

**Application of Pennsylvania-American Water Company for the Acquisition  
of the Wastewater Collection, Conveyance and Treatment System  
Owned and Operated by Towamencin Township and Towamencin Municipal Authority  
(collectively “Towamencin”)**

**Docket No. A-2023-3039900**

**66 Pa. C.S. § 1329  
Application Filing Checklist – Water/Wastewater**

20. Proof of Compliance. Provide proof of compliance with applicable design, construction and operation standards of DEP or of the county health department, or both, including:
- c. For **wastewater** system acquisitions, provide a copy of the Chapter 94 Municipal Wasteload Management Report that was most recently submitted to DEP.

**AMENDED RESPONSE:**

- c. Attached as **Amended Appendix A-20-c** is Towamencin’s 2023 Chapter 94 Report.



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## CHAPTER 94 WASTELOAD MANAGEMENT REPORT FOR CALENDAR YEAR 2023

### TOWAMENCIN MUNICIPAL AUTHORITY MONTGOMERY COUNTY, PENNSYLVANIA

Submitted to: PA DEP Southeast Regional Office  
Clean Water Program (Via OnBase)  
ATTN: Mr. Pravin C. Patel, P.E.  
2 East Main Street  
Norristown, PA 19401

008494.0429

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## INTRODUCTION

### REGULATORY REQUIREMENTS

This document was prepared pursuant to the Pennsylvania Chapter 94 Wasteload Management requirements for Towamencin Municipal Authority. As suggested by the Pennsylvania Department of Environmental Protection (PADEP), this document was developed utilizing the PADEP Chapter 94 Template (PADEP Doc. ID 3800-FM-BPNPSM0507) and the associated PADEP spreadsheet and graphs found at [www.dep.pa.gov/Business/Water/CleanWater/WastewaterMgmt/Pages/Wasteload-Management.aspx](http://www.dep.pa.gov/Business/Water/CleanWater/WastewaterMgmt/Pages/Wasteload-Management.aspx).

Please note that reports prior to 2021 for Towamencin Municipal Authority did not utilize the PADEP spreadsheet and report.

### COLLECTION AND CONVEYANCE FACILITIES

The Towamencin Municipal Authority (TMA) provides bulk wastewater treatment and disposal services to Towamencin Township and to a portion of Upper Gwynedd Township. Portions of the adjacent municipalities of Hatfield Township, Lansdale Borough, Lower Salford Township, and Worcester Township are also served by TMA. TMA owns all collection and conveyance systems (except those located within Upper Gwynedd Township) and operates the TMA WWTP, the Kriebel Road Interceptor, and the Turnpike and Hillside Avenue Trunk Sewers (see Attachment B). In 2015, Upper Gwynedd Township took ownership of all sanitary sewers located within Upper Gwynedd Township and the portion of the Turnpike Trunk Line located in Towamencin Township that is upstream of Manhole 30.

On October 8, 2021, Upper Gwynedd Township (UGT) executed its PADEP-Approved Flow Diversion, diverting approximately 0.795 million gallons per day (MGD) from treatment and disposal at the TMA WWTP (as measured by the permanent municipal boundary flow meters during 2021), for treatment at UGT's WWTP via their Southwest Interceptor. The UGT Flow Diversion included physical sealing of the manholes conveying flow from Upper Gwynedd Township to Towamencin Township through MH 24 and MH 236. The manholes conveying flow from Upper Gwynedd Township to Towamencin Township through MH 21.2 and MH 336 remain in normal operation. All permanent metering sites (at MH 21.2, MH 24, MH 236, and MH 336) were untouched during the diversion and continue to actively record flow.

Each of the tributary municipalities provide and are responsible for the operation and maintenance of the collection and conveyance systems within their respective geopolitical boundaries. The Sewer System Questionnaires and/or Reports provided by each of the tributary municipalities are included in Appendices A through F. Each response provides the information required for reporting under Title 25 Chapter 94.

### TREATMENT PLANT

The TMA Wastewater Treatment Plant (WWTP) is located at 2225 Kriebel Road in Towamencin Township, Montgomery County, Pennsylvania near the confluence of the Towamencin Creek and Bustard Road on approximately 8 acres of land. The Towamencin Municipal Authority owns and operates the facility. Current TMA WWTP processes employ channel grinders/comminutors, influent pumping and metering, primary screening, pre-aeration, conventional activated sludge and contact stabilization activated sludge,

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intermediate clarification, trickling filter treatment, final clarification, and disinfection by chlorination. The receiving stream is the Towamencin Creek.

Primary screenings (including tramp rags) are captured by a rag compactor and are bagged and disposed of offsite. Secondary waste sludges and screenings are blended in a sludge holding tank. The blended sludges are then processed through two centrifuges, lime stabilized as dewatered filter cake, and ultimately disposed of primarily via land application, with landfill disposal as an alternative.

The original plant facilities were constructed in 1966 and consisted of the Stage I treatment train rated at 1.3 MGD. The plant was expanded to include a separate Stage II treatment train rated at 4.33 MGD in 1987; and additional capacity was added to the Stage I facilities in 1989, increasing the rating to 2.17 MGD. The total rated hydraulic loading is 6.50 MGD, with a maximum monthly hydraulic loading of 7.30 MGD.



## CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

**For Calendar Year: 2023**

- 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:	Towamencin Municipal Authority	Permit No.:	PA0039004
Mailing Address:	2225 Kriebel Road	Effective Date:	September 1, 2014
City, State, Zip:	Lansdale, PA 19446-5019	Expiration Date:	August 31, 2019
Contact Person:	Michael McGann	Renewal Due Date:	March 4, 2019. Submitted February 21, 2019; Draft NPDES Permit Issued March 24, 2022. Copper BLM Study Review Ongoing per PADEP Water Quality Division 6/1/2022 Memo Directive (TMA Most Recent Response to PADEP Dated 9/26/2023).
Title:	Executive Director	Municipality:	Towamencin Township
Phone:	(215) 514-8561	County:	Montgomery
Email:	michael.mcgann.tma@comcast.net	Consultant Name:	Herbert, Rowland & Grubic, Inc.

### CHAPTER 94 REPORT COMPONENTS

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

**Check the appropriate boxes:**

- Line graph for flows attached (**Attachment A**)  
 DEP Chapter 94 Spreadsheet used (**Attachment A**)  
 Section 1 is not applicable (report is for a collection system).

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

**Check the appropriate boxes:**

- Line graph for organic loads attached (**Attachment A**)  
 DEP Chapter 94 Spreadsheet used (**Attachment A**)  
 Section 2 is not applicable (report is for a collection system).

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

**Hydraulic and organic loading calculations indicate no current or projected overloads. Refer to the respective reports/questionnaires of Appendices A through F for specific information on the tributary municipality flow projections for the next five (5) years (2024 to 2028) used in the spreadsheets.**

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:**

**Maps and/or information tabulating sewer extensions and proposed public sewer projects for each tributary municipality are included in the respective reports/questionnaires of Appendices A through F.**

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))

**All information related to TMA sewer system monitoring, maintenance, repair, and rehabilitation is included as Attachment B. Specific information pertaining to sewer system monitoring, maintenance, repair, and rehabilitation for each tributary municipality is included in the respective reports/questionnaires of Appendices A through F.**

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:**

**The Authority experienced one (1) total SSO Event during 2023. The subject SSO Event (December 18, 2023) was due primarily to operational/material issues at the WWTP during locally high flows caused by excessive rain, and abated once the rain slowed. Subsequent inspections/repairs were made to the impacted facilities (i.e., aeration tank inlet wall end, and manhole outside of bisulfite chemical room). No SSOs during 2023 were caused by hydraulic overload of the WWTP. See Attachment C, which also contains a record of date, time, rainfall amount, WWTP Effluent flows, and raw levels during the thirteen (13) times in 2023 that Authority Staff investigated the potential for system SSOs.**

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 – 3)
- Discussion of condition of each pump station attached (**Attachment D**)

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 E**)

9. Existing or Projected Overload.

**Check the appropriate boxes:**

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

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

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

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

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

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

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

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

- Flow calibration report attached (**Attachment F**)

**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).

**Michael McGann**

Name of Responsible Official

Signature

**(215) 514-8561**

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).

**Christopher J. Ferdik, P.E.**  
**Herbert, Rowland & Grubic, Inc.**

Name of Preparer

Signature

**(484) 460-7050**

Telephone No.

Date



## CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT INSTRUCTIONS

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

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

### General Information

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

### Chapter 94 Report Components

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

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

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

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

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

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

### Certification

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

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

# Attachment A – Hydraulic and Organic Loading Graph and Data





PADEP Chapter 94 Spread:  
Sewage Treatment Pl

Reporting Year: 2023

Facility Name: Towamencin Municipal Authority

Permit No.: PA0039004

Persons/EDU: 3.5

Existing Hydraulic Design Capacity: 7.3 MGD  
 Upgrade Planned in Next 5 Years? NO Year:   
 Future Hydraulic Design Capacity:  MGD

Existing Organic Design Capacity: 16,263 lbs BOD5/day  
 Upgrade Planned in Next 5 Years? NO Year:   
 Future Organic Design Capacity:  lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2019	2020	2021	2022	2023
January	4.805	3.941	3.9	3.395	4.167
February	4.416	4.23	4.777	3.671	2.943
March	4.935	4.093	5.292	3.32	3.493
April	3.61	4.166	3.436	4.513	3.103
May	4.358	3.444	3.254	3.742	3.112
June	3.695	2.995	3.439	2.761	2.827
July	3.593	3.458	3.125	3.125	2.92
August	3.016	3.979	3.641	2.728	2.668
September	2.729	2.936	4.148	2.954	2.793
October	3.141	3.278	2.968	3.501	2.787
November	3.448	3.735	2.76	2.99	2.893
December	4.435	5.197	2.564	4.102	4.739

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

Month	2019	2020	2021	2022	2023
January	4,207	6,398	6,248	9,433	4,750
February	4,333	5,513	6,318	7,904	4,642
March	5,055	6,006	10,780	6,870	5,067
April	5,067	6,097	7,487	6,376	4,456
May	5,782	5,142	6,983	6,812	5,655
June	3,201	5,605	6,496	5,582	4,891
July	4,085	6,995	5,433	6,758	5,628
August	3,301	5,473	5,488	6,482	4,010
September	5,165	4,955	5,249	6,018	4,983
October	3,236	4,345	7,368	7,387	6,428
November	5,205	4,830	7,182	6,325	12,902
December	5,212	8,739	6,531	5,183	5,388

Annual Avg	3.848	3.788	3.609	3.4	3.204
Max 3-Mo Avg	4.719	4.202	4.656	3.858	3.753
Max : Avg Ratio	1.23	1.11	1.29	1.13	1.17
Existing EDUs	14,196.0	14,220.0	10,506.0	10,532.0	10,547.0
Flow/EDU (GPD)	271.1	266.4	343.5	322.8	303.8
Flow/Capita (GPD)	77.4	76.1	98.1	92.2	86.8
Exist. Overload?	NO	NO	NO	NO	NO

Annual Avg	4,487	5,842	6,797	6,761	5,733
Max Mo Avg	5,782	8,739	10,780	9,433	12,902
Max : Avg Ratio	1.29	1.50	1.59	1.40	2.25
Existing EDUs	14,196	14,220	10,506	10,532	10,547
Load/EDU	0.316	0.411	0.647	0.642	0.544
Load/Capita	0.090	0.117	0.185	0.183	0.155
Exist. Overload?	NO	NO	NO	NO	NO

Projected Flows for Next Five Years (MGD)

	2024	2025	2026	2027	2028
New EDUs	93.0	576.0	547.0	634.0	225.0
New EDU Flow	0.028	0.1737	0.1649	0.1912	0.0678
Proj. Annual Avg	3.598	3.7717	3.9366	4.1278	4.1956
Proj. Max 3-Mo Avg	4.269	4.475	4.67	4.897	4.977
Proj. Overload?	NO	NO	NO	NO	NO

