.0	24315.2	5.7	53.9
28.	31878.9	22.6	24321.6	6.4	51.9

MARCH 2022

PUMP RUN TIME / PUMP STATION

DATE:	#1. PUMP	RUN TIME	#2. PUMP	RUN TIME	INCHES	
DECAWT	MARCH 1.	31903	24.1	24325.5	3.9	81
	2.	31926.7	23.7	24330.8	7.3	52.1
	3.	31951	24.3	24339.1	6.3	52.7
	4.	31975	24	24341.4	2.3	54
	5.	31998.8	23.8	24342.7	1.3	52.8
	6.	32023.2	24.4	24351.0	8.3	53.7
	7.	32046.9	23.7	24359.9	8.9	51.1
	8.	32070.9	24	24369.5	9.6	51
	9.	32094.8	23.9	24377.3	7.8	52.1
	10.	32118.9	24.1	24392.8	15.5	54.8
	11.	32142.9	24	24407.0	14.2	55.6
	12.	32167.7	24.8	24420.6	13.6	54.7
	13.	32192.5	24.8	24440.1	19.5	62.9
	14.	32213.9	21.4	24455.1	15	52
	15.	32237.9	24	24470.2	15.1	51.2
	16.	32261.9	24	24487.8	17.6	50.1
	17.	32285.8	23.9	24504.5	16.7	51.2
	18.	32309.8	24	24524.2	19.7	53.6
	19.	32334.8	25	24544.7	20.5	55.8
	20.	32359.6	24.8	24565.8	21.1	51.3
DECAWT	21.	32381.7	22.1	24584.8	19	48.3
"	22.	32405.7	24	24605.3	20.5	72.2
	23.	32429.7	24	24625.5	20.2	53
	24.	32453.7	24	24645.2	19.7	48.6
	25.	32477.7	24	24665.2	20	51.1
	26.	32501.7	24	24683.2	18	50.9
	27.	32525.6	23.9	24701.7	18.5	49.9
	28.	32549.6	24	24721.1	19.4	49.8
	29.	32573.5	23.9	24737.7	16.6	52
	30.	32597.7	24.2	24754.6	16.9	53.2
	31.	32621.6	23.9	24771.0	16.4	54.0

APRIL 2022

PUMP RUN TIMES / PUMP STATION

DATE:	#1. PUMP	RUN TIME	#2. PUMP	RUN TIME	INCHES
APRIL 1.	32645.5		24722.8		65.3
2.	32670.1	24.6	24817.5	24.7	82.1
3.	32694.8	24.7	24842.2	24.7	107.1
4.	32717.5	22.7	24864.8	22.6	101.2
5.	32741.6	24.1	24889.4	23.6	52.4
6.	32764.5	22.9	24892	3.6	45.2
7.	32788.8	24.3	24914.7	22.5	87.3
8.	32812.8	24	24938.7	24	72.6
9.	32838.2	25.4	24964.1	25.4	134.5
10.	32861.3	22.1	24987.1	23.0	100.3
11.	32884.7	23.4	25010.4	23.3	96.8
12.	32908.7	24	25034.4	24	108.9
13.	32932.7	24	3747.7 3747.9	.2	56.4
14.	32956.7	24	3749.1	1.2	33.1
15.	32980.7	24	3750.6	1.5	52
16.	33003.9	23.2	3752.1	1.5	48.5
17.	33029.7	25.8	3754.0	1.9	64.4
18.	33052.7	23	3755.2	1.2	60.1
19.	33076.7	24	3758.8	3.6	57.2
20.	33100.7	24	3762	3.2	65.1
21.	33124.7	24	3763.9	1.9	62.6
22.	33148.7	24	3765.8	1.9	61.0
23.	33173.3	24.6	3768.3	2.5	56.0
24.	33194.7	21.4	3769.9	1.6	54.8
25.	33220.9	26.2	3772.3	2.4	49.8
26.	33244.7	23.8	3773.8	1.5	58.1
27.	33268.7	24	3775.4	1.6	61.2
28.	33292.7	24	3777.1	1.7	60.7
29.	33316.7	24	3778.7	1.6	44.3
30.	33339.7	23 23	3779.6	.9	61.9

CLEAN-OUT DEEP WELL
WORN ON PUMPS →

PUMP PROBLEMS →

→ Pump
#2

CLEAN OUT C/S CONTACT
← DECAWT
← CAT PUMP #2

MAY 2022

PUMP RUN TIMES / PUMP STATION

DATE:	#1 PUM	RUN TIME	CAT PUMP	RUN TIME	INCHES
MAY 1.	33363.6	23.9	3780.4	.8	53.9
2.	33388.7	25.1	3782.1	1.7	64.1
3.	33412.6	23.9	3784	1.9	59.8
4.	33436.5	23.9	3784.1	.1	60.8
5.	33460.6	24.1	3784.5	.4	53.1
6.	33484.6	24	3786.0	1.5	51.8
7.	33509.1	24.5	3795.2	4.2	53.4
8.	33532.1	23	3806.7	11.5	59.1
9.	33556.8	24.7	3815.2	8.5	44.4
10.	33580.5	23.7	3821.3	6.1	62.3
11.	33604.5	24	3826.8	5.5	56.1
12.	33627.4	22.9	3834.2	7.4	35
13.	—	—	3843.5	9.3	—
14.	—	—	3852.3	8.8	—
15.	—	—	3861.6	9.3	—
16.	—	—	3870.8	9.2	—
17.	—	—	3880.1	9.3	—
18.	—	—	3888.9	8.8	—
19.	—	—	3897.6	8.7	—
20.	—	—	3906.4	8.8	—
21.	—	—	3913.8	7.4	—
22.	—	—	3923.2	9.4	—
23.	—	—	3931.8	8.6	—
24.	—	—	3939.6	7.8	—
25.	—	—	3947.4	7.8	—
26.	—	—	3954.7	7.3	—
27.	—	—	3962.3	7.6	—
28.	—	—	3971.5	9.2	—
29.	—	—	3979.9	8.4	—
30.	—	—	4003.5	23.6	—
31.	—	—	4016.7	13.2	—

ADYH.

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DAYS



Pump removed

PUMP ←
TAKE OVER

JUNE 2028

PUMP RUN TIME

DATE:	#1 PUMP	RUN TIME	CAT PUMP	RUN TIME	INCHES
JUNE 1.	—	—	4024.6	—	—
2.	—	—	4032.6	8	—
3.	—	—	4042.2	9.6	—
4.	—	—	4049.5	7.3	—
5.	PULL PUMP / CLEAN	—	4069.1	19.6	—
6.	—	—	4083.3	14.2	—
7.	—	—	4090.9	7.6	—
8.	PULL PUMP / CLEAN	—	4108.3	17.4	—
9.	—	—	4116.6	8.3	—
10.	—	—	4122.5	5.9	—
11.	CHANGED PUMP		—	—	—
12.	CHANGED PUMP		—	—	—
13.	CHANGED PUMP		—	—	—
14.	NO HOUR METER		—	—	—
15.	NO HOUR METER		—	—	—
16.	NO HOUR METER		—	—	—
17.	NO HOUR METER		—	—	—
18.	NO HOUR METER		—	—	—
19.	NO HOUR METER		—	—	—
20.	NO HOUR METER		—	—	—
21.	NO HOUR METER		—	—	—
22.	NO HOUR METER		—	—	—
23.	NO HOUR METER		—	—	—
24.	NO HOUR METER		—	—	—
25.	NO HOUR METER		—	—	—
26.	NO HOUR METER		—	—	—
27.	NO HOUR METER		—	—	—
28.	NO HOUR METER		—	—	—
29.	NO HOUR METER		—	—	—
30.	NO HOUR METER		—	—	—