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

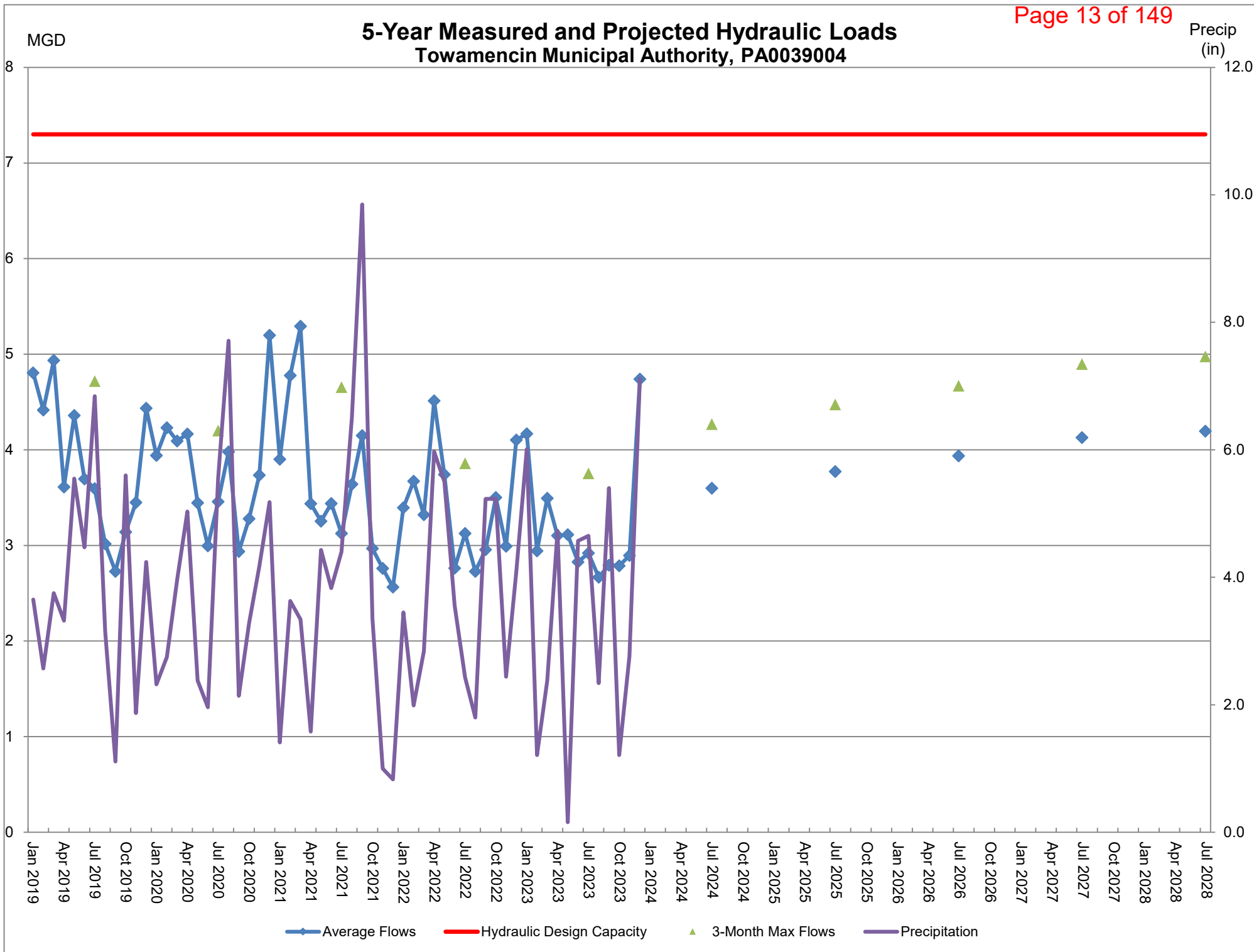
	2024	2025	2026	2027	2028
New EDUs	93	576	547	634	225
New EDU Load	47.605	294.841	279.997	324.530	115.172
Proj. Annual Avg	5,972	6,266	6,546	6,871	6,986
Proj. Max Avg	9,574	10,047	10,495	11,016	11,200
Proj. Overload?	NO	NO	NO	NO	NO

Show Precipitation Data on Hydraulic Graph?

Total Monthly Precipitation for Past Five Years (Inches)

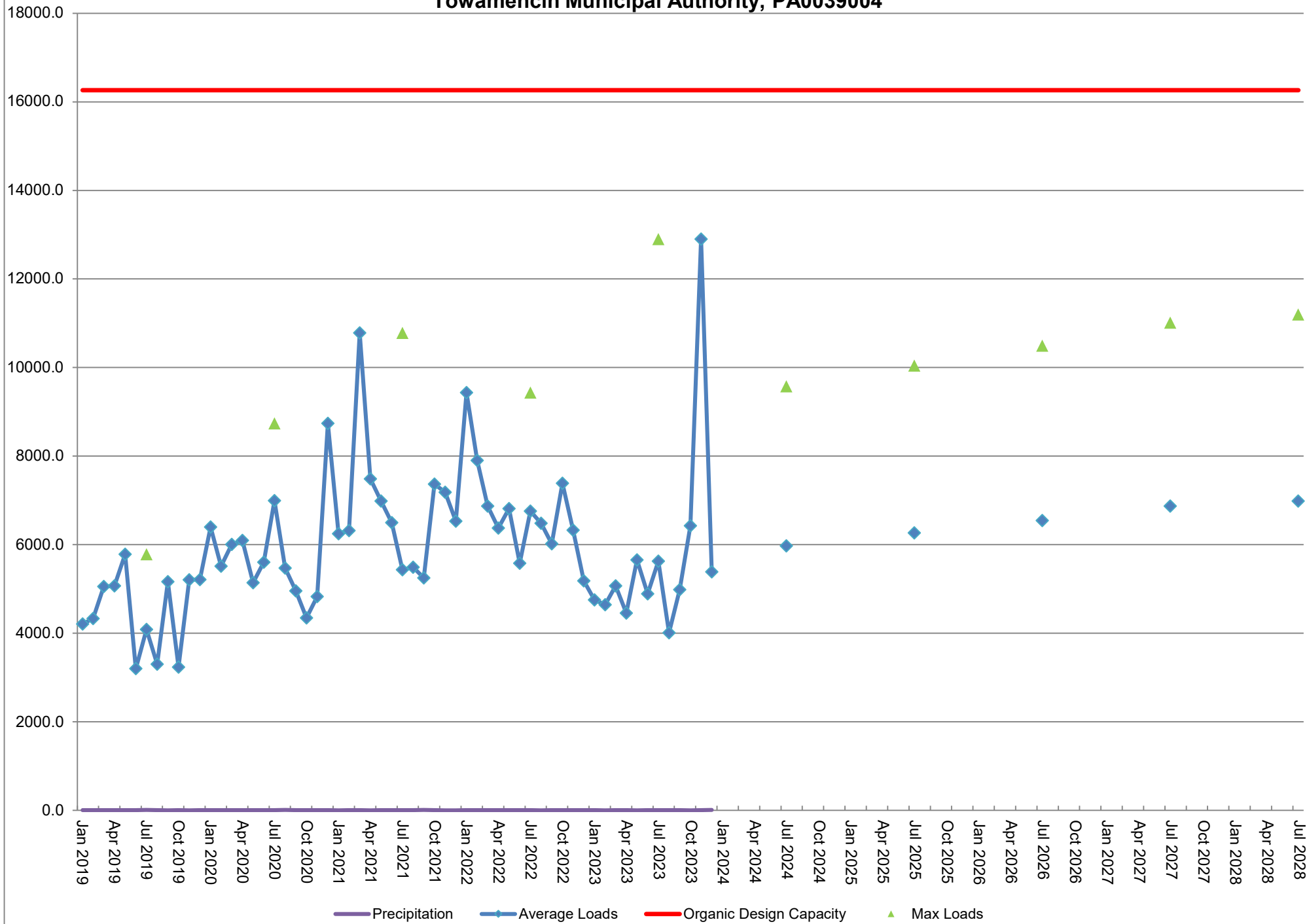
Month	2019	2020	2021	2022	2023
January	3.65	2.32	1.41	3.45	6.01
February	2.57	2.75	3.63	1.99	1.21
March	3.75	3.96	3.34	2.84	2.38
April	3.32	5.03	1.58	5.97	4.73
May	5.55	2.38	4.43	5.5	0.16
June	4.47	1.96	3.83	3.56	4.57
July	6.84	5.55	4.4	2.43	4.65
August	3.15	7.71	6.52	1.8	2.34
September	1.11	2.14	9.85	5.23	5.4
October	5.6	3.28	3.35	5.23	1.21
November	1.87	4.17	1.0	2.44	2.76
December	4.24	5.18	0.83	4.09	7.12

### 5-Year Measured and Projected Hydraulic Loads Towamencin Municipal Authority, PA0039004



◆ Average Flows    — Hydraulic Design Capacity    ▲ 3-Month Max Flows    — Precipitation

### 5-Year Measured and Projected Organic Loads Towamencin Municipal Authority, PA0039004



Municipal Wasteload Report  
Attachment A  
Calendar Year 2023  
Towamencin Municipal Authority, Montgomery County, PA

## HYDRAULIC AND ORGANIC LOADING INFORMATION

### GENERAL

Below is a table showing the number of EDUs connected during 2023 and the number of EDUs anticipated to be added to the Towamencin Municipal Authority Wastewater Treatment Plant over the next five (5) years (2024 to 2028). The information regarding current year EDU connections and future year EDU projections was provided by the tributary municipalities in their respective reports/questionnaires of Appendices A through F.

On October 8, 2021, Upper Gwynedd Township executed its PADEP-Approved Flow Diversion, diverting approximately 0.795 million gallons per day (MGD) from treatment and disposal at the TMA WWTP (as measured by the permanent municipal boundary flow meters during 2021), for treatment at UGT's WWTP via their Southwest Interceptor. The UGT Flow Diversion included physical sealing of the manholes conveying flow from Upper Gwynedd Township to Towamencin Township through MH 24 and MH 236. The manholes conveying flow from Upper Gwynedd Township to Towamencin Township through MH 21.2 and MH 336 remain in normal operation. All permanent metering sites (at MH 21.2, MH 24, MH 236, and MH 336) were untouched during the diversion and continue to actively record flow.

As of December 31, 2022, TMA had 10,532 total EDUs connected to their system (which incorporates the previous removal of 3,725 EDUs from Upper Gwynedd Township due to their PADEP-Approved Flow Diversion of October 8, 2021). Fifteen (15) total EDUs were added to the TMA system in 2023 across the tributary municipalities, resulting in a total connected count of 10,547 EDUs as of December 31, 2023.

TMA WWTP						
CHAPTER 94 REPORT						
EDUS CONNECTED OR ANTICIPATED BY MUNICIPALITY						
MUNICIPALITY	2023 CONNECTIONS	ANTICIPATED CONNECTIONS				
		2024	2025	2026	2027	2028
TOWAMENCIN TOWNSHIP	7	46	109	36	233	225
UPPER GWYNEDD TOWNSHIP	0	0	0	0	0	0
HATFIELD TOWNSHIP	0	0	467	511	400	0
LANSDALE BOROUGH	0	0	0	0	0	0
LOWER SALFORD TOWNSHIP	7	46	0	0	0	0
WORCESTER TOWNSHIP	1	1	0	0	1	0
<b>ANNUAL TOTAL</b>	<b>15</b>	<b>93</b>	<b>576</b>	<b>547</b>	<b>634</b>	<b>225</b>

Notes:

1. Lower Salford Township Total Purchased EDUs = 536.

2. Prior discussions between Towamencin Township and the Towamencin Municipal Authority concerning a potential agreement to accept wastewater flows of 100,000 gallons per day (GPD) from Franconia Township are currently not progressing; and at present, there is no indication that talks will continue. However, should the discussions resume, TMA still currently has sufficient reserve capacity to accept the potential additional quantity of flow from Franconia Township (should an agreement to their request come to fruition).

Municipal Wasteload Report  
Attachment A  
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Towamencin Municipal Authority, Montgomery County, PA

## **BIOSOLIDS DISPOSAL**

During 2023, the TMA WWTP processed and disposed of a total of 2,092 dry tons (1,898 dry metric tons) of biosolids; which included hauled-in septage (residential septic tank waste) and hauled-in sludge (municipal holding tank waste) sources. Additionally, an approximate total of 57.57 dry tons (52.23 dry metric tons) of primary screenings (removed by the rag compactor) were landfilled. Monthly reports of solids production, receiving, and disposal are submitted to PADEP with each monthly Discharge Monitoring Report (DMR).

## **CORRECTIVE ACTION AND CONNECTION MANAGEMENT PLANS**

On January 25, 2012, PADEP issued a letter to TMA regarding a site inspection made of the Kriebel Road Interceptor (KRI). The letter stated that evidence of Sanitary Sewer Overflows (SSO) had been observed along the KRI, and that new connections to the KRI drainage area would be prohibited. A Corrective Action Plan and Connection Management Plan were subsequently submitted and approved by PADEP. Since the collection and conveyance sewers discharging into the KRI are the respective responsibility of Towamencin Township and Upper Gwynedd Township, coordination of activities has been ongoing. During 2017 and 2018, TMA completed construction of capacity upgrades for a portion of the KRI in order to reduce SSO events; which included the KRI from Manhole 1 to 3, Manhole 3 to 14, and the Turnpike Trunk Line from Manhole 14 to 30.

Also on January 25, 2012, PADEP issued a letter to Towamencin Township regarding a site inspection made of the Towamencin Creek Interceptor (TCI). The letter stated that evidence of Sanitary Sewer Overflows (SSO) had been observed along the TCI on January 5, 2012, and that new connections to the TCI drainage area would be prohibited. A Corrective Action Plan and Connection Management Plan were subsequently submitted and approved by PADEP. Towamencin Township submitted ongoing status reports in conjunction with their Corrective Action Plan and Connection Management Plan to PADEP from 2012 to 2015. Towamencin Township indicated that PADEP removed the Chapter 94 prohibition and associated CAP/CMP requirement from the TCI on January 20, 2016.

During a prior site visit by PADEP to the TMA WWTP, it was determined that the influent pumping station (IPS) exceeded its then hydraulic capacity of 15.2 MGD, as stated in PADEP's letter dated February 24, 2012. The letter stated that new connections to the WWTP's entire drainage area would be prohibited. A Corrective Action Plan and a Connection Management Plan for the IPS was submitted and approved by PADEP. Based upon improvements to the WWTP previously completed, PADEP approved an application to re-rate the hydraulic capacity of the plant to 20 MGD on March 23, 2015. Subsequent to approving the re-rated hydraulic capacity, PADEP removed the IPS from Chapter 94 prohibition, and the associated CAP/CMP on June 9, 2015.

On May 19, 2020, PADEP removed the Chapter 94 prohibition and associated CAP/CMP requirement from the Kriebel Road Interceptor (KRI), for tributary drainage areas located in Towamencin Township. However, drainage areas tributary to the KRI which are located in Upper Gwynedd Township are still subject to the Chapter 94 prohibition and associated CAP/CMP requirement, due to the potential for hydraulic overloading in wet weather. Upper Gwynedd Township has a previously approved CAP and CMP agreement with PADEP for the portion of the TMA collection system located within Upper Gwynedd Township and continues to report work activities to reduce the overloads associated with this portion of the collection system directly to PADEP (also reference Appendix B to this Report, for applicable areas with remaining flow contributions following the October 8, 2021 Upper Gwynedd Township PADEP-Approved Flow Diversion).

# Attachment B – Sewer System Monitoring, Maintenance, Repair, and Rehabilitation



Municipal Wasteload Report  
Attachment B  
Calendar Year 2023  
Towamencin Municipal Authority, Montgomery County, PA

## **SEWER SYSTEM MONITORING, MAINTENANCE, REPAIR, AND REHABILITATION**

The Towamencin Municipal Authority (TMA) owns all collection and conveyance systems (except those located within Upper Gwynedd Township) and operates the Kriebel Road Interceptor, and the Turnpike and Hillside Avenue Trunk Sewers (see Figure 1 of this attachment). The applicable branch collection sewers located along and adjacent to Valley Forge Road (tributary to Manhole 21) which convey sewerage flows from both Towamencin and Upper Gwynedd Townships are maintained by TMA. Local collector sewer systems are owned by TMA yet are leased back to and maintained by the respective municipalities or their sewer authorities. The Towamencin Creek, Skippack Creek, and Bustard Road Interceptor Sewers are owned by TMA and maintained by Towamencin Township.

In 2015, Upper Gwynedd Township took ownership of all sanitary sewers located within Upper Gwynedd Township and the portion of the Turnpike Trunk Line located in Towamencin Township that is upstream of Manhole 30. The previously indicated Upper Gwynedd Township PADEP-Approved Flow Diversion (which occurred on October 8, 2021) included physical sealing of the manholes conveying flow from Upper Gwynedd Township to Towamencin Township through MH 24 and MH 236. The manholes conveying flow from Upper Gwynedd Township to Towamencin Township through MH 21.2 and MH 336 remain in normal operation. All permanent metering sites (at MH 21.2, MH 24, MH 236, and MH 336) were untouched during the diversion and continue to actively record flow.

Flow monitoring data accessible from any of the current permanent and/or portable metering sites (KRI drainage area) can be utilized to support Inflow/Infiltration (I/I) reduction efforts within the TMA system. Aside from the minor remaining portion of Upper Gwynedd Township which continues to send flow to the TMA WWTP following the October 8, 2021 PADEP-Approved Flow Diversion (solely via MH 21.2 and MH 336), the vast majority of TMA's sewer service area does not have a Chapter 94 prohibition or associated CAP/CMP requirement. As such, related flow data analyses and I/I evaluations are available upon request for the TMA system.

During 2017 and 2018, TMA completed post-construction televising of new pipe installed as part of the KRI capacity upgrades from Manhole 1 to 3, Manhole 3 to 14, and the Turnpike Trunk Line from Manhole 14 to 30. There are no planned construction extensions by TMA for 2024. All information regarding sewer extensions and/or proposed public sewer projects for each tributary municipality is included in the respective reports/questionnaires of Appendices A through F. A general map of TMA's Sanitary Sewer System is included in this section as Figure 1. Sewer maps for the tributary municipalities are included in their respective sections of this Report, where available.

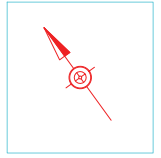
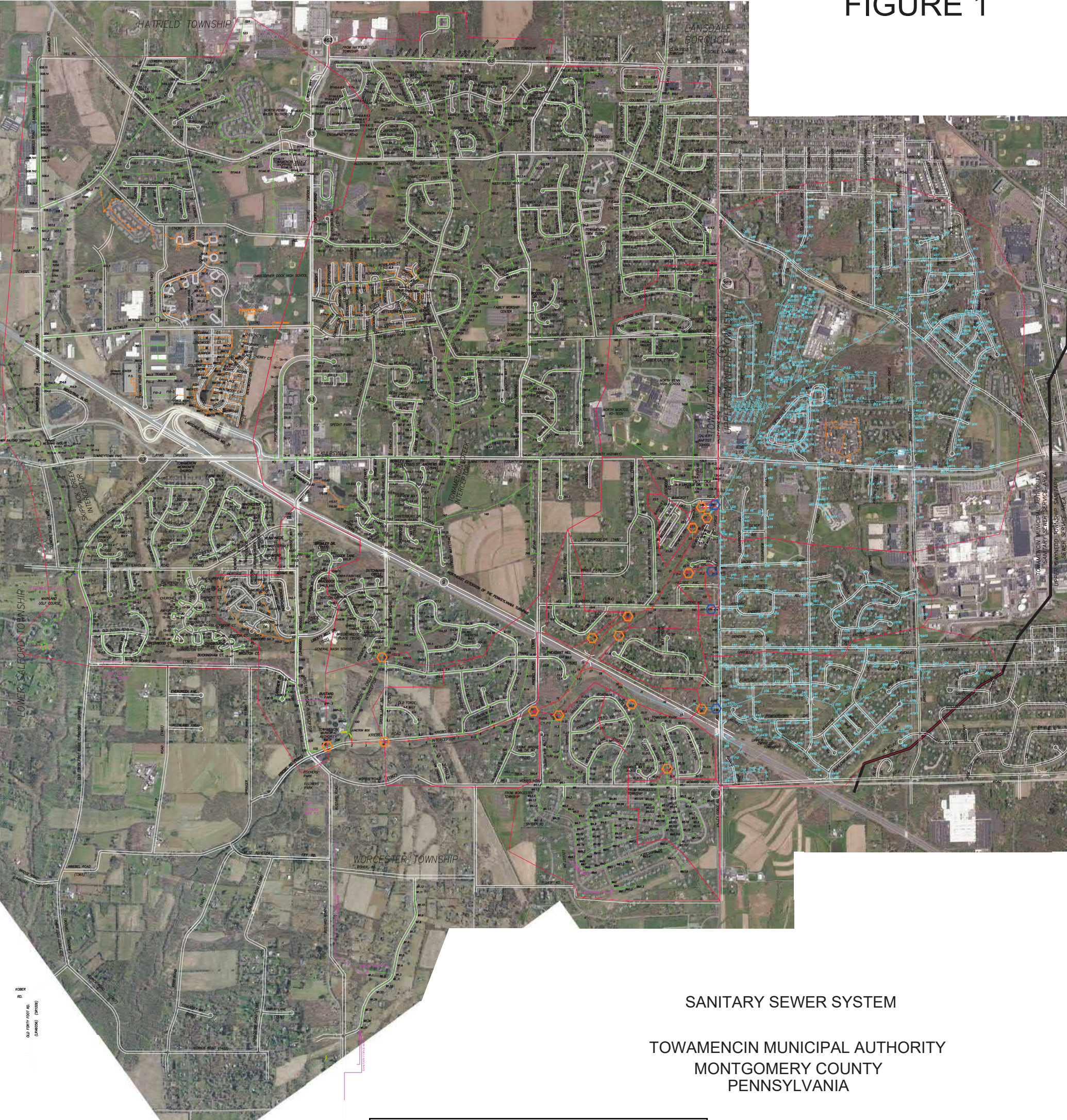


FIGURE 1



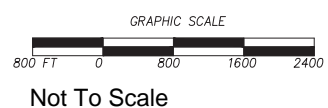
SANITARY SEWER SYSTEM

TOWAMENCIN MUNICIPAL AUTHORITY  
MONTGOMERY COUNTY  
PENNSYLVANIA

LEGEND

- SANITARY SEWER
- SANITARY SEWER FORCE MAIN
- ◊ PERMANENT METER LOCATION
- ◊ PORTABLE METER LOCATION
- METER DRAINAGE AREA
- TMA MAINTAINED
- TOWAMENCIN TOWNSHIP MAINTAINED
- UPPER GWYNNEDD TOWNSHIP OWNED & MAINTAINED
- PRIVATELY MAINTAINED

**Note:** Upper Gwynedd Township  
PADEP-Approved Flow Diversion  
Effective 10/8/2021



March 2024

# Attachment C – Sanitary Sewer Overflow (SSO) Reports



Flow Checklist

Month \_\_\_\_\_

Please log every trip.

If SSO is evident:

Date	Initials	Time In	Time Out	Amt. Rain	Plant Flow	Level Stg. 1	Level Stg. 2	Manhole Nos.
9/6/22	JR / FS	1:10	2:30	3.32	10 mgd	122	87	NONE
10/3/22	EF / MH	10:00AM	11:30AM	2.13	6.67 mgd	104	87	NONE
11/16/22	JS / SM	8:15 AM	11:08 AM	1.16	8.0 mgd	105	87	NONE
12/7/22	MH, GO	9:30	10:30	1.13	1.91 / 6.52	104	88	NONE
12/16/22	JR / FS	9:45	12:00	1.02	3.23 / 6.52	94	86	NONE
1/28/23	JS / RS	1330	1430	1.37	3.51 / 4.84	89	83	NONE
4/29/23	CF / GO	11:00	12:30	1.20	6.69	98	83	NONE
5/1/23	GO / EF	8:00	9:30	1.52	9.10	100	99	NONE
6/13/23	EF / SM	8:10AM	9:10AM	1.20	4.0	109	81	NONE
6/27/23	SM / CB	10:15 AM	11:35 AM	1.42	5.67	100	85	NONE
7/10/23	SM / JH	9:30 AM	10:00 AM	1.43	4.91	98	83	NONE
7/26/23	MB	10:00	10:30	1.45	3.08	96	76	NONE
8/29/23	EF	10:00		1.06	6.76	89	67	
9/25/23	CF / MW	8:30	1:30	.81*	5.34	91	75	NONE
10/22/23	JS / CF	8:00	9:40 AM	1.54	7.16	105	88	NONE
11/27/23	EF / JR	8:30AM	10:00AM	1.75	6.74	106	90	NONE

\*Told to walk over by MGMT



Sanitary Sewer Overflow(SSO) Report to PADEP – Water Management DEP fax: 484-250-5971

Please check the appropriate box  Dry Weather Overflow  Wet Weather Overflow

REVISED REPORT

1. Date, Name, Phone # of person completing this report	Date: Name Phone #: 215-855-8165
2. Organization name and address:	Municipality: – Towamencin Municipal Authority County: Montgomery Address: 2225 Kriebel Rd. , Lansdale PA 19446
Sewer system owner and permit number	Towamencin Municipal Authority PA0039004
3. Date found and <u>specific</u> location of SSO?	Date: 12/18/2023 ① manhole outside Bisulfite chemical room at WWTP ② Aeration Tank 5 @ Inlet end of wall
4. How was SSO discovered? By who?	Visual inspection ① Greg Opdyke ② Mike Weber, Ralph Jacoby
5. Start and end time of SSO (actual or estimate?)	Start: ① 7:30 <sup>AM</sup> - 8:00 <sup>AM</sup> approx estimate ② AM 12/18/23 9 AM 12/18 approx estimate
6. Date, time and name of person who notified PADEP of SSO?	Date: 12/18/2023 Time: 2:15 PM Name: Michael Weber
7. Description and actual or estimated volume of SSO	① 500 gal ② 300 gal
8. Where, <u>precisely</u> , did SSO go? (land, roadway, basement, swale storm sewer, creek etc)	① storm sewer ② storm sewer
9. What caused SSO? How was it stopped?	High flow rain event. Stopped when rain slowed & tank level dropped
10. Describe extent of contamination and how it was cleaned up	No residual to clean up.
11. What actions will be taken to prevent a re-occurrence? When?	② Aeration tank will be inspected and repaired. ① Excessive rain. Unknown repair. Will discuss with engineers
12. Other comments?	
13. Downstream notifications made: (all downstream users such as public water suppliers must be notified)	NONE

sent 12/18/2023

# Attachment D – Condition of Existing Pump Stations and Wastewater Treatment Plant



Municipal Wasteload Report  
Attachment D  
Calendar Year 2023  
Towamencin Municipal Authority, Montgomery County, PA

## CONDITION OF THE PUMP STATIONS

The Towamencin Municipal Authority's collection system has three (3) pumping stations, including the Rittenhouse Road Pump Station, Milestone Pump Station, and Hollis Hills Pump Station. TMA Staff are responsible for the operations and maintenance of each pumping station. The following routine inspection and preventative maintenance work schedules are applied to each respective pumping station:

### RITTENHOUSE ROAD PUMP STATION

Seven (7) days per week: Inspect pumps, hose well, and floats; test-run pumps and hydraulic unit; inspect for oil leaks, belts, and alarms; make required repairs when necessary. Inspect light bulbs, supply, and exhaust fans; inspect dialer and alarms and record flows.