NO HOUR METER
ON NEW BY-PASS
PUMP

MAIN PUMPING STATION

PUMP RUN HOURS

NOVEMBER 2022

MONTH NOV

YEAR 2022

DAY OF WEEK	MON	TUES	WED	THURS	FRI	SAT	SUN
DATE	14	15	16	17	18	19	20
INFLU #	9084	9198	9332	9443	9546	9644	9753
FLOW	93	114	134	111	103	98	108
EFFLU #	7182	7268	7374	7469	7556	7634	7711
FLOW	83	86	106	95	87	78	77
RAIN	0	0	.80	0	0	0	0
TEMP	39°	25°	35°	34°	32°	28°	27°

EFFLUENT

PH	7.4	7.5	7.4	7.4	7.5	7.5	7.4
DO	6.1	6.2	6.2	6.3	6.3	6.3	6.2

LOWER PUMP STATION

			TOTAL	5.1	4.6	4.2	5.1
DEPTH	3.0	2.1	2.2	1.8	1.8	2.1	3.3
#1 HRS	200.3	203.0	206.0	203.6	210.9	213.1	215.6
HRS RAN	2.1	2.7	3.0	2.6	2.3	2.2	2.5
#2 HRS	190.2	192.8	195.9	198.4	200.7	202.7	205.3
HRS RAN	2.2	2.6	3.1	2.5	2.3	2.0	2.6

UPPER PUMP STATION

DEPTH	2.2	2.5	2.1	2.5	2.4	2.1	2.1
#1 HRS	111.4	112.8	114.4	115.8	117.0	118.3	119.5
HRS RAN	1.2	1.4	1.6	1.4	1.2	1.2	1.3
#2 HRS	111.8	113.2	114.8	116.2	117.5	118.6	119.9
HRS RAN	1.1	1.4	1.6	1.4	1.3	1.1	1.3

UV LIGHT

#1 HRS	OFF	OFF	OFF	OFF	OFF	OFF	OFF
#1 INTEN	—	—	—	—	—	—	—
#2 HRS	2113	2136	2161	2184	2209	2232	2258
#2 INTEN	.9	1.0	1.2	1.1	1.1	1.0	1.1

MONTH Nov

YEAR 2022

DAY OF WEEK	MON	TUES	WED	THURS	FRI	SAT	SUN
DATE	21	22	23	24	25	26	27
INFLU #	9853	9962	10075	10198	10282	10365	10472
FLOW	101	109	113	123	90	77	107
EFFLU #	7792	7871	7968	8049	8113	8168	8250
FLOW	81	79	97	81	64	55	82
RAIN	0	0	0	0	0.10	0	0
TEMP	16°	19°	19°	21°	39°	39°	47°

EFFLUENT

PH	7.4	7.5	7.3	7.3	7.2	7.3	7.2
DO	6.1	6.2	6.1	6.2	6.3	6.3	6.2

LOWER PUMP STATION

TOTAL	4.9	4.8	5.1	4.5	4.3	3.6	5.0
DEPTH	2.7	2.7	3.3	2.6	2.7	2.4	3.4
#1 HRS	218.1	220.3	222.7	225	227.2	229.0	231.6
HRS RAN	2.5	2.2	2.4	2.3	2.2	1.8	2.6
#2 HRS	207.7	210.3	213.0	215.2	217.3	219.1	221.5
HRS RAN	2.4	2.6	2.7	2.2	2.1	1.8	2.4

UPPER PUMP STATION

DEPTH	2.2	2.2	2.1	2.0	2.0	2.1	2.2
#1 HRS	120.7	122.0	123.4	124.6	125.7	126.6	127.9
HRS RAN	1.2	1.3	1.4	1.2	1.1	.9	1.3
#2 HRS	121.2	122.5	123.9	125.0	126.1	127.1	128.3
HRS RAN	1.3	1.3	1.4	1.1	1.1	1.0	1.2

UV LIGHT

#1 HRS	OFF	OFF	OFF	OFF	OFF	OFF	OFF
#1 INTEN	—	—	—	—	—	—	—
#2 HRS	2280	2304	2328	2352	2376	2397	2426
#2 INTEN	.8	.9	.8	.7	0.8	1.0	0.9

MONTH NOVEMBER

YEAR 2022

DAY OF WEEK	MON	TUES	WED	THURS	FRI	SAT	SUN
DATE	28	29	30				
INFLU #	10570	10697	10799				
FLOW	98	127	92				
EFFLU #	8328	8422	8500				
FLOW	78	94	78				
RAIN	0	0	0.10				
TEMP	45°	43°	42°				

EFFLUENT

PH	7.3	7.2	7.3				
DO	6.2	6.2	6.2				

LOWER PUMP STATION

TOTAL DEPTH	4.6	6.2	3.9				
#1 HRS	233.9	237.1	239.1				
HRS RAN	2.3	3.2	2.0				
#2 HRS	225.8	226.8	228.7				
HRS RAN	2.3	3.0	1.9				

UPPER PUMP STATION

DEPTH	2.1	2.8	2.0				
#1 HRS	129	130.7	131.8				
HRS RAN	1.1	1.7	1.1				
#2 HRS	129.5	131.1	132.2				
HRS RAN	1.2	1.6	1.1				

UV LIGHT

#1 HRS	OFF	OFF	OFF				
#1 INTEN	—	—	—				
#2 HRS	2449	2473	2497				
#2 INTEN	0.8	0.9	0.8				

MAIN PUMPING STATION

PUMP RUN HOURS

AUGUST 2022 - DECEMBER 2022

#1.

MAIN INFLUENT PUMPS							NRS.
DATE:	DEPTH	# 1 PUMP HRS.	# 1 PUMP TOTAL	# 2 PUMP HRS.	# 2 PUMP TOTAL	TOTAL BOTH	
2022 AUG. 17	1.9'	2	2	1	1	3	
18	2.1'	9	7	4	3	10	
19	1.9'	16	7	9.5	5.5	12.5	
20	3.5'	17.7	1.7	11.1	1.6	3.3	
21	2.9'	19.9	2.2	13.1	2.2	4.4	
22	2.6'	22	2.1	15.4	2.1	4.2	
23	2.0'	24.2	2.2	17.4	2.0	4.2	
24	1.7'	26.3	2.1	19.5	2.1	4.2	
25	1.7'	28.4	2.1	21.5	2.0	4.1	
26	2.8'	30.4	2	23.4	1.9	3.9	
27	3.8'	32.2	1.8	25.2	1.8	3.6	
28	1.5'	34.3	2.1	27.2	2.0	4.1	
29	1.5'	36.2	1.9	29.1	1.9	3.8	
30	2.7'	38.2	2.0	31	1.9	3.9	
31	3.2'	40.3	2.1	33	2.0	4.1	
AVERAGE -						4.89	
MAX -						12.5	
MIN -						3.0	

#2.

MAIN INFLUENT PUMPS						HRS.
DATE	DEPTH	#1 PUMP HRS.	#1 PUMP TOTAL	#2 PUMP HRS.	#2 PUMP TOTAL	TOTAL BOTH
SEPT 2022 1	3.3	42.1	1.8	34.8	1.8	3.6
2	3.1	44.2	2.1	36.8	2.0	4.1
3	2.9	46.0	1.8	38.5	1.7	3.5
4	3.0	48.0	2.0	40.5	2.0	4.0
5	2.7	49.8	1.8	42.2	1.7	3.5
6	2.1	53.5	3.7	45.8	3.6	7.3
7	2.4	55.8	2.3	47.9	2.1	4.4
8	3.3	58.0	2.2	50.1	2.2	4.4
9	2.6	60.5	2.5	52.4	2.3	4.8
10	2.8	62.4	1.9	54.3	1.9	3.8
11	2.1	64.8	2.4	56.6	2.3	4.7
12	1.9	67.2	2.4	59.0	2.4	4.8
13	2.2	69.3	2.1	61.0	2.0	4.1
14	1.9	71.4	2.1	63.0	2.0	4.1
15	3.2	73.4	2.0	64.9	1.9	3.9
						AVERAGE - 4.33
						MAX - 7.3
						MIN - 3.5

#3.

MAIN INFLUENT PUMPS						HRS.
DATE	DEPTH	#1 PUMP HRS.	#1 PUMP TOTAL	#2 PUMP HRS.	#2 PUMP TOTAL	TOTAL BOTH
SEPT-16	2.0	75.3	1.9	66.8	1.9	3.8
17	3.0	77.1	1.8	68.5	1.7	3.5
18	3.4	79.2	2.1	70.5	2.0	4.1
19	1.9	81.3	2.1	72.6	2.1	4.2
20	1.9	83.7	2.4	74.8	2.2	4.6
21	2.9	85.8	2.1	76.9	2.1	4.2
22	2.0	87.8	2.0	78.9	2.0	4.0
23	1.9	89.7	1.9	80.6	1.7	3.6
24	2.2	91.4	1.7	82.3	1.7	3.4
25	3.0	93.1	1.7	84.0	1.7	3.4
26	3.0	95.5	2.4	86.2	2.2	4.6
27	1.9	97.4	1.9	88.1	1.9	3.8
28	2.8	99.3	1.9	89.9	1.8	3.7
29	2.7	101.2	1.9	91.7	1.8	3.7
30	2.4	103.1	1.9	93.5	1.8	3.7
AVERAGE -						3.89
MAX -						4.6
MIN -						3.4

#4.

MAIN INFLUENT PUMPS						HRS.
DATE:	DEPTH	#1 PUMP HRS.	#1 PUMP TOTAL	#2 PUMP HRS.	#2 PUMP TOTAL	TOTAL BOTH
OCT-2022 1.	3.4	104.9	1.8	95.4	1.9	3.7
2	2.5	107.7	2.8	98.0	2.6	5.4
3	2.8	110.8	3.1	101.0	3.0	6.1
4	2.8	113.0	2.2	103.1	2.1	5.3
5	2.2	116.2	3.2	106.1	3.0	6.2
6	2.1	118.4	2.2	108.3	2.2	4.4
7	3.3	120.8	2.4	110.5	2.2	4.6
8	2.6	122.5	1.7	112.2	1.7	3.4
9	2.7	124.8	2.3	114.4	2.2	4.5
10	2.2	127.2	2.4	116.8	2.4	4.8
11	2.0	129.4	2.2	118.8	2.0	4.2
12	2.8	131.5	2.1	121.0	2.2	4.3
13	2.7	134.1	2.6	123.5	2.5	5.1
14	2.6	136.9	2.8	126.1	2.6	5.4
15	3.3	138.7	1.8	127.9	1.8	3.6
AVERAGE						4.73
MAX						6.2
MIN						3.4

#5.

MAIN INFLUENT PUMPS						HRS.
DATE:	DEPTH	#1 PUMP HRS.	#1 PUMP TOTAL	#2 PUMP HRS.	#2 PUMP TOTAL	TOTAL BOTH.
1000 16	3.4	141.2	2.5	130.3	2.4	4.9
17	2.1	143.5	2.3	132.5	2.2	4.5
18	2.2	145.8	2.3	134.7	2.2	4.5
19	2.9	147.9	2.1	136.8	2.1	4.2
20	2.9	149.9	2.0	138.6	1.8	3.8
21	1.5	151.9	2.0	140.6	2.0	4.0
22	1.6	153.7	1.8	142.3	1.7	3.5
23	3.4	155.6	1.9	144.1	1.8	3.7
24	2.3	157.9	2.3	146.5	2.4	4.7
25	3.3	160.3	2.4	149.0	2.5	4.9
26	1.6	162.2	1.9	151.0	2.0	3.9
27	2.8	164.1	1.9	152.8	1.8	3.7
28	2.8	166	1.9	154.7	1.9	3.8
29	3.2	167.7	1.7	156.3	1.6	3.3
30	3.4	169.8	2.1	158.4	2.1	4.2
31	2.2	171.7	1.9	160.3	1.9	3.8
						AVERAGE- 4.09
						MAX- 4.9
						MIN- 3.3

#6

MAIN INFLUENT PUMPS						HRS.
DATE	DEPTH	#1 PUMP HRS.	#1 PUMP TOTAL	#2 PUMP HRS.	#2 PUMP TOTAL	TOTAL BOTH
NOV. 2022 1	3.9	174.4	2.7	162.7	2.4	5.1
2	2.9	176.1	1.7	165.6	2.9	4.6
3	2.2	178.1	2.0	167.5	1.9	3.9
4	3.1	180.0	1.9	169.4	1.9	3.8
5	1.6	181.9	1.9	171.2	1.8	3.7
6	1.6	183.6	1.7	172.8	1.6	3.3
7	1.6	185.9	2.3	174.9	2.1	4.4
8	2.0	187.9	2.0	178.0	3.1	5.1
9	2.2	189.8	1.9	179.9	1.9	3.8
10	3.5	191.6	1.8	181.6	1.7	3.5
11	1.5	193.4	1.8	183.3	1.7	3.5
12	3.1	196.1	2.7	185.9	2.6	5.3
13	2.9	198.2	2.1	188	2.1	4.2
14	3.0	200.3	2.1	190.2	2.2	4.3
15	2.1	203.0	2.7	192.8	2.6	5.3
16	2.2	206.0	3.0	195.9	3.1	6.1

AVERAGE - 4.37
 MAX - 6.1

AVERAGE → 4.38/HRS

MAX → 6.93

MIN → 3.32

MAIN PUMPS		#1.	#2.	TOTAL	
DATE:	DEPTH	HRS.	HRS.	HOURS	
DEC. 1, 2022	2.3	2.3	2.2	4.5	
12-2-22	1.9	2.0	1.9	3.9	
12-3-22	2.7	1.6	1.6	3.2	
12-4-22	2.3	2.9	2.8	5.7	
12-5-22	1.5	2.3	2.2	4.5	
12-6-22	2.8	2.8	2.1	4.9	
12-7-22	3.2	2.5	2.3	4.8	
12-8-22	2.9	2.0	1.8	3.8	
12-9-22	2.5	1.9	2.0	3.9	
12-10-22	2.6	2.2	2.1	4.3	
12-11-22	2.0	1.7	1.7	3.4	
12-12-22	3.3	2.4	2.2	4.6	
12-13-22	3.2	2.0	2.0	4.0	
12-14-22	1.6	2.1	2.0	4.1	
12-15-22	2.7	2.3	2.6	4.9	
12-16-22	2.9	4.8	4.5	9.3	

#1.