#### Blower Preventative Maintenance

1. Change filters once per year
2. Lubricate and check adjustments every 60 days
3. Change oil every 60 days

#### Channel Monster

1. Grease every 80 days
2. Hose and inspect daily

#### Compressors

1. Check oil level, belts, and pressure gage daily
2. Change oil once per year

#### Miscellaneous

1. Conduct air monitoring every 14 days
2. Exercise force main valves once per week
3. Perform grounds maintenance once per week and inspect daily
4. Test-run generator under load and exercise transfer switch and dialer every week
5. Change dialer battery once per year

### MILESTONE PUMP STATION & HOLLIS HILLS PUMP STATION

Two (2) times per week on Tuesdays and Fridays: Check pump operations, hose well, and sensor; check for leaks on generator and make repairs, if needed.

#### Miscellaneous

1. Pump empty and clean twice per year (January and July)
2. Test-run generator under load and exercise transfer switch and dialer every week
3. Perform grounds maintenance and cleanup once per week
4. Change dialer battery once per year

Municipal Wasteload Report  
Attachment D  
Calendar Year 2023  
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Annual preventative maintenance is performed on the generators at each of the Rittenhouse Road, Milestone, and Hollis Hills Pump Stations, including coolant flushes, oil changes, and inspection.

The Rittenhouse Road Pump Station is located in Towamencin Township at the intersection of Forty Foot Road and Rittenhouse Road and serves the Skippack Creek Interceptor as well as the western portion of Towamencin Township. As of December 31, 2023, flow from the Rittenhouse Road Pump Station is metered, and the pumping station has approximately 7,940 linear feet of dual 16" force main servicing an estimated 4,447 EDUs.

The Milestone Pump Station is located in Worcester Township on Sched Way. As of December 31, 2023, flow from the Milestone Pump Station is metered, and the pumping station has approximately 1,680 linear feet of 8" force main servicing an estimated 80 EDUs.

The Hollis Hills Pump Station is located in Worcester Township at the intersection of Bustard Road and Fisher Road. As of December 31, 2023, flow from the Hollis Hills Pump Station is metered, and the pumping station has approximately 5,740 linear feet of 4" force main servicing an estimated 30 EDUs.

All three (3) pumping stations in TMA's collection system were reported to be in good condition during 2023.

		PEAK DAY DESIGN CAPACITY		2023 PEAK DAY FLOW	2 YEAR PEAK PROJECTED FLOW
Station	Number of Pumps	(mgd)	(gpm)	(gpm)	(gpm)
Rittenhouse Road	<u>5 total</u> 3 and 2 standby	8.5	5,903	2,104	2,471
Milestone	<u>2 total</u> 1 and 1 standby	0.173	120	25.46	26.63
Hollis Hills	<u>2 total</u> 1 and 1 standby	0.173	120	73.36	74.53

Notes:

1. 2023 Peak Day Flow occurred on December 19, 2023 for Rittenhouse Road Pump Station.
2. 2023 Peak Day Flow occurred on December 18, 2023 for Milestone Pump Station.
3. 2023 Peak Day Flow occurred on July 21, 2023 for Hollis Hills Pump Station.

## CONDITION OF THE WASTEWATER TREATMENT PLANT

TMA Staff are responsible for the daily operations and maintenance of the wastewater treatment plant. The significant maintenance work performed, and capital improvements made to the TMA WWTP during 2023 were as follows:

Municipal Wasteload Report  
Attachment D  
Calendar Year 2023  
Towamencin Municipal Authority, Montgomery County, PA

1. Installed a submersible KSB pump to replace the Stage II utility pumps which require replacement each time a significant rainfall event occurs.
2. Installed a new damage avoidance pump by Raw Pumps #5 & #6 to prevent room from being flooded out during significant rainfall occurrences.
3. Installed a duckbill check valve on LPT floor drain to prevent the sewers backing up in the plant during significant rainfall occurrences.
4. Installed hydrogen sulfide monitors in raw wells for safety before entering.
5. Installed sulfur dioxide monitor in sodium bisulfate area for safety before entering.
6. Installed new valve on storage tanks for unloading tankers.
7. Replaced one of the sludge pumps for the centrifuges with a new Borger pump instead of Netzsch (which is easy, quicker to repair, and affordable [70% cheaper]).
8. Installed a set of double doors for ease of centrifuge repairs and the pending installation of another centrifuge (coming in 2024).
9. Upgraded the PLC from Slick 500 to ControlLogix at Rittenhouse Road Pump Station.
10. Completed preventative maintenance on main breakers at the plant.
11. Replaced scum collection box on Stage I Floc Separators #5 & #6.
12. Replaced Stage I Floc Separators #5 & #6 scum troughs (with stainless steel).
13. Replaced Stage I Effluent Flow Weir (for flow monitoring).
14. Replaced Stage I Thickener level monitors with radar instead of sonar.
15. Replaced Ferric, PAC, and Polymer flow meters in Stage II Ferric Building.
16. Replaced RAS Pump #3 VFD.
17. Replaced gearbox and motor on horizontal screw conveyor for centrifuges.
18. Replaced gearbox on Screw Conveyor #2 for rotoscreens.
19. Replaced motor on incline conveyor for centrifuges.
20. Replaced 3 exhaust fans at Rittenhouse Road Pump Station.
21. Replaced 2 supply fans at Rittenhouse Road Pump Station.
22. Replaced 3 exhaust fans in the receiving station.
23. Installed new mag meter at Rittenhouse Road Pump Station.
24. Replaced both turbos on Generator #1 and both air flow motors.
25. Installed TDS meter at Rittenhouse Road Pump Station.
26. Installed TDS meter on plant effluent.
27. Replaced flow meter on Aeration Tank #3.
28. Replaced flow meter displays on Rotoscreens #2 & #3.
29. Replaced motor and blower for sludge storage tanks.
30. Replaced Utility Pumps #2 & #3 in Stage II utility room.
31. Installed gearbox on Flocculator #2.
32. Rebuilt Sludge Transfer Pump #2.
33. Replaced pump controller (at time clock) for transfer pumps.
34. Replaced one of the Stage II chlorine pumps.
35. Replaced Stage I bubbler controls for Pumps #5 & #6 with LC150 controller.
36. Replaced drive chains in all tanks.
37. Replaced 3 heaters at the plant.
38. Replaced gearbox and motor on horizontal conveyor.
39. Installed safety rails on all rotoscreens.
40. Replaced EQ valve for Aeration Tank #1.

Municipal Wasteload Report  
Attachment D  
Calendar Year 2023  
Towamencin Municipal Authority, Montgomery County, PA

41. Upgraded men's showers, urinals, sinks, and toilets.
42. Removed the last ejector pot which was compromised.
43. Replaced mass chains on forklift and replaced all hoses.
44. Updated all safety equipment for all employees.
45. Rebuilt Blower #5.
46. Replaced both boiler pumps on heating system.
47. Installed 4 new soft starts for the 4 large blowers.
48. Updated the SCADA system in MCC #7 from PLC Cat5 to ControlLogix.
49. Replaced the fiber optics from MCC #6 to MCC #7.
50. Replaced the fiber optics from MCC #6 to MCC #15.
51. Load bank tested all generators and performed all preventative maintenance work.
52. Installed new radar on lime silo to replace bottle and rope.
53. Repaired all Stage II VFDs and replaced 1 VFD for Stage II raw pumps.
54. Purchased 2 new raw pumps for Stage I.
55. Replaced 1 of Stage II raw pumps.
56. Installed new motor on Stage II recirculation pumps.
57. Purchased one VFD for Rittenhouse Road Pump Station.
58. De-ragged and cleaned all tanks.
59. Replaced all wear shoes in all tanks.

# Attachment E – 2023 Industrial Pretreatment Program Annual Report

**Note:** As required by U.S. EPA Region 3, the 2023 Industrial Pretreatment Report has been electronically submitted. Courtesy copy requests of the electronic submission were made to:

1. David Burke (PADEP Southeast Region, Clean Water, Watershed Manager) at [daburke@pa.gov](mailto:daburke@pa.gov)
2. Thomas Magge (PADEP Southeast Region, Clean Water, Program Manager) at [tmagge@pa.gov](mailto:tmagge@pa.gov)

A hardcopy submission of the 2023 Industrial Pretreatment Report is enclosed.



# ATTACHMENT F – FLOW CALIBRATION REPORTS



# WG Malden

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

## \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** MARCH 16, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE II EFFLUENT (1)  
**METER #:** C8565 AA

**PRIMARY:** FLUME PARSHALL 24  
**MAXIMUM CAPACITY:** 20.0 MGD  
**METER:** ENDRESS+HAUSER                    **MODEL #:** FMU90                    **SERIAL #:** D5007F150E6  
**RECORDER:** CHESSELL                    **MODEL #:** 392                    **SERIAL #:** 9203-02909

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## \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND FLOW CHECKS	<b>ERROR:</b> -0.05 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%, 0%, 0%	<b>TOLERANCE:</b> ±1.000 %
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %

---

## \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, BOB HEINE

# WG Malden

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

## \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** MARCH 16, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE II EFFLUENT (2)  
**METER #:** C8565 AB

**PRIMARY:** FLUME PARSHALL 24  
**MAXIMUM CAPACITY:** 20.0 MGD  
**METER:** ENDRESS+HAUSER                      **MODEL #:** FMU90                      **SERIAL #:** L800AF15068  
**RECORDER:** CHESSELL                      **MODEL #:** 392                      **SERIAL #:** 9203-02909

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## \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND FLOW CHECKS	<b>ERROR:</b> -0.02 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%, 0%, 0%	<b>TOLERANCE:</b> ±1.000 %
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %

---

## \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, JACOB BROWN

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** MARCH 16, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE II INFLUENT  
**METER #:** C8565 AC

**PRIMARY:** 20  
**MAXIMUM CAPACITY:** 30.0 MGD  
**METER:** ABB                                    **MODEL #:** WATER MASTER FEX100    **SERIAL #:** 3K220000076146  
**RECORDER:** CHESSELL                    **MODEL #:** 392                                **SERIAL #:** 9203-02909

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### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b>	<b>ERROR:</b> 0 %	<b>TOLERANCE:</b> ±1.000 %
<b>METHOD:</b> PORTABLE TRANSIT TIME METER		
<b>RECORDER CALIBRATION</b>	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %
<b>CHECKED AT:</b> OPERATING VALUE%		
<b>TOTALIZER CALIBRATION</b>	<b>ERROR:</b> 0	<b>TOLERANCE:</b> ±1.000 %
<b>CHECKED AT:</b> OPERATING VALUE		

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, JACOB BROWN

# WG Malden

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

## \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** MARCH 16, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE I EFFLUENT (1)  
**METER #:** C8565 AD

**PRIMARY:** WEIR RECTANGLE NON-CONTRACTED 35.5  
**MAXIMUM CAPACITY:** 6.0 MGD  
**METER:** ENDRESS+HAUSER                    **MODEL #:** FMU90                    **SERIAL #:** SB00AC150E6  
**RECORDER:** CHESSELL                    **MODEL #:** 392                    **SERIAL #:** 9203-2910

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## \*\*\* WORK PERFORMED \*\*\*

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

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## \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
INSTALLED NEW WEIR PER QUOTE  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, JACOB BROWN

# WG Malden

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

## \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** MARCH 16, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE I EFFLUENT (2)  
**METER #:** C8565 AE

**PRIMARY:** WEIR RECTANGLE NON-CONTRACTED 35.5  
**MAXIMUM CAPACITY:** 6.0 MGD  
**METER:** ENDRESS+HAUSER                    **MODEL #:** FMU90                    **SERIAL #:** L7002C150E6  
**RECORDER:** CHESSELL                    **MODEL #:** 392                    **SERIAL #:** 9203-2910

---

## \*\*\* WORK PERFORMED \*\*\*

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

---

## \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
INSTALLED NEW WEIR  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, JACOB BROWN

# WG Malden

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

## \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** MARCH 16, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE I INFLUENT  
**METER #:** C8565 AF

**PRIMARY:** 16  
**MAXIMUM CAPACITY:** 7.0 MGD  
**METER:** FISCHER & PORTER    **MODEL #:** 50XM 13    **SERIAL #:** 96W008908  
**RECORDER:** CHESSELL    **MODEL #:** 392    **SERIAL #:** 9203-2910

---

## \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> METHOD: PORTABLE TRANSIT TIME METER	<b>ERROR:</b> 0 %	<b>TOLERANCE:</b> ±1.000 %
<b>RECORDER CALIBRATION</b> CHECKED AT: 0%, 100%	<b>ERROR:</b> 0%, 0%	<b>TOLERANCE:</b> ±1.000 %
<b>TOTALIZER CALIBRATION</b> CHECKED AT: OPERATING VALUE	<b>ERROR:</b> 0	<b>TOLERANCE:</b> ±1.000 %