MAIN	DUMPS	#1.	#2.	TOTAL	
DATE:	DEPTH	HRS.	HRS	HOURS	
12-17-22	2.3	3.9	3.4	7.3	
12-18-22	3.3	3.2	3.2	6.4	
12-19-22	1.5	2.5	2.5	5.0	
12-20-22	3.3	2.6	2.4	5.0	
12-21-22	3.0	2.5	3.0	5.5	
12-22-22	2.3	2.8	2.6	5.4	
12-23-22	2.5	5.4	5.3	10.7	
12-24-22	2.6	4.5	4.4	8.9	
12-25-22	1.6	3.9	3.8	7.7	
12-26-22	1.8	3.0	2.8	5.8	
12-27-22	2.0	3.3	3.2	6.5	
12-28-22	2.0	3.8	3.5	7.3	
12-29-22	2.4	3.2	3.0	6.2	
12-30-22	2.3	2.7	2.7	5.4	
12-31-22	1.9	2.9	3.0	5.9	
MIN.			3.2		
MAX.			10.7		
AVERAGE			5.57		#2

HRS.

#2

MAINTENANCE RECORD

MONTH June

YEAR 2022

DATE	MAIN PUMP #1	MAIN PUMP #2	BLOWER PUMP #1	BLOWER PUMP #2	EMERG BLOWER	SLUDGE PUMP	DIGESTER BLOWER #1	DIGESTER BLOWER #2	
1	OFFLINE →								
2	↓	↓							
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13					GREASE + OIL →			GREASE ←	
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27					GREASE + OIL			GREASE →	
28									
29									
30									
31			↓	↓					

MAINTENANCE RECORD

MONTH JULY

YEAR 2022

DATE	MAIN PUMP #1	MAIN PUMP #2	BLOWER PUMP #1	BLOWER PUMP #2	EMERG BLOWER	SLUDGE PUMP	DIGESTER BLOWER #1	DIGESTER BLOWER #2
1	OFFLINE	→						
2	↓	↓						
3	↓	↓						
4	↓	↓						
5	↓	↓						
6	↓	↓						
7	↓	↓						
8	↓	↓						
9	↓	↓						
10	↓	↓						
11	↓	↓						
12	↓	↓						
13	↓	↓						
14	↓	↓						
15	↓	↓	GREASE + OIL →			GREASE →		
16	↓	↓						
17	↓	↓						
18	↓	↓						
19	↓	↓						
20	↓	↓						
21	↓	↓						
22	↓	↓						
23	↓	↓						
24	↓	↓						
25	↓	↓						
26	↓	↓						
27	↓	↓						
28	↓	↓						
29	↓	↓						
30	↓	↓						
31	↓	↓						

ATTACHMENT D:
Sewage Sludge Management Inventory



SEWAGE SLUDGE MANAGEMENT INVENTORY

As a part of the 2022 Wastewater Treatment Plant Upgrades Project, the previously existing treatment tanks were repurposed into Aerobic Sludge Digestors. The tanks were updated with new coarse bubble diffusers and were reconnected to the headworks of the plant for RAS purposes. Sludge to be disposed is pumped and hauled from site after decanting from the repurposed Aerobic Digestors to thicken sludge.

The existing above ground steel Aerobic Sludge Digester tank (41,000 gallon capacity) was demolished on October 25th, 2022, and the new Aerobic Sludge Storage tanks placed into service shortly after. Two "Sludge Generation Calculation" forms are being submitted with this Chapter 94 Report. One form is for the previously existing Activated Sludge Treatment process, and the other for the upgraded SBR HAWASA WWTP. The Upgraded WWTP includes a new Aerobic Digestion system. The total dry tons of sludge hauled off site in 2022 was 4.282 tons.

It is being assumed for the purpose of the sludge generation calculation that 138 days worth of sludge (August 15, 2022 – December 29, 2022) were generated from the new SBR system. And that 227 days (January 1, 2022 – August 14, 2022) of sludge was generated from the original activated sludge treatment processes. The total sludge generated for the year (4.282 dry tons) was divided between the two time periods according to number of days that each respective treatment facilities operated in 2022. It was calculated that the original activated sludge HAWASA WWTP produced 2.663 dry tons of sludge and that the new SBR process generated 1.619 dry tons of sludge, totaling the 4.282 dry tons hauled off site in 2022.

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL

Facility Name: Halifax Area Water and Sewer Authority
Municipality: Halifax Borough County: Dauphin
Watershed: 6-C

JANUARY 2022
NPDES Permit No. PA 0024457
This permit will expire on April 30, 2022

Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge / Biosolids Hauled Off-site				Dewatered Sewage Sludge / Biosolids Hauled Off-site				Sewage Sludge / Biosolids Dewatered and Incinerated On-site							
	Gallons	% Solids	X Conv. Factor	= Dry Tons	Tons dewatered sludge	X % Solids	X 0.01	= Dry Tons	Tons dewatered	X % Solids	= Dry Tons					
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
1/4/22	5,500	1.9	X 0.0000417	0.436			X 0.01									
1/4/22	5,500	1.8	X 0.0000417	0.413			X 0.01									
1/4/22	5,500	1.6	X 0.0000417	0.367			X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
			X 0.0000417				X 0.01									
	16,500	1.8	X 0.0000417				X 0.01									
	TOTAL:				1.216		TOTAL:				0.00		TOTAL:			0.00

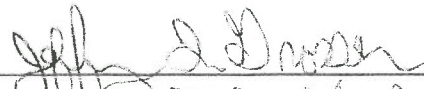
SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
(Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)

	SITE 1	SITE 2	SITE 3
Site Name:	Kline's Septic	Harrisburg Sewer Plant	
Municipality:	Salunga	Harrisburg	
County:	Lancaster	Dauphin	
DEP Permit Number:	101606	WH-0422-05	
Type of Material*	Liquid Biosolids	Liquid Biosolids	
Dry Tons Disposal:	0	1.215555	
Gallons Disposed:	0	16,500	
Type of Disposal/Use:*	Sewer Plant	Sewer Plant	
Hauler Name:	Kline's Septic	Kline's Septic	

* See Instructions for explanation

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 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 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Jeffrey L. Grosser
Title: Manager

Signature: 
Date: FEB. 24, 2022

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL

Facility Name: Halifax Area Water and Sewer Authority
Municipality: Halifax Borough County: Dauphin
Watershed: 6-C

FEBRUARY 2022
NPDES Permit No. PA 0024457
This permit will expire on April 30, 2022

Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge / Biosolids Hauled Off-site				Dewatered Sewage Sludge / Biosolids Hauled Off-site				Sewage Sludge / Biosolids Dewatered and Incinerated On-site						
	Gallons	% Solids	X Conv. Factor	= Dry Tons	Tons dewatered sludge	X % Solids	X 0.01	= Dry Tons	Tons dewatered	X % Solids	= Dry Tons				
			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
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			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
			X 0.0000417				X 0.01								
	0	#DIV/0!	X 0.0000417				X 0.01								
				TOTAL:	0.000					TOTAL:	0.00			TOTAL:	0.00

SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
(Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)

	SITE 1	SITE 2	SITE 3
Site Name:	Kline's Septic	Harrisburg Sewer Plant	
Municipality:	Salunga	Harrisburg	
County:	Lancaster	Dauphin	
DEP Permit Number:	101607	27198	
Type of Material*	Liquid Biosolids	Liquid Biosolids	
Dry Tons Disposal:	0	0	
Gallons Disposed:	0	0	
Type of Disposal/Use:*	Sewer Plant	Sewer Plant	
Hauler Name:	Kline's Septic	Kline's Septic	

* See Instructions for explanation

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 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 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Jeffrey L. Grosser
Title: Manager

Signature: 
Date: MARCH 14, 2022

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

**SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL**

Facility Name: Halifax Area Water and Sewer Authority
Municipality: Halifax Borough County: Dauphin
Watershed: 6-C

MARCH 2022
NPDES Permit No. PA 0024457
This permit will expire on April 30, 2022

Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge / Biosolids Hauled Off-site				Dewatered Sewage Sludge / Biosolids Hauled Off-site				Sewage Sludge / Biosolids Dewatered and Incinerated On-site				
	Gallons	% Solids	X Conv. Factor	= Dry Tons	Tons dewatered sludge	X % Solids	X 0.01	= Dry Tons	Tons dewatered	X % Solids	= Dry Tons		
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
	0	#DIV/0!	X 0.0000417				X 0.01						
TOTAL:				0.000	TOTAL:				0.00	TOTAL:			0.00

SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
(Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)

	SITE 1	SITE 2	SITE 3
Site Name:	Kline's Septic	Harrisburg Sewer Plant	
Municipality:	Salunga	Harrisburg	
County:	Lancaster	Dauphin	
DEP Permit Number:	101607	27198	
Type of Material*	Liquid Biosolids	Liquid Biosolids	
Dry Tons Disposal:	0	0	
Gallons Disposed:	0	0	
Type of Disposal/Use:*	Sewer Plant	Sewer Plant	
Hauler Name:	Kline's Septic	Kline's Septic	

* See Instructions for explanation

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 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 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Jeffrey L. Grosser
Title: Manager

Signature: *Jeffrey L. Grosser*
Date: APRIL 26, 2022

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL

Facility Name: Halifax Area Water and Sewer Authority
Municipality: Halifax Borough County: Dauphin
Watershed: 6-C

APRIL 2022
NPDES Permit No. PA 0024457
This permit will expire on April 30, 202

Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge / Biosolids Hauled Off-site				Dewatered Sewage Sludge / Biosolids Hauled Off-site				Sewage Sludge / Biosolids Dewatered and Incinerated On-site				
	Gallons	% Solids	X Conv. Factor	= Dry Tons	Tons dewatered sludge	X % Solids	X 0.01	= Dry Tons	Tons dewatered	X % Solids	= Dry Tons		
4/5/22	2,400	3.0	X 0.0000417	0.300			X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
	2,400	3.0	X 0.0000417				X 0.01						
TOTAL:				0.300	TOTAL:				0.00	TOTAL:			0.00

SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
(Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)

	SITE 1	SITE 2	SITE 3
Site Name:	Kline's Septic	Harrisburg Sewer Plant	
Municipality	Salunga	Harrisburg	
County:	Lancaster	Dauphin	
DEP Permit Number:	101607	27198	
Type of Material*	Liquid Biosolids	Liquid Biosolids	
Dry Tons Disposal:	0.30024	0	
Gallons Disposed:	2,400	0	
Type of Disposal/Use:*	Sewer Plant	Sewer Plant	
Hauler Name:	Kline's Septic	Kline's Septic	

* See Instructions for explanation

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 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 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Jeffrey L. Grosser
Title: Manager

Signature: Jeffrey L. Grosser
Date: MA 9 18, 2022

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL

Facility Name: Halifax Area Water and Sewer Authority
Municipality: Halifax Borough County: Dauphin
Watershed: 6-C

MAY 2022
NPDES Permit No. PA 0024457
This permit will expire on April 30, 2022

Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge / Biosolids Hauled Off-site				Dewatered Sewage Sludge / Biosolids Hauled Off-site				Sewage Sludge / Biosolids Dewatered and Incinerated On-site			
	Gallons	% Solids	X Conv. Factor	= Dry Tons	Tons dewatered sludge	X % Solids	X 0.01	= Dry Tons	Tons dewatered	X % Solids	= Dry Tons	
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
	0	#DIV/0!	X 0.0000417				X 0.01					
			TOTAL:	0.000			TOTAL:	0.00			TOTAL:	0.00

SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
(Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)

	SITE 1	SITE 2	SITE 3
Site Name:	Kline's Septic	Harrisburg Sewer Plant	
Municipality	Salunga	Harrisburg	
County:	Lancaster	Dauphin	
DEP Permit Number:	101607	27198	
Type of Material*	Liquid Biosolids	Liquid Biosolids	
Dry Tons Disposal:	0	0	
Gallons Disposed:	0	0	
Type of Disposal/Use:*	Sewer Plant	Sewer Plant	
Hauler Name:	Kline's Septic	Kline's Septic	

* See Instructions for explanation

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 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 Pa. C.S. § 4903 (relating to misworn falsification).

Prepared By: Jeffrey L. Grosser
Title: Manager

Signature: Jeffrey L. Grosser
Date: JUNE 21, 2022

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

**SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL**

Facility Name: Halifax Area Water and Sewer Authority
 Municipality: Halifax Borough County: Dauphin
 Watershed: 6-C

JUNE 2022
 NPDES Permit No. PA 0024457
 This permit will expire on April 30, 2022

Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge / Biosolids Hauled Off-site				Dewatered Sewage Sludge / Biosolids Hauled Off-site				Sewage Sludge / Biosolids Dewatered and Incinerated On-site		
	Gallons	% Solids	X Conv. Factor	= Dry Tons	Tons dewatered sludge	X % Solids	X 0.01	= Dry Tons	Tons dewatered	X % Solids	= Dry Tons
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
	0	#DIV/0!	X 0.0000417				X 0.01				
			TOTAL:	0.000			TOTAL:	0.00			TOTAL: 0.00

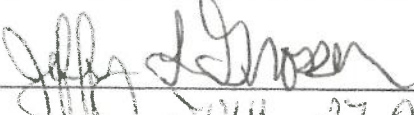
SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
 (Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)

	SITE 1	SITE 2	SITE 3
Site Name:	Kline's Septic	Harrisburg Sewer Plant	
Municipality:	Salunga	Harrisburg	
County:	Lancaster	Dauphin	
DEP Permit Number:	101607	27198	
Type of Material*	Liquid Biosolids	Liquid Biosolids	
Dry Tons Disposal:	0	0	
Gallons Disposed:	0	0	
Type of Disposal/Use:*	Sewer Plant	Sewer Plant	
Hauler Name:	Kline's Septic	Kline's Septic	

* See Instructions for explanation

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 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 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Jeffrey L. Grosser
 Title: Manager

Signature: 
 Date: JULY 27, 2022

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION**

**SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL**

Facility Name: Halifax Area Water and Sewer Authority
Municipality: Halifax Borough **County:** Dauphin
Watershed: 6-C

JULY 2002
 NPDES Permit No. PA 0024487
 This permit will expire on April 30, 2003

Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge / Biosolids Hauled Off-site				Dewatered Sewage Sludge / Biosolids Hauled Off-site				Sewage Sludge / Biosolids Dewatered and Incinerated On-site				
	Gallons	% Solids	X Conv. Factor	= Dry Tons	Tons dewatered sludge	X % Solids	X 0.01	= Dry Tons	Tons dewatered	X % Solids	= Dry Tons		
			X 0.000417				X 0.01						
			X 0.000417				X 0.01						
			X 0.000417				X 0.01						
			X 0.000417				X 0.01						
			X 0.000417				X 0.01						
			X 0.000417				X 0.01						
			X 0.000417				X 0.01						
			X 0.000417				X 0.01						
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			X 0.000417				X 0.01						
			X 0.000417				X 0.01						
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			X 0.000417				X 0.01						
			X 0.000417				X 0.01						
			X 0.000417				X 0.01						
	0	#DIV/0!	X 0.000417				X 0.01						
TOTAL:				0.00	TOTAL:				0.00	TOTAL:			0.00