---

## \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, JACOB BROWN



# WG Malden

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## \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** MARCH 16, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** RITTENHOUSE PUMP STATION - CREEK SIDE  
**METER #:** C8565 AH

**PRIMARY:** 16

**MAXIMUM CAPACITY:** 5000 GPM

**METER:** ABB

**RECORDER:** CHESSELL

**MODEL #:** 50XM 13NX

**MODEL #:** 392

**SERIAL #:** 00W026597

**SERIAL #:** UR34765-001-01-01-02-06

---

## \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**  
**METHOD:** FACTORY SET

**ERROR:** 0 %

**TOLERANCE:** ±1.000 %

**RECORDER CALIBRATION**  
**CHECKED AT:** 0%, 100%

**ERROR:** 0%, 0%

**TOLERANCE:** ±1.000 %

**TOTALIZER CALIBRATION**  
**CHECKED AT:** OPERATING VALUE

**ERROR:** 0

**TOLERANCE:** ±1.000 %

---

## \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED SEMI-ANNUAL CALIBRATION  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, JACOB BROWN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** MARCH 16, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** MH 336 FLUME  
**METER #:** C8565 AL

**PRIMARY:** FLUME PALMER-BOWLUS 10

**MAXIMUM CAPACITY:** 0.7248 MGD

**METER:** TELEDYNE ISCO

**MODEL #:** SIGNATURE 310

**SERIAL #:** 215G01590

**RECORDER:**

**MODEL #:** N/A

**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** 0 INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND FLOW CHECKS

**RECORDER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** ±NA

**CHECKED AT:** N/A

**TOTALIZER CALIBRATION**

**ERROR:** 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 50%, 100%

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED SEMI-ANNUAL CALIBRATION  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
NO ADJUSTMENT NEEDED  
CHANGED DESICCANT  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, JACOB BROWN

# WG Malden

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## \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** MARCH 16, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** MH 21.2 FLUME  
**METER #:** C8565 AM

**PRIMARY:** FLUME PALMER-BOWLUS 10

**MAXIMUM CAPACITY:** 0.7248 MGD

**METER:** TELEDYNE ISCO

**MODEL #:** SIGNATURE 310

**SERIAL #:** 215G01594

**RECORDER:**

**MODEL #:** N/A

**SERIAL #:** N/A

---

## \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** -0.04 INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND FLOW CHECKS

**RECORDER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** ±NA

**CHECKED AT:** N/A

**TOTALIZER CALIBRATION**

**ERROR:** 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 50%, 100%

---

## \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED SEMI-ANNUAL CALIBRATION  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY  
CHANGED DESICCANT

**SERVICE REPRESENTATIVE(S):** BOB HEINE, JACOB BROWN

## WG Malden

P.O. BOX 196, EAST EARL, PA 17519  
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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** MARCH 16, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** MH 21.2 AREA VELOCITY  
**METER #:** C8565 AN

**PRIMARY:** 9.75

**MAXIMUM CAPACITY:** 0.7248 MGD

**METER:** TELEDYNE ISCO

**MODEL #:** SIGNATURE 350

**SERIAL #:** 215G01594

**RECORDER:**

**MODEL #:** N/A

**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** 0 INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND VELOCITY CHECKS

**RECORDER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** ±NA

**CHECKED AT:** N/A

**TOTALIZER CALIBRATION**

**ERROR:** 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 50%, 100%

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED SEMI-ANNUAL CALIBRATION  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
NO ADJUSTMENT NEEDED  
CHANGED DESICCANT  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, JACOB BROWN

# WG Malden

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## \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** MARCH 16, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** MH 24-A FLUME  
**METER #:** C8565 AO

**PRIMARY:** FLUME PALMER-BOWLUS 21

**MAXIMUM CAPACITY:** 5.38 MGD

**METER:** TELEDYNE ISCO

**MODEL #:** SIGNATURE 310

**SERIAL #:** 215G01589

**RECORDER:**

**MODEL #:** N/A

**SERIAL #:** N/A

---

## \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND FLOW CHECKS

**RECORDER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** ±NA

**CHECKED AT:** N/A

**TOTALIZER CALIBRATION**

**ERROR:** 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 50%, 100%

---

## \*\*\* TECHNICIAN COMMENTS \*\*\*

COULD NOT CALIBRATE AT THIS TIME  
NOT ENOUGH FLOW AND TOO MANY SOLIDS  
FOR THE METER TO BE ACCURATE THE PIPE WILL NEED TO BE CLEANED OUT

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, BOB HEINE

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** MARCH 16, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** MH 24-A AREA VELOCITY  
**METER #:** C8565 AP

**PRIMARY:** 22.5

**MAXIMUM CAPACITY:** 5.38 MGD

**METER:** TELEDYNE ISCO

**RECORDER:**

**MODEL #:** SIGNATURE 350

**MODEL #:** N/A

**SERIAL #:** 215G01589

**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** INCHES

**TOLERANCE:**  $\pm 0.125$  INCHES

**METHOD:** LEVEL MEASUREMENTS AND VELOCITY CHECKS

**RECORDER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:**  $\pm$ NA

**CHECKED AT:** N/A

**TOTALIZER CALIBRATION**

**ERROR:** 0%

**TOLERANCE:**  $\pm 1.000$  %

**CHECKED AT:** 0%, 50%, 100%

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

COULD NOT CALIBRATE AT THIS TIME  
NOT ENOUGH FLOW AND TOO MANY SOLIDS  
FOR THE METER TO BE ACCURATE THE PIPE WILL NEED TO BE CLEANED OUT

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, BOB HEINE

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** JUNE 07, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE II EFFLUENT (1)  
**METER #:** C8565 AA

**PRIMARY:** FLUME PARSHALL 24  
**MAXIMUM CAPACITY:** 20.0 MGD  
**METER:** ENDRESS+HAUSER  
**RECORDER:** CHESSELL

**MODEL #:** FMU90  
**MODEL #:** 392

**SERIAL #:** D5007F150E6  
**SERIAL #:** 9203-02909

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND FLOW CHECKS	<b>ERROR:</b> -0.05 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%, 0%, 0%	<b>TOLERANCE:</b> ±1.000 %
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, PATRICK MCNALLY

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** JUNE 07, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE II EFFLUENT (2)  
**METER #:** C8565 AB

**PRIMARY:** FLUME PARSHALL 24  
**MAXIMUM CAPACITY:** 20.0 MGD  
**METER:** ENDRESS+HAUSER  
**RECORDER:** CHESSELL

**MODEL #:** FMU90  
**MODEL #:** 392

**SERIAL #:** L800AF15068  
**SERIAL #:** 9203-02909

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND FLOW CHECKS	<b>ERROR:</b> -0.05 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%, 0%, 0%	<b>TOLERANCE:</b> ±1.000 %
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, PATRICK MCNALLY

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** JUNE 07, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE II INFLUENT  
**METER #:** C8565 AC

**PRIMARY:** 20

**MAXIMUM CAPACITY:** 30.0 MGD

**METER:** ABB

**RECORDER:** CHESSELL

**MODEL #:** WATER MASTER FEX100

**MODEL #:** 392

**SERIAL #:** 3K220000076146

**SERIAL #:** 9203-02909

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**                      **ERROR:** 0.00 %                      **TOLERANCE:** ±1.000 %  
**METHOD:** PORTABLE TRANSIT TIME METER

**RECORDER CALIBRATION**                      **ERROR:** 0%                      **TOLERANCE:** ±1.000 %  
**CHECKED AT:** OPERATING VALUE%

**TOTALIZER CALIBRATION**                      **ERROR:** 0                      **TOLERANCE:** ±1.000 %  
**CHECKED AT:** OPERATING VALUE

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, PATRICK MCNALLY

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** JUNE 07, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE I EFFLUENT (1)  
**METER #:** C8565 AD

**PRIMARY:** WEIR RECTANGLE NON-CONTRACTED 35.5

**MAXIMUM CAPACITY:** 6.0 MGD

**METER:** ENDRESS+HAUSER

**MODEL #:** FMU90

**SERIAL #:** SB00AC150E6

**RECORDER:** CHESSELL

**MODEL #:** 392

**SERIAL #:** 9203-2910

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** -0.02 INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND FLOW CHECKS

**RECORDER CALIBRATION**

**ERROR:** 0%, 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 100%

**TOTALIZER CALIBRATION**

**ERROR:** 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 50%, 100%

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, PATRICK MCNALLY

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** JUNE 07, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE I EFFLUENT (2)  
**METER #:** C8565 AE

**PRIMARY:** WEIR RECTANGLE NON-CONTRACTED 35.5

**MAXIMUM CAPACITY:** 6.0 MGD

**METER:** ENDRESS+HAUSER

**MODEL #:** FMU90

**SERIAL #:** L7002C150E6

**RECORDER:** CHESSELL

**MODEL #:** 392

**SERIAL #:** 9203-2910

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** -0.01 INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND FLOW CHECKS

**RECORDER CALIBRATION**

**ERROR:** 0%, 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 100%

**TOTALIZER CALIBRATION**

**ERROR:** 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 50%, 100%

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, PATRICK MCNALLY

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** JUNE 07, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE I INFLUENT  
**METER #:** C8565 AF

**PRIMARY:** 16  
**MAXIMUM CAPACITY:** 7.0 MGD  
**METER:** FISCHER & PORTER    **MODEL #:** 50XM 13    **SERIAL #:** 96W008908  
**RECORDER:** CHESSELL    **MODEL #:** 392    **SERIAL #:** 9203-2910

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> PORTABLE TRANSIT TIME METER	<b>ERROR:</b> 0.00 %	<b>TOLERANCE:</b> ±1.000 %
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 100%	<b>ERROR:</b> 0%, 0%	<b>TOLERANCE:</b> ±1.000 %
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> OPERATING VALUE	<b>ERROR:</b> 0	<b>TOLERANCE:</b> ±1.000 %

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, PATRICK MCNALLY

## WG Malden

P.O. BOX 196, EAST EARL, PA 17519  
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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** AUGUST 30, 2023    **SERVICE CONTRACT:** ANNUAL (A8)  
**LOCATION:** (MH #17.2)  
**METER #:** C8565 BA

**PRIMARY:** 7.75

**MAXIMUM CAPACITY:**

**METER:** TELEDYNE ISCO

**RECORDER:**

**MODEL #:** 2150

**MODEL #:** N/A

**SERIAL #:** 212B01084

**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b>	<b>ERROR:</b> 0.9 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>METHOD:</b> LEVEL MEASUREMENTS AND VELOCITY CHECKS		
<b>RECORDER CALIBRATION</b>	<b>ERROR:</b> N/A	<b>TOLERANCE:</b> N/A
<b>CHECKED AT:</b> N/A		
<b>TOTALIZER CALIBRATION</b>	<b>ERROR:</b> N/A	<b>TOLERANCE:</b> N/A
<b>CHECKED AT:</b> N/A		

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED ANNUAL CALIBRATION  
CLEANED PRIMARY  
ADJUSTED EQUIPMENT  
CHANGED DESICCANT  
REPLACED BATTERY  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

P.O. BOX 196, EAST EARL, PA 17519  
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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** AUGUST 30, 2023    **SERVICE CONTRACT:** OUT OF SERVICE (OS)  
**LOCATION:** (MH #23)  
**METER #:** C8565 BC

**PRIMARY:** 7.75

**MAXIMUM CAPACITY:**

**METER:** TELEDYNE ISCO

**RECORDER:**

**MODEL #:** 2150

**MODEL #:** N/A

**SERIAL #:** 212B01103

**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND VELOCITY CHECKS

**RECORDER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** N/A

**CHECKED AT:** N/A

**TOTALIZER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** N/A

**CHECKED AT:** N/A

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

FOUND SENSOR BAD  
REMOVED METER  
DID NOT REMOVE SENSOR  
LADDER RUNGS BROKEN AND RUSTED

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** AUGUST 30, 2023    **SERVICE CONTRACT:** OUT OF SERVICE (OS)  
**LOCATION:** (MH #138)  
**METER #:** C8565 BD

**PRIMARY:** 7.75

**MAXIMUM CAPACITY:**

**METER:** TELEDYNE ISCO

**RECORDER:**

**MODEL #:** 2150

**MODEL #:** N/A

**SERIAL #:** 212B01104

**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b>	<b>ERROR:</b> INCHES	<b>TOLERANCE:</b> ±1.000 %
<b>METHOD:</b> LEVEL MEASUREMENTS AND VELOCITY CHECKS		
<b>RECORDER CALIBRATION</b>	<b>ERROR:</b> N/A	<b>TOLERANCE:</b> N/A
<b>CHECKED AT:</b> N/A		
<b>TOTALIZER CALIBRATION</b>	<b>ERROR:</b> 0	<b>TOLERANCE:</b> ±1.000 %
<b>CHECKED AT:</b> OPERATING VALUE		

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

FOUND METER NOT POWERING ON  
REMOVED METER

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** AUGUST 30, 2023    **SERVICE CONTRACT:** ANNUAL (A8)  
**LOCATION:** (MH #103D)  
**METER #:** C8565 BF

**PRIMARY:** 21

**MAXIMUM CAPACITY:**

**METER:** TELEDYNE ISCO

**RECORDER:**

**MODEL #:** 2150

**MODEL #:** N/A

**SERIAL #:** 212A01460

**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** -0.7 INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND VELOCITY CHECKS

**RECORDER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** N/A

**CHECKED AT:** N/A

**TOTALIZER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** N/A

**CHECKED AT:** N/A

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED ANNUAL CALIBRATION  
CLEANED PRIMARY  
ADJUSTED EQUIPMENT  
CHANGED DESICCANT  
REPLACED BATTERY  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** AUGUST 30, 2023    **SERVICE CONTRACT:** ANNUAL (A8)  
**LOCATION:** (MH #21.1)  
**METER #:** C8565 BH

**PRIMARY:** 7.75

**MAXIMUM CAPACITY:**

**METER:** TELEDYNE ISCO

**RECORDER:**

**MODEL #:** 2150

**MODEL #:** N/A

**SERIAL #:** 212B01094

**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** 1.2 INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND VELOCITY CHECKS

**RECORDER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** N/A

**CHECKED AT:** N/A

**TOTALIZER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** N/A

**CHECKED AT:** N/A

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED ANNUAL CALIBRATION  
CLEANED PRIMARY  
ADJUSTED EQUIPMENT  
DOWNLOADED DATA  
CHANGED DESICCANT  
REPLACED BATTERY  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** AUGUST 30, 2023    **SERVICE CONTRACT:** ANNUAL (A8)  
**LOCATION:** (MH #11)  
**METER #:** C8565 BI

**PRIMARY:** 23.75 INCH  
**MAXIMUM CAPACITY:**  
**METER:** TELEDYNE ISCO  
**RECORDER:**

**MODEL #:** 2150  
**MODEL #:** N/A

**SERIAL #:** 212B01087  
**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND VELOCITY CHECKS	<b>ERROR:</b> 0.5 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> N/A	<b>ERROR:</b> N/A	<b>TOLERANCE:</b> N/A
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> OPERATING VALUE	<b>ERROR:</b> 0	<b>TOLERANCE:</b> ±1.000 %

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED ANNUAL CALIBRATION  
ADJUSTED EQUIPMENT  
CLEANED PRIMARY  
DOWNLOADED DATA  
CHANGED DESICCANT  
REPLACED BATTERY  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** AUGUST 30, 2023    **SERVICE CONTRACT:** OUT OF SERVICE (OS)  
**LOCATION:** (MH #4)  
**METER #:** C8565 BK

**PRIMARY:** 30 INCH  
**MAXIMUM CAPACITY:**  
**METER:** TELEDYNE ISCO  
**RECORDER:**

**MODEL #:** 2150  
**MODEL #:** N/A

**SERIAL #:** 212A01465  
**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND VELOCITY CHECKS	<b>ERROR:</b> INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> N/A	<b>ERROR:</b> N/A	<b>TOLERANCE:</b> N/A
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> OPERATING VALUE	<b>ERROR:</b> 0	<b>TOLERANCE:</b> ±1.000 %

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

FOUND SENSOR BAD  
PULLED METER

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** AUGUST 30, 2023    **SERVICE CONTRACT:** ANNUAL (A8)  
**LOCATION:** (MH #531)  
**METER #:** C8565 BN

**PRIMARY:** 18

**MAXIMUM CAPACITY:**

**METER:** TELEDYNE ISCO

**RECORDER:**

**MODEL #:** 2150

**MODEL #:** N/A

**SERIAL #:** 212A01466

**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b>	<b>ERROR:</b> INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>METHOD:</b> LEVEL MEASUREMENTS AND VELOCITY CHECKS		
<b>RECORDER CALIBRATION</b>	<b>ERROR:</b> N/A	<b>TOLERANCE:</b> N/A
<b>CHECKED AT:</b> N/A		
<b>TOTALIZER CALIBRATION</b>	<b>ERROR:</b> 0	<b>TOLERANCE:</b> ±1.000 %
<b>CHECKED AT:</b> OPERATING VALUE		

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED ANNUAL CALIBRATION  
FOUND LINE BACKED UP AND LINE MOSTLY FILLED WITH DEBRIS  
FOUND SENSOR PULLED OFF BAND AND IN DOWNSTREAM PIPE  
UNABLE TO PULL SENSOR OUT  
RECOMMEND JETTING THE LINE

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** AUGUST 30, 2023    **SERVICE CONTRACT:** OUT OF SERVICE (OS)  
**LOCATION:** (MH #30.7)  
**METER #:** C8565 BO

**PRIMARY:** 7.75

**MAXIMUM CAPACITY:**

**METER:** TELEDYNE ISCO

**RECORDER:**

**MODEL #:** 2150

**MODEL #:** N/A

**SERIAL #:** 212B01083

**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND VELOCITY CHECKS

**RECORDER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** N/A

**CHECKED AT:** N/A

**TOTALIZER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** N/A

**CHECKED AT:** N/A

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

FOUND SENSOR BAD  
PULLED METER

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** AUGUST 30, 2023    **SERVICE CONTRACT:** ANNUAL (A8)  
**LOCATION:** (MH #30.1)  
**METER #:** C8565 BP

**PRIMARY:** 7.75

**MAXIMUM CAPACITY:**

**METER:** TELEDYNE ISCO

**RECORDER:**

**MODEL #:** 2150

**MODEL #:** N/A

**SERIAL #:** 212B01090

**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** -0.09 INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND VELOCITY CHECKS

**RECORDER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** N/A

**CHECKED AT:** N/A

**TOTALIZER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:** N/A

**CHECKED AT:** N/A

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED ANNUAL CALIBRATION  
ADJUSTED EQUIPMENT  
DOWNLOADED DATA  
CHANGED DESICCANT  
REPLACED BATTERY  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE II EFFLUENT (1)  
**METER #:** C8565 AA

**PRIMARY:** FLUME PARSHALL 24  
**MAXIMUM CAPACITY:** 20.0 MGD  
**METER:** ENDRESS+HAUSER  
**RECORDER:** CHESSELL

**MODEL #:** FMU90  
**MODEL #:** 392

**SERIAL #:** D5007F150E6  
**SERIAL #:** 9203-02909

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND FLOW CHECKS	<b>ERROR:</b> 0.00 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%, 0%, 0%	<b>TOLERANCE:</b> ±1.000 %
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE II EFFLUENT (2)  
**METER #:** C8565 AB

**PRIMARY:** FLUME PARSHALL 24  
**MAXIMUM CAPACITY:** 20.0 MGD  
**METER:** ENDRESS+HAUSER  
**RECORDER:** CHESSELL

**MODEL #:** FMU90  
**MODEL #:** 392

**SERIAL #:** L800AF15068  
**SERIAL #:** 9203-02909

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND FLOW CHECKS	<b>ERROR:</b> 0.01 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%, 0%, 0%	<b>TOLERANCE:</b> ±1.000 %
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE II INFLUENT  
**METER #:** C8565 AC

**PRIMARY:** 20

**MAXIMUM CAPACITY:** 30.0 MGD

**METER:** ABB

**RECORDER:** CHESSELL

**MODEL #:** WATER MASTER FEX100

**MODEL #:** 392

**SERIAL #:** 3K220000076146

**SERIAL #:** 9203-02909

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**                      **ERROR:** 0.00 %                      **TOLERANCE:** ±1.000 %  
**METHOD:** PORTABLE TRANSIT TIME METER

**RECORDER CALIBRATION**                      **ERROR:** 0%                      **TOLERANCE:** ±1.000 %  
**CHECKED AT:** OPERATING VALUE%

**TOTALIZER CALIBRATION**                      **ERROR:** 0                      **TOLERANCE:** ±1.000 %  
**CHECKED AT:** OPERATING VALUE

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE I EFFLUENT (1)  
**METER #:** C8565 AD

**PRIMARY:** WEIR RECTANGLE NON-CONTRACTED 35.5  
**MAXIMUM CAPACITY:** 6.0 MGD  
**METER:** ENDRESS+HAUSER                      **MODEL #:** FMU90                                      **SERIAL #:** SB00AC150E6  
**RECORDER:** CHESSELL                              **MODEL #:** 392                                              **SERIAL #:** 9203-2910

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b>	<b>ERROR:</b> 0.05 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>METHOD:</b> LEVEL MEASUREMENTS AND FLOW CHECKS		
<b>RECORDER CALIBRATION</b>	<b>ERROR:</b> 0%, 0%	<b>TOLERANCE:</b> ±1.000 %
<b>CHECKED AT:</b> 0%, 100%		
<b>TOTALIZER CALIBRATION</b>	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %
<b>CHECKED AT:</b> 0%, 50%, 100%		

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** KYLE RANKIN, JACOB BROWN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE I EFFLUENT (2)  
**METER #:** C8565 AE

**PRIMARY:** WEIR RECTANGLE NON-CONTRACTED 35.5

**MAXIMUM CAPACITY:** 6.0 MGD

**METER:** ENDRESS+HAUSER

**MODEL #:** FMU90

**SERIAL #:** L7002C150E6

**RECORDER:** CHESSELL

**MODEL #:** 392

**SERIAL #:** 9203-2910

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** 0.03 INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND FLOW CHECKS

**RECORDER CALIBRATION**

**ERROR:** 0%, 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 100%

**TOTALIZER CALIBRATION**

**ERROR:** 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 50%, 100%

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** KYLE RANKIN, JACOB BROWN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE I INFLUENT  
**METER #:** C8565 AF

**PRIMARY:** 16

**MAXIMUM CAPACITY:** 7.0 MGD

**METER:** FISCHER & PORTER

**RECORDER:** CHESSELL

**MODEL #:** 50XM 13

**MODEL #:** 392

**SERIAL #:** 96W008908

**SERIAL #:** 9203-2910

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b>	<b>ERROR:</b> 0.00 %	<b>TOLERANCE:</b> ±1.000 %
<b>METHOD:</b> PORTABLE TRANSIT TIME METER		
<b>RECORDER CALIBRATION</b>	<b>ERROR:</b> 0%, 0%	<b>TOLERANCE:</b> ±1.000 %
<b>CHECKED AT:</b> 0%, 100%		
<b>TOTALIZER CALIBRATION</b>	<b>ERROR:</b> 0	<b>TOLERANCE:</b> ±1.000 %
<b>CHECKED AT:</b> OPERATING VALUE		

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** RITTENHOUSE PUMP STATION - STREET SIDE  
**METER #:** C8565 AG

**PRIMARY:** 16

**MAXIMUM CAPACITY:** 5,000 GPM

**METER:** ABB

**RECORDER:** CHESSELL

**MODEL #:** WATER MASTER

**MODEL #:** 392

**SERIAL #:** 3K620000223181

**SERIAL #:** UR34765-001-01-01-02-06

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**  
**METHOD:** FACTORY SET

**ERROR:** 0.00 %

**TOLERANCE:** ±1%

**RECORDER CALIBRATION**  
**CHECKED AT:** 0%, 100%

**ERROR:** 0%, 0%

**TOLERANCE:** ±1%

**TOTALIZER CALIBRATION**  
**CHECKED AT:** OPERATING VALUE

**ERROR:** 0

**TOLERANCE:** ±1%

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED SEMI-ANNUAL CALIBRATION  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN

# WG Malden

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## \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** RITTENHOUSE PUMP STATION - CREEK SIDE  
**METER #:** C8565 AH

**PRIMARY:** 16

**MAXIMUM CAPACITY:** 5000 GPM

**METER:** ABB

**RECORDER:** CHESSELL

**MODEL #:** 50XM 13NX

**MODEL #:** 392

**SERIAL #:** 00W026597

**SERIAL #:** UR34765-001-01-01-02-06

---

## \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**  
**METHOD:** FACTORY SET

**ERROR:** 0.00 %

**TOLERANCE:** ±1.000 %

**RECORDER CALIBRATION**  
**CHECKED AT:** 0%, 100%

**ERROR:** 0%, 0%

**TOLERANCE:** ±1.000 %

**TOTALIZER CALIBRATION**  
**CHECKED AT:** OPERATING VALUE

**ERROR:** 0

**TOLERANCE:** ±1.000 %

---

## \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED SEMI-ANNUAL CALIBRATION  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN

## WG Malden

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### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** MH 336 FLUME  
**METER #:** C8565 AL

**PRIMARY:** FLUME PALMER-BOWLUS 10  
**MAXIMUM CAPACITY:** 0.7248 MGD

**METER:** TELEDYNE ISCO  
**RECORDER:**

**MODEL #:** SIGNATURE 310  
**MODEL #:** N/A

**SERIAL #:** 215G01590  
**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND FLOW CHECKS	<b>ERROR:</b> 0.07 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> N/A	<b>ERROR:</b> N/A	<b>TOLERANCE:</b> ±NA
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED SEMI-ANNUAL CALIBRATION  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
NO ADJUSTMENT NEEDED  
DOWNLOADED DATA  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN, KYLE RANKIN