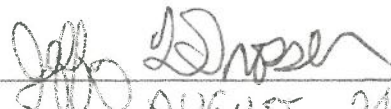
**SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
(Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)**

	SITE 1	SITE 2	SITE 3
Site Name:	Kline's Septic	Harrisburg Sewer Plant	
Municipality:	Salunga	Harrisburg	
County:	Lancaster	Dauphin	
DEP Permit Number:	101607	27198	
Type of Material*	Liquid Biosolids	Liquid Biosolids	
Dry Tons Disposal:	0	0	
Gallons Disposed:	0	0	
Type of Disposal/Use:**	Sewer Plant	Sewer Plant	
Hauler Name:	Kline's Septic	Kline's Septic	

* See Instructions for explanation

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 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 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Jeffrey L. Grosser
 Title: Manager

Signature: 
 Date: AUGUST 24, 2002

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL

Facility Name: Halifax Area Water and Sewer Authority
Municipality: Halifax Borough County: Dauphin
Watershed: 6-C

AUGUST 2022
NPDES Permit No. PA 0024457
This permit will expire on April 30, 2022

Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge / Biosolids Hauled Off-site				Dewatered Sewage Sludge / Biosolids Hauled Off-site				Sewage Sludge / Biosolids Dewatered and Incinerated On-site			
	Gallons	% Solids	X Conv. Factor	= Dry Tons	Tons dewatered sludge	X % Solids	X 0.01	= Dry Tons	Tons dewatered	X % Solids	= Dry Tons	
8/18/22	5,500	2.2	X 0.0000417	0.505			X 0.01					
8/17/22	5,500	2	X 0.0000417	0.528			X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
			X 0.0000417				X 0.01					
	11,000	2.3	X 0.0000417				X 0.01					
TOTAL:				1.032	TOTAL:				0.00	TOTAL: 0.00		


SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
(Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)

	SITE 1	SITE 2	SITE 3
Site Name:	Kline's Septic	Harrisburg Sewer Plant	
Municipality:	Salunga	Harrisburg	
County:	Lancaster	Dauphin	
DEP Permit Number:	101607	27198	
Type of Material*	Liquid Biosolids	Liquid Biosolids	
Dry Tons Disposed:	1.032075	0	
Gallons Disposed:	11,000	0	
Type of Disposal/Use:	Sewer Plant	Sewer Plant	
Hauler Name:	Kline's Septic	Kline's Septic	

* See Instructions for explanation

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 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 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Jeffrey L. Grosser
Title: Manager

Signature: 
Date: SEPT. 27, 2022

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL

Facility Name: Halifax Area Water and Sewer Authority
Municipality: Halifax Borough County: Dauphin
Watershed: 6-C

SEPT. 2022
NPDES Permit No. PA 0024457
This permit will expire on April 30, 2023

Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge / Biosolids Hauled Off-site			Dewatered Sewage Sludge / Biosolids Hauled Off-site				Sewage Sludge / Biosolids Dewatered and Incinerated On-site			
	Gallons	% Solids	X Conv. Factor = Dry Tons	Tons dewatered sludge	X % Solids	X 0.01	= Dry Tons	Tons dewatered	X % Solids	= Dry Tons	
			X 0.0000417			X 0.01					
			X 0.0000417			X 0.01					
			X 0.0000417			X 0.01					
			X 0.0000417			X 0.01					
			X 0.0000417			X 0.01					
			X 0.0000417			X 0.01					
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			X 0.0000417			X 0.01					
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			X 0.0000417			X 0.01					
			X 0.0000417			X 0.01					
			X 0.0000417			X 0.01					
			X 0.0000417			X 0.01					
			X 0.0000417			X 0.01					
			X 0.0000417			X 0.01					
			X 0.0000417			X 0.01					
	0	#DIV/0!	X 0.0000417			X 0.01					
			TOTAL:	0.000				TOTAL:	0.00		

SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
(Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)

	SITE 1	SITE 2	SITE 3
Site Name:	Kline's Septic	Harrisburg Sewer Plant	
Municipality:	Salunga	Harrisburg	
County:	Lancaster	Dauphin	
DEP Permit Number:	101607	27198	
Type of Material*	Liquid Biosolids	Liquid Biosolids	
Dry Tons Disposal:	0	0	
Gallons Disposed:	0	0	
Type of Disposal/Use:*	Sewer Plant	Sewer Plant	
Hauler Name:	Kline's Septic	Kline's Septic	

* See Instructions for explanation

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 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 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Jeffrey L. GROSSER
Title: Manager

Signature: *Jeffrey L. Grosser*
Date: OCT-25, 2022

BUREAU OF WATER STANDARDS AND FACILITY REGULATION

**SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL**

Facility Name: Halifax Area Water and Sewer Authority
 Municipality: Halifax Borough County: Dauphin
 Watershed: 6-C

OCTOBER 2022
NPDES Permit No. PA 0024457
This permit will expire on April 30, 2022

Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge / Biosolids Hauled Off-site				Dewatered Sewage Sludge / Biosolids Hauled Off-site				Sewage Sludge / Biosolids Dewatered and Incinerated On-site		
	Gallons	% Solids	X Conv. Factor	= Dry Tons	Tons dewatered sludge	X % Solids	X 0.01	= Dry Tons	Tons dewatered	X % Solids	= Dry Tons
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
			X 0.0000417				X 0.01				
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			X 0.0000417				X 0.01				
	0	#DIV/0!	X 0.0000417				X 0.01				
			TOTAL:	0.000			TOTAL:	0.00			TOTAL: 0.00

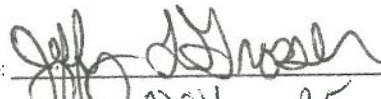
SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
 (Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)

	SITE 1	SITE 2	SITE 3
Site Name:	Kline's Septic	Harrisburg Sewer Plant	
Municipality	Salunga	Harrisburg	
County:	Lancaster	Dauphin	
DEP Permit Number:	101607	27198	
Type of Material*	Liquid Biosolids	Liquid Biosolids	
Dry Tons Disposal:	0	0	
Gallons Disposed:	0	0	
Type of Disposal/Use:*	Sewer Plant	Sewer Plant	
Hauler Name:	Kline's Septic	Kline's Septic	

* See Instructions for explanation

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 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 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Jeffrey L. Grosser
 Title: Manager

Signature: 
 Date: NOV. 25, 2022

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

**SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL**

Facility Name: Halifax Area Water and Sewer Authority
Municipality: Halifax Borough County: Dauphin
Watershed: 6-C

NOVEMBER 2022
NPDES Permit No. PA 0024457
This permit will expire on April 30, 2022

Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge / Biosolids Hauled Off-site				Dewatered Sewage Sludge / Biosolids Hauled Off-site				Sewage Sludge / Biosolids Dewatered and Incinerated On-site				
	Gallons	% Solids	X Conv. Factor	= Dry Tons	Tons dewatered sludge	X % Solids	X 0.01	= Dry Tons	Tons dewatered	X % Solids	= Dry Tons		
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
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			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
	0	#DIV/0!	X 0.0000417				X 0.01						
TOTAL:				0.000	TOTAL:				0.00	TOTAL:			0.00

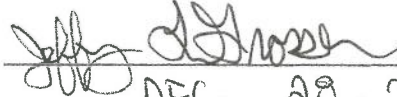
SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
(Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)