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** MH 21.2 FLUME  
**METER #:** C8565 AM

**PRIMARY:** FLUME PALMER-BOWLUS 10  
**MAXIMUM CAPACITY:** 0.7248 MGD

**METER:** TELEDYNE ISCO  
**RECORDER:**

**MODEL #:** SIGNATURE 310  
**MODEL #:** N/A

**SERIAL #:** 215G01594  
**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND FLOW CHECKS	<b>ERROR:</b> -0.8 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> N/A	<b>ERROR:</b> N/A	<b>TOLERANCE:</b> ±NA
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED SEMI-ANNUAL CALIBRATION  
FOUND METER LOCKED UP  
RESET POWER  
ADJUSTED EQUIPMENT  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
DOWNLOADED DATA  
CHANGED DESICCANT  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** MH 21.2 AREA VELOCITY  
**METER #:** C8565 AN

**PRIMARY:** 9.75  
**MAXIMUM CAPACITY:** 0.7248 MGD  
**METER:** TELEDYNE ISCO                      **MODEL #:** SIGNATURE 350                      **SERIAL #:** 215G01594  
**RECORDER:**                                      **MODEL #:** N/A                                      **SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b>	<b>ERROR:</b> -0.8 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>METHOD:</b> LEVEL MEASUREMENTS AND VELOCITY CHECKS		
<b>RECORDER CALIBRATION</b>	<b>ERROR:</b> N/A	<b>TOLERANCE:</b> ±NA
<b>CHECKED AT:</b> N/A		
<b>TOTALIZER CALIBRATION</b>	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %
<b>CHECKED AT:</b> 0%, 50%, 100%		

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED SEMI-ANNUAL CALIBRATION  
FOUND METER LOCKED UP  
RESET POWER  
CLEANED PRIMARY  
VERIFIED TOTALIZER (PASSED)  
ADJUSTED EQUIPMENT  
DOWNLOADED DATA  
CHANGED DESICCANT  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** JACOB BROWN

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** MH 24-A FLUME  
**METER #:** C8565 AO

**PRIMARY:** FLUME PALMER-BOWLUS 21  
**MAXIMUM CAPACITY:** 5.38 MGD

**METER:** TELEDYNE ISCO  
**RECORDER:**

**MODEL #:** SIGNATURE 310  
**MODEL #:** N/A

**SERIAL #:** 215G01589  
**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND FLOW CHECKS	<b>ERROR:</b> INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> N/A	<b>ERROR:</b> N/A	<b>TOLERANCE:</b> ±NA
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

COULD NOT CALIBRATE AT THIS TIME  
NOT ENOUGH FLOW AND TOO MANY SOLIDS FOR THE METER TO BE ACCURATE THE PIPE WILL NEED TO  
BE CLEANED OUT  
DOWNLOADED DATA

**SERVICE REPRESENTATIVE(S):** JACOB BROWN

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** SEPTEMBER 13, 2023    **SERVICE CONTRACT:** SEMI-ANNUAL (S3)  
**LOCATION:** MH 24-A AREA VELOCITY  
**METER #:** C8565 AP

**PRIMARY:** 22.5

**MAXIMUM CAPACITY:** 5.38 MGD

**METER:** TELEDYNE ISCO

**RECORDER:**

**MODEL #:** SIGNATURE 350

**MODEL #:** N/A

**SERIAL #:** 215G01589

**SERIAL #:** N/A

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** INCHES

**TOLERANCE:**  $\pm 0.125$  INCHES

**METHOD:** LEVEL MEASUREMENTS AND VELOCITY CHECKS

**RECORDER CALIBRATION**

**ERROR:** N/A

**TOLERANCE:**  $\pm$ NA

**CHECKED AT:** N/A

**TOTALIZER CALIBRATION**

**ERROR:** 0%

**TOLERANCE:**  $\pm 1.000$  %

**CHECKED AT:** 0%, 50%, 100%

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

COULD NOT CALIBRATE AT THIS TIME  
NOT ENOUGH FLOW AND TOO MANY SOLIDS FOR THE METER TO BE ACCURATE THE PIPE WILL NEED TO  
BE CLEANED OUT  
DOWNLOADED DATA

**SERVICE REPRESENTATIVE(S):** JACOB BROWN

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** DECEMBER 06, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE II EFFLUENT (1)  
**METER #:** C8565 AA

**PRIMARY:** FLUME PARSHALL 24  
**MAXIMUM CAPACITY:** 20.0 MGD  
**METER:** ENDRESS+HAUSER  
**RECORDER:** CHESSELL

**MODEL #:** FMU90  
**MODEL #:** 392

**SERIAL #:** D5007F150E6  
**SERIAL #:** 9203-02909

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND FLOW CHECKS	<b>ERROR:</b> -0.30 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%, 0%, 0%	<b>TOLERANCE:</b> ±1.000 %
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %

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### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
CLEANED PRIMARY  
ADJUSTED EQUIPMENT  
TESTED 4-20MA LOOP  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, PATRICK MCNALLY

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** DECEMBER 06, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE II EFFLUENT (2)  
**METER #:** C8565 AB

**PRIMARY:** FLUME PARSHALL 24  
**MAXIMUM CAPACITY:** 20.0 MGD  
**METER:** ENDRESS+HAUSER  
**RECORDER:** CHESSELL

**MODEL #:** FMU90  
**MODEL #:** 392

**SERIAL #:** L800AF15068  
**SERIAL #:** 9203-02909

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b> <b>METHOD:</b> LEVEL MEASUREMENTS AND FLOW CHECKS	<b>ERROR:</b> -0.30 INCHES	<b>TOLERANCE:</b> ±0.125 INCHES
<b>RECORDER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%, 0%, 0%	<b>TOLERANCE:</b> ±1.000 %
<b>TOTALIZER CALIBRATION</b> <b>CHECKED AT:</b> 0%, 50%, 100%	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
CLEANED PRIMARY  
ADJUSTED EQUIPMENT  
TESTED 4-20MA LOOP  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, PATRICK MCNALLY

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** DECEMBER 06, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE II INFLUENT  
**METER #:** C8565 AC

**PRIMARY:** 20  
**MAXIMUM CAPACITY:** 30.0 MGD  
**METER:** ABB  
**RECORDER:** CHESSELL

**MODEL #:** WATER MASTER FEX100    **SERIAL #:** 3K220000076146  
**MODEL #:** 392    **SERIAL #:** 9203-02909

---

### \*\*\* WORK PERFORMED \*\*\*

<b>METER CALIBRATION</b>	<b>ERROR:</b> 0 %	<b>TOLERANCE:</b> ±1.000 %
<b>METHOD:</b> PORTABLE TRANSIT TIME METER		
<b>RECORDER CALIBRATION</b>	<b>ERROR:</b> 0%	<b>TOLERANCE:</b> ±1.000 %
<b>CHECKED AT:</b> OPERATING VALUE%		
<b>TOTALIZER CALIBRATION</b>	<b>ERROR:</b> 0	<b>TOLERANCE:</b> ±1.000 %
<b>CHECKED AT:</b> OPERATING VALUE		

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, PATRICK MCNALLY

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** DECEMBER 06, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE I EFFLUENT (1)  
**METER #:** C8565 AD

**PRIMARY:** WEIR RECTANGLE NON-CONTRACTED 35.5

**MAXIMUM CAPACITY:** 6.0 MGD

**METER:** ENDRESS+HAUSER

**MODEL #:** FMU90

**SERIAL #:** SB00AC150E6

**RECORDER:** CHESSELL

**MODEL #:** 392

**SERIAL #:** 9203-2910

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** -0.03 INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND FLOW CHECKS

**RECORDER CALIBRATION**

**ERROR:** 0%, 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 100%

**TOTALIZER CALIBRATION**

**ERROR:** 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 50%, 100%

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
CLEANED PRIMARY  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, PATRICK MCNALLY

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** DECEMBER 06, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE I EFFLUENT (2)  
**METER #:** C8565 AE

**PRIMARY:** WEIR RECTANGLE NON-CONTRACTED 35.5

**MAXIMUM CAPACITY:** 6.0 MGD

**METER:** ENDRESS+HAUSER

**MODEL #:** FMU90

**SERIAL #:** L7002C150E6

**RECORDER:** CHESSELL

**MODEL #:** 392

**SERIAL #:** 9203-2910

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**

**ERROR:** -0.02 INCHES

**TOLERANCE:** ±0.125 INCHES

**METHOD:** LEVEL MEASUREMENTS AND FLOW CHECKS

**RECORDER CALIBRATION**

**ERROR:** 0%, 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 100%

**TOTALIZER CALIBRATION**

**ERROR:** 0%

**TOLERANCE:** ±1.000 %

**CHECKED AT:** 0%, 50%, 100%

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
CLEANED PRIMARY  
TESTED 4-20MA LOOP  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, PATRICK MCNALLY

## WG Malden

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

### \*\*\* SERVICE REPORT \*\*\*

TOWAMENCIN MUNICIPAL AUTHORITY  
2225 KRIEBEL ROAD  
LANSDALE, PA 19446

**SERVICE DATE:** DECEMBER 06, 2023    **SERVICE CONTRACT:** QUARTERLY (Q3)  
**LOCATION:** STAGE I INFLUENT  
**METER #:** C8565 AF

**PRIMARY:** 16

**MAXIMUM CAPACITY:** 7.0 MGD

**METER:** FISCHER & PORTER

**RECORDER:** CHESSELL

**MODEL #:** 50XM 13

**MODEL #:** 392

**SERIAL #:** 96W008908

**SERIAL #:** 9203-2910

---

### \*\*\* WORK PERFORMED \*\*\*

**METER CALIBRATION**                      **ERROR:** 0 %                      **TOLERANCE:** ±1.000 %  
**METHOD:** PORTABLE TRANSIT TIME METER

**RECORDER CALIBRATION**                      **ERROR:** 0%, 0%                      **TOLERANCE:** ±1.000 %  
**CHECKED AT:** 0%, 100%

**TOTALIZER CALIBRATION**                      **ERROR:** 0                      **TOLERANCE:** ±1.000 %  
**CHECKED AT:** OPERATING VALUE

---

### \*\*\* TECHNICIAN COMMENTS \*\*\*

PERFORMED QUARTERLY CALIBRATION  
NO ADJUSTMENT NEEDED  
LEFT EQUIPMENT OPERATING PROPERLY

**SERVICE REPRESENTATIVE(S):** BOB HEINE, PATRICK MCNALLY

**APPENDIX A –  
TOWAMENCIN TOWNSHIP  
2023 CHAPTER 94 REPORT**





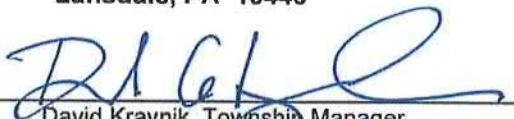
**TOWAMENCIN TOWNSHIP  
MONTGOMERY COUNTY, PENNSYLVANIA**

**2024 Municipal Wasteload Management Report  
(Chapter 94 Report for Calendar Year 2023)**

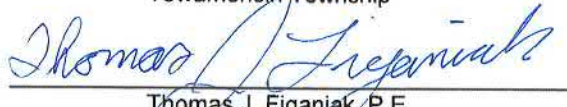
**Prepared For:**

**Towamencin Township  
1090 Troxel Road  
Lansdale, PA 19446**

Permittee:

  
David Kraynik, Township Manager  
Towamencin Township

Preparer:

  
Thomas J. Figaniak, P.E.  
Gilmore & Associates, Inc.