	SITE 1	SITE 2	SITE 3
Site Name:	Kline's Septic	Harrisburg Sewer Plant	
Municipality:	Salunga	Harrisburg	
County:	Lancaster	Dauphin	
DEP Permit Number:	101607	27198	
Type of Material*	Liquid Biosolids	Liquid Biosolids	
Dry Tons Disposal:	0	0	
Gallons Disposed:	0	0	
Type of Disposal/Use:	Sewer Plant	Sewer Plant	
Hauler Name:	Kline's Septic	Kline's Septic	

* See Instructions for explanation

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 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 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Jeffrey L. Grosser
Title: Manager

Signature: 
Date: DEC 28, 2022

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

**SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL**

Facility Name: Halifax Area Water and Sewer Authority
Municipality: Halifax Borough County: Dauphin
Watershed: 6-C

DECEMBER 2022
NPDES Permit No. PA 0024457
This permit will expire on April 30, 2022

Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge / Biosolids Hauled Off-site				Dewatered Sewage Sludge / Biosolids Hauled Off-site				Sewage Sludge / Biosolids Dewatered and Incinerated On-site				
	Gallons	% Solids	X Conv. Factor	= Dry Tons	Tons dewatered sludge	X % Solids	X 0.01	= Dry Tons	Tons dewatered	X % Solids	= Dry Tons		
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
12/29/22	5,400	2.0	X 0.0000417	0.450			X 0.01						
12/29/22	5,400	1.9	X 0.0000417	0.428			X 0.01						
12/29/22	5,400	1.9	X 0.0000417	0.428			X 0.01						
12/29/22	5,400	1.9	X 0.0000417	0.428			X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
			X 0.0000417				X 0.01						
	21,600	1.9	X 0.0000417				X 0.01						
TOTAL:				1.734	TOTAL:				0.00	TOTAL:			0.00


SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
(Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)

	SITE 1	SITE 2	SITE 3
Site Name:	Kline's Septic	Harrisburg Sewer Plant	
Municipality	Safunga	Harrisburg	
County:	Lancaster	Dauphin	
DEP Permit Number:	101607	27198	
Type of Material*	Liquid Biosolids	Liquid Biosolids	
Dry Tons Disposal:	0	1.733886	
Gallons Disposed:	0	21,600	
Type of Disposal/Use:*	Sewer Plant	Sewer Plant	
Hauler Name:	Kline's Septic	Kline's Septic	

* See instructions for explanation

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 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 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Jeffrey L. Grosser
Title: Manager

Signature: 
Date: JAN. 20, 2023

SLUDGE GENERATION CALCULATION

Facility Name:

Permit Number:

Date of Calculation:

Required Information For Calculation

Average Daily Flow (mgd): Digester Capacity (gal):

Influent BOD (mg/l): %Solids of Outgoing Sludge:

Effluent BOD (mg/l): Monitoring Period (days):

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	<input type="checkbox"/>	Contact Stabilization	<input type="checkbox"/>	RBC	<input type="checkbox"/>
Conventional Activated Sludge	<input type="checkbox"/>	SBR	<input type="checkbox"/>	ABF	<input type="checkbox"/>
Extended Aeration	<input checked="" type="checkbox"/>	Trickling Filter	<input type="checkbox"/>	Small Plant with low SOR	<input type="checkbox"/>
				<small>(<500 gpd/sq ft)</small>	

Operational Information

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

Digester Information

Type of Digester

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

Aerobic Digestion Anaerobic Digestion None

Sludge Feed Rate to Digesters (gpd):

Digester Hydraulic Detention Time (days):

Estimated Total Solids Reduction (%):

Sludge Generation

dry lbs/day	<input type="text" value="64"/>	wet lbs/day	<input type="text" value="2127"/>
dry tons/monitoring period	<input type="text" value="10"/>	wet tons/monitoring period	<input type="text" value="320"/>
gal/day	<input type="text" value="255"/>	gal/monitoring period	<input type="text" value="76772"/>

Amount of Sludge Reported as Being Generated by the Facility

wet tons/monitoring period

OR

dry tons/monitoring period

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 explanation:

What type of information was used to calculate the above information:

Dates used: TO

Name of person performing the calculation:

SLUDGE GENERATION CALCULATION

Facility Name: Halifax Wastewater Treatment Plant - 2022 Upgrade

Permit Number: PA0024457

Date of Calculation: 3/10/2023

Required Information For Calculation

Average Daily Flow (mgd): 0.1405 Digester Capacity (gal): 131000

Influent BOD (mg/l): 138 %Solids of Outgoing Sludge: 2

Effluent BOD (mg/l): 9.1 Monitoring Period (days): 183

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	<input type="checkbox"/>	Contact Stabilization	<input type="checkbox"/>	RBC	<input type="checkbox"/>
Conventional Activated Sludge	<input type="checkbox"/>	SBR	<input checked="" type="checkbox"/>	ABF	<input type="checkbox"/>
Extended Aeration	<input type="checkbox"/>	Trickling Filter	<input type="checkbox"/>	Small Plant with low SOR	<input type="checkbox"/>
(<500 gpd/sq ft)					

Operational Information

BOD Removed (lbs/day): 151 TSS Removed (lbs/day): 128

Digester Information

Type of Digester

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

Aerobic Digestion Anaerobic Digestion None

Sludge Feed Rate to Digesters (gpd): 2565.64708

Digester Hydraulic Detention Time (days): 51

Estimated Total Solids Reduction (%): 0.4

Sludge Generation

dry lbs/day	<u>77</u>	wet lbs/day	<u>3852</u>
dry tons/monitoring period	<u>7</u>	wet tons/monitoring period	<u>352</u>
gal/day	<u>462</u>	gal/monitoring period	<u>84512</u>

Amount of Sludge Reported as Being Generated by the Facility

wet tons/monitoring period 0

OR

dry tons/monitoring period 1.619

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: 2022 DMR Supplemental Reports

Dates used: 8.15.2022 TO 12.31.2022

Name of person performing the calculation: Brenden Miller

	Influent BOD (mg/L)	Effluent CBOD (mg/L)	Liquid Sludge Disposed Off-Site (dry ton)	Liquid Sludge Disposed Off-Site (gal)	% Solids
Jan	159	6.6	0.917	10,000	2.2
Feb	182	6.1	0.000	0	0.0
Mar	135	11.4	0.803	16,500	1.2
Apr	154	13.1	0.000	0	0.0
May	155	10.3	0.000	0	0.0
Jun	188	8.2	0.521	5,000	2.5
Jul	126	13.0	0.000	0	0.0
Aug	128	7.1	0.000	0	0.0
Sep	69	11.4	0.000	0	0.0
Oct	223	17.2	0.000	0	0.0
Nov	139	9.6	0.000	0	0.0
Dec	222	16.9	0.000	0	0.0
Tot	1880	130.9	2.241	31500	5.9
Avg	157	10.9	0.2	2625	2.0

ATTACHMENT E:
Flow Meter Calibration Report





LRM, Inc

Instrumentation & Disinfection Systems

Startup Date
7/27/2022

User

PSI PUMPING SOLUTIONS

Job Site

HALIFAX WWTP

Instrument Model No.:
E+H: FMU90-L21CA111AA1A
E+H: FDU90-RN2AB

Instrument S/N:
S60045010E6
S6000701123

Instrument Loop:
INFLUENT FLOW

Input Type:
ULTRASONIC

Primary Signal Producer:
6" PARSHALL FLUME

Calibrated Range:
0-1000 GPM

Instrument Settings

Zero	Span
2.673 FT	1000 GPM

Calibration Data

Input %	Input Value	Output Value	% Error After Calibration
0 %	0.00 GPM	4.00 mADC	00.00%
50 %	500.00 GPM	12.00 mADC	00.00%
100 %	1000.00 GPM	20.00 mADC	00.00%

Comments :

Equipment Used: E+H FIELD CARE SOFTWARE, ISCO STANDARDS

Adjustments / Actions Taken : START-UP

Service Representative Mackenzie Crawford

Date 7/27/2022



LRM, Inc

Instrumentation & Disinfection Systems

Startup Date
7/27/2022

User

PSI PUMPING SOLUTIONS

Job Site

HALIFAX WWTP

Instrument Model No.:
ENDRESS + HAUSER
5W4C1F-3LR1/0

Instrument S/N:
S602CD16000

Instrument Loop:
WASTE ACTIVATED SLUDGE

Input Type:
MAGMETER

Primary Signal Producer:
MAG PRIMARY 6"

Calibrated Range:
0-1000 GPM

Instrument Settings

Zero	Span
0 GPM	1000 GPM

Calibration Data

Input %	Input Value	Output Value	% Error After Calibration
0 %	0.00 GPM	4.00 mADC	00.00%
50 %	500.00 GPM	12.00 mADC	00.00%
100 %	1000.00 GPM	20.00 mADC	00.00%

Comments :

Equipment Used: E+H FIELD CARE SOFTWARE

Adjustments / Actions Taken : START-UP

Service Representative Mackenzie Crawford

Date 7/27/2022



LRM, Inc

Instrumentation & Disinfection Systems

Startup Date

7/27/2022

User

PSI PUMPING SOLUTIONS

Job Site

HALIFAX WWTP

Instrument Model No.:

E+H: FMU90-L21CA111AA1A

E+H: FDU90-RN2AB

Instrument S/N:

S60046010E6

S6000801123

Instrument Loop:

EFFLUENT FLOW

Input Type:

ULTRASONIC

Primary Signal Producer:

6" PARSHALL FLUME

Calibrated Range:

0-1000 GPM

Instrument Settings

Zero	Span
2.284 FT	1000 GPM

Calibration Data

Input %	Input Value	Output Value	% Error After Calibration
0 %	0.00 GPM	4.00 mADC	00.00%
50 %	500.00 GPM	12.00 mADC	00.00%
100 %	1000.00 GPM	20.00 mADC	00.00%

Comments :

Equipment Used: E+H FIELD CARE SOFTWARE, ISCO STANDARDS

Adjustments / Actions Taken : START-UP

Service Representative Mackenzie Crawford

Date 7/27/2022

ATTACHMENT F:
Consent Order And Agreement Progress
Report





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

VIA ELECTRONIC DELIVERY

December 31, 2022

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 were completed as part of the WWTP Upgrade Project, which is currently nearing completion.

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 has 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 are tributary to the overloaded sewerage facilities.

Implementation Schedule – Update

WWTP UPGRADE PROJECT CONSTRUCTION STATUS:

- As indicated in previous COA Update Letters, the General Contractor for the WWTP Upgrade Project has experienced substantial delays in procuring and receiving shipments of construction materials during the project. These material delays are attributable to ongoing supply chain disruptions related to the COVID-19 Pandemic and

to recent natural disasters. Numerous materials, including pipes, metals, and machined components were delayed. Of primary importance were delays in procuring fiberglass reinforced plastic (FRP) components integral to the biologic treatment process, which were critical path items needed prior to start-up of the SBR system. The FRP material supplier provided a letter to the General Contractor on August 12, 2021 indicating material delays were due to an event of force majeure. As of the date of this report, all outstanding materials have arrived at site. However, these delays had notable impacts on the construction schedule.

- To date, HRG has reviewed and approved time extension requests for the Project increasing the duration of Substantial and Final completion by 295 days to a total of 745 and 790 days respectively. These extensions were incorporated into Change Orders No. 1 – 3 which have been submitted to PA DEP and PennVest. This contract times modification places substantial completion on December 15, 2022 and final completion on January 29, 2023.
- Construction at the WWTP site has progressed rapidly over the last quarter. All WWTP unit process are fully operation and HRG anticipates performing a substantial completion inspection in the coming weeks. Site work and grading was completed to allow for a base coat of paving to be laid around the site to improve access during the winter months. Final site work will be completed in the spring when temperatures rise and seeding and final top coating can be completed.
- The WWTP Main Pumping Station, which is considered hydraulically overloaded and was one of the primary drivers behind the implementation of the CAP and the completion of the Project, has been successfully operating since its start-up in August 2022. The upgraded station captures all flow from the Front Street Interceptor and various WWTP return flows and is designed to handle a PIF of 300 gpm with a single pump in operation. Since it was put into operation, there have been no instances in which both pumps were called to operate due to high flow conditions.
 - On October 26, 2022, HRG met with PA DEP to discuss the status of the COA and the current system connection ban. The improvements to the Main Pumping Station have addressed the hydraulic overload condition that was one of the primary drivers of the CAP. Pump runtimes since start-up of the new Main Pumping Station will be provided separately for review.
- DEP completed a site visit to review the status of the construction on July 13, 2022 and provided the WWTP operations staff instructions on reporting effluent criteria, specifically data related to the new UV Disinfection system, on the eDMR website.
- Construction status updates will continue to be provided 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 and HAWASA have been proceeding with efforts on 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.

On October 12, 2022, bids were received for the three contracts associated with this Project. Given the favorable bid results, the HAWASA has elected to proceed with the project and Notices of Intent to Award have been issued to the low bidders. HAWASA is currently targeting settlement on the PENNVEST award in March 2023 and has been coordinating project specifics with PENNVEST staff. In December, HRG and HAWASA held a series of public meetings to discuss the implications of the sewer extension with residents.

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: <ul style="list-style-type: none"> • 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	Substantial Completion adjusted to 12/15/22 Final Completion adjusted to 1/29/23 Change Orders denoting this time extension have been submitted to PA DEP.
Verify completion of construction by submission of the Sewage and Industrial Wastewater Facilities Construction Certification	Within 30 days of completed construction operations	

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
Submission of quarterly Progress Reports until termination of COA		Quarterly Progress Report submitted December 31, 2022. Previous Quarterly Progress Report Submitted October 7, 2022

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. The improvements made to the Main Pumping Station as part of the WWTP Upgrade Project have increased its capacity substantially and eliminated the hydraulic overload at this station. Since start-up of the upgraded station in August there were no instances where the standby pump was called into operation to handle additional flow.

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 discussed in previous Progress Reports, 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 known as Sycamore Ridge and proposes the construction of 124 residential townhome units. 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.

On October 26, 2022, HRG and PA DEP met to discuss the status of the WWTP Upgrade Project, the overload condition at the WWTP Main Pump Station, and the proposed Sycamore Ridge Development. Based on the outcome of that meeting and subsequent discussions with the developer, HRG anticipates that further plans for the Sycamore Ridge Development will be delayed until a planning module exemption can be requested following removal of the connection ban.

Mr. Erick Ammon
PA Department of Environmental Protection
December 31, 2022
Page 5

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.

A handwritten signature in black ink, reading "Justin J. Mendinsky". The signature is written in a cursive style with a large, stylized initial "J".

Justin J. Mendinsky
Water & Wastewater Group Manager

JJM/rb
001650.0426

Enclosures

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