**March 2024**

**File No. 24-00046**

**Prepared By:**

**Gilmore & Associates, Inc.  
Engineers ♦ Land Surveyors ♦ Planners ♦ GIS Consultants  
65 E. Butler Avenue, Suite 100  
New Britain, PA 18901  
215-345-4330**

**TABLE OF CONTENTS**

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Towamencin Municipal Authority Tributary Sewer System Questionnaire

**Tables**

- 1 Towamencin Township Proposed Development
- 2A Towamencin Township – Manhole Repairs
- 2B Towamencin Township – Sanitary Sewer Repairs
- A Towamencin Township Sanitary Collection / Conveyance System Activity Matrix
- B Lower Salford Township Authority Flows to Towamencin Township System Information

**Appendices**

- A. Towamencin Township I&I Report for Calendar Year 2023 dated March 1, 2024
- B. Figure A – Towamencin Township I & I Investigation and Repairs (Includes Meter Locations)

**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

Municipality Name: Towamencin Township Date: February 2024

**A. SEWER SYSTEM DETAILS**

**1. Connected Population:**

Actual Year End	Projected				
2023	2024	2025	2026	2027	2028
18,462	18,468	18,473	18,524	18,574	18,625

**2. Total length of gravity sewer main pipe in collection system:** 458,600 feet (actual or estimated)

**3. Range of pipe sizes:**

- a. Collection Sewers: Construction Materials: Asbestos Cement, PVC, DIP, VCP, RCP  
 Smallest: 8 inches (actual or estimated) Largest: 12 inches (actual or estimated)
- b. Trunk Sewers: Construction Materials: Asbestos Cement, PVC, DIP, VCP, RCP  
 Smallest: 15 inches (actual or estimated) Largest: 21 inches (actual or estimated)

**4. Total number of manholes:** 1,680 (actual or estimated) Construction Materials: Concrete, Brick

**5. Major Trunk Sewers: (Greater than 10" diameter)** Construction Materials: Asbestos Cement, PVC, DIP, VCP, RCP

NAME	PIPE SIZE(S) (Min. to Max. Dia.)	LENGTH (Feet)	POPULATION Served (EDU)	DESIGN CAPACITY (At Limiting Section-gpm)	METERED	METERED
					ANNUAL AVG. FLOW (12 Month ADF-gpd)	PEAK HOURLY FLOW (Hourly Flow Rate-gpm)
Towamencin Creek	12" to 21"	Upper: 5,570' Lower: 5,000'	3,088	3,300	This data is analyzed by TMA as part of their Report	
Skippack Creek	12" to 21"	5,870'	4,320	4,400		
Bustard Road	12" to 18"	3,570'	478	1,800		

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Towamencin Township Date: February 2024

**6. Trunk, Branch, or Collector Sewers – Flow Metering:**

As a supplement to this questionnaire form please provide a discussion regarding the following:

Existing sanitary sewer flow rates shall be documented with actual metering of sewers. A discussion and mapping of the historical, existing, and proposed future placement of flow metering equipment to accurately record and document 15-minute interval readings of sanitary sewer velocity, level, flow rates, and rainfall quantities shall be provided. Average daily total flows, maximum peak daily total flows, hourly flow rates one day prior to, during, and one day subsequent to a rainfall greater than 1" per continuous 24-hour period or less are required if an SSO occurred. The peaking factor comparing the peak flow recorded during the highest continuous 24-hour period to the annual average daily flow shall be provided in a tabular form for all metered sites. If surcharging was recorded, 15-minute rainfall versus sanitary flow rates shall be determined. Please provide a discussion that applies the rainfall to flow rate comparison to possible future I&I investigations.

Portable area velocity flow meters have been installed throughout the Township since 2012. See Figure A for current flow meter locations.

All installed meters in the KRI are owned and maintained by TMA and are part of their report.

Towamencin Township Meter data can be provided upon request

**7. Collection System Capacity Problems:**

If existing or proposed flows exceed a sewer section capacity at any time for a period of a half hour (flow depths greater than the pipe diameter constitute a surcharge overload condition), discuss the municipality's on-going and proposed efforts to reduce the I&I flows contributing to the overload condition at each location. Provide documentation of investigative and corrective repair and/or rehabilitation efforts completed. Estimate the schedule of proposed efforts to eliminate the potential overload. Provide copies of all Sanitary Sewer Overflow (SSO) and Sanitary Sewer Discharge (SSD) reports during the year. Use additional sheets as necessary.

No known existing or proposed flow capacity issues. Towamencin Township has installed flow meters and continues I/I reduction efforts.

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Towamencin Township

Date: February 2024

**B. PUMPING STATIONS**

**1. Description: (Include all municipal and private stations discharging to the Authority)**

Name/Number	Location	Capacity Existing	(mgd) Ultimate	Metered* (Yes/No)	Force Length (feet)	Main Diameter (inches)	Estimated Service Area Total EDU
Rittenhouse Road	Rittenhouse @ Old Forty Foot Rd	8.5 mgd	8.5 mgd	Yes	7,940'	Dual 16"	4,447
Hollis Hills	Bustard Rd / Fisher Rd Hollis Homes	120 gpm	120 gpm	No	5,740'	4"	30
Milestone	Morris Valley Homes on Sched Way	120 gpm	120 gpm	Yes	1,680'	8"	80
Fisher's Park	Grinder Pump @ park	80 gpm	80 gpm	No	377'	4" to Hollis Hills force main	1
Christopher Dock	On high school lot	Private	Private	No	1,653'	Private	10
Gehman Center*	Gehman Rd	Private	Private	No	251'	Private	2
Walnut Meadow Mobile Homes*	Wood Hollow Dr	Private	Private	No	907'	Private	240

**2. Pumping Station Flows:**

NAME	Recorded Present		Projected Annual Monthly Average & Peak Daily Flows (mgd)									
	2023 Avg.	2023 Peak	2024 Avg.	2024 Peak	2025 Avg.	2025 Peak	2026 Avg.	2026 Peak	2027 Avg.	2027 Peak	2028 Avg.	2028 Peak
Station: <u>Rittenhouse Road</u>		By TMA	This data is analyzed by TMA as part of their Report									
Station: <u>Hollis Hills</u>		N/A										
Station: <u>Milestone</u>		By TMA										
Station: <u>Fisher's Park</u>		N/A										
Station: <u>Christopher Dock</u>		N/A										
Station: <u>Gehman Center*</u>		N/A										
<u>Walnut Meadow Mobile Homes*</u>		N/A										

\* Notes private pump station

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Towamencin Township Date: February 2024

**3. Pumping Stations – Flow Metering:**

As a supplement to this questionnaire form please provide a discussion for the following:

Existing sanitary sewer flow rates shall be documented with actual metering of influent flows into all pump stations. A discussion and copies of station plans of the actual and proposed placement of flow metering equipment to accurately record and document 15-minute readings of sanitary sewer influent flow rates, pumping rates, and rainfall quantities shall be provided. Average daily total flows, maximum peak daily total flows, hourly flow rates one day prior to, during, and one day subsequent to a rainfall greater than 1" per 24 hours or less shall be provided. The peaking factor comparing the peak flow recorded during the highest continuous 24-hour period to the annual average daily flow shall be provided in a tabular form for all pumping stations. If surcharging was recorded or if all pumps were in simultaneous operation for more than a half hour, a comparison of rainfall versus sanitary flow rates shall be determined. Please provide a discussion that applies the rainfall to flow rate comparison to possible future I&I investigations.  
This data is analyzed by TMA as part of their Report

**4. Pumping Stations Capacity:**

If the existing metered and/or projected peak flow rates exceed the pumping station design capacity (gallons per minute without the largest pump) at any time for a period of a half hour, explain ongoing and proposed efforts to reduce the overload for each station. Provide documentation of investigative and corrective repair and/or rehabilitation efforts completed. Estimate the schedule of proposed efforts to reduce the overload. Provide copies of all Sanitary Sewer Overflow (SSO) and Sanitary Sewer Discharge (SSD) reports during the year. Use additional sheets as necessary to document existing recorded flows and provide a detailed discussion.

In 2023, three (3) wet weather SSO's occurred at MH#s 134B, 135, and 136A resulting from a single severe rainfall event (1.05" rainfall in 24 hours). The Township does not currently provide oversight for privately owned pumping stations.

No known dry weather SSO's occurred in gravity sewers.

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TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Towamencin Township Date: February 2024

**C. INDUSTRIAL FLOWS**

<u>Industry Name</u>	<u>SIC Code</u>	<u>Location</u>	<u>2023 Average Flow (GPD)</u>	<u>Current Metered (Yes/No)</u>	<u>Waste Strength (mg/L BOD<sub>5</sub>)</u>
<u>Industrial Pretreatment Program administered by TMA.</u>					

**D. PROGRAM FOR SANITARY SEWER MONITORING, OPERATION AND MAINTENANCE AND REPAIRS**

**1. The program shall discuss the following activities:**

- a. Monitoring    b. Maintenance    c. Repair    d. Rehabilitation    e. Routine & Special Activities
- f. Personnel & Equipment Used    g. Sampling Frequency    h. Quality Assurance    i. Data Analyses
- j. Infiltration / Inflow (I&I) monitoring-Explain municipality's application of flow metering data provided by TMA in your I&I program

**2. Annual events & activities:**

- a. Provide copies of SSO & SSD reports submitted to PADEP during the past year. Provide discussion on cause(s) of SSO/SSD and surcharges in the drainage area tributary to the manhole, the capacity of the sewers & pump station(s) downstream of the manhole and peak flow rates. Provide a comparison of dry weather average peak flows to average daily flows and wet weather peak flow rates and a hydraulic analysis of the problem sewers.
- b. Provide a discussion of repairs made to reduce the I&I causing the SSO/SSD and planned activities for 2023.
- c. Provide information for the total anticipated flow rates based on existing connections to the problem sewers and any proposed new connections and the anticipated dry and wet average and peak flow rates compared to sewer and pump station(s) capacity.
- d. Provide annual calibration reports for flow metering systems in sewers and pump stations.

See attached Memo

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Towamencin Township Date: February 2024

**E. SANITARY SEWER EXTENSIONS (2023 ONLY)\***

<u>Name/Area Served/Interceptor</u>	<u>Sewer Size</u>	<u>Extension Length</u>	<u>DEP Permit No.</u>	<u>Housing Units Served (Actual/Estimated)</u>					
				<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>

\*Please attach plans of sanitary sewer system detailing additions made in 2022.

**F. PROPOSED HOUSING DEVELOPMENTS**

Proposed Housing Units to be Connected. These should match the projections on the Connection Management Plan (CMP) as applicable.

<u>Name/Area Served Segregate &amp; Total by each Interceptor Drainage Area</u>	<u>DEP Permits Obtained (Yes/ No)</u>	<u>DEP Permit No.</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>

See Attached Table 1

**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

Municipality Name: Towamencin Township Date: February 2024

**G. CERTIFICATION**

Signed:   
(SEAL)

Title: David Kraynik, Township Manager

Address: Towamencin Township  
1090 Troxel Road, P.O. Box 303  
Kulpsville, PA 19443-0303

Phone No.: (215) 368-7602





**GILMORE & ASSOCIATES, INC.**  
ENGINEERING & CONSULTING SERVICES

Name	Total Project EDU's	Prior Connections	2023	Remaining EDU's	PROPOSED CONNECTION (EDU)				
					2024	2025	2026	2027	2028
<b>KRIEBEL ROAD INTERCEPTOR</b>									
Wagon Wheel Lane	5	2		3	1	1	1		
Miscellaneous (incl. OLDS)	2			2				1	1
<b>Subtotal</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>TOWAMENCIN CREEK INTERCEPTOR</b>									
Cheswold	18	17		1				1	
Clemtree (Phase II)	57	17		40				20	20
Tow Corp Center (Corner/Pond)	24	11		13			13		
Kulp - Lot 51 Welsh Rd - Hatfield	1			1		1			
1261 Sumneytown Pike (OLDS Failure)	1	1		0					
WAWA (40Ft Rd/Sumneytown)	14			14		14			
Tow. Town Square (2C)	10			10		10			
1558 Welsh Road	1	1		0					
355 Orvilla Road	1	1		0					
Belfair Square	16			16		8	8		
Miscellaneous (incl. OLDS)	5			5	1	1	1	1	1
<b>Subtotal</b>	<b>148</b>	<b>48</b>	<b>0</b>	<b>100</b>	<b>1</b>	<b>34</b>	<b>22</b>	<b>22</b>	<b>21</b>
<b>SKIPPACK CREEK INTERCEPTOR</b>									
<b>Towamencin Township</b>									
GennVest Towamencin Village	65	58		7		7			
CFC Towamencin Properties	36	9		27		10	10	7	
Green Tweed Addition - Phase I	4			4		4			
Accupac - Additional flow	88			88	44	44			
Lansdale Commerce Center (2130 Allentown)	10		7	3			3		
Delp Drive	9			9		9			
1560 Old Forty Foot Road	406			406				203	203
<b>Hatfield Township</b>									
Derstine Rd Hatfield Residents	10	3		7		7			
Derstine Run Phase III - TMA	121			121		60	61		
Hatfield Quality Meats (Additional Flows)	1250			1250		400	450	400	
<b>Lower Salford Township</b>									
Creekside at Mainland	45				45				
<b>Subtotal</b>	<b>2044</b>	<b>70</b>	<b>7</b>	<b>1922</b>	<b>89</b>	<b>541</b>	<b>524</b>	<b>610</b>	<b>203</b>
<b>BUSTARD ROAD INTERCEPTOR</b>									
<b>Worcester Township</b>									
Trier (Hollis Road)	1			1				1	
1740 Old Morris Road	1		1	0					
1807 Old Forty Foot Road	1			1	1				
<b>Towamencin Township</b>									
1955 Bustard Road	1	1							
<b>Subtotal</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>

<b>TABLE 2A TOWAMENCIN TOWNSHIP 2023 MANHOLE REPAIRS</b>				
<b>MH Number</b>	<b>Interceptor Basin</b>	<b>Repair Date</b>	<b>Repair Type</b>	<b>Gallon Grout Used</b>
511A.4	TC	5/24/2023	Internal Grouting	19
512A.4	TC	5/24/2023	Internal Grouting	18
511A6.12	TC	5/24/2023	Internal Grouting	39
511A6.14	TC	5/24/2023	Internal Grouting	31
511A6.18	TC	5/24/2023	Internal Grouting	23
31-2	TC	5/24/2023	Internal Grouting	33
<b>TOTAL GALLONS</b>				<b>163</b>

**TABLE 2B  
TOWAMENCIN TOWNSHIP  
2023 SEWER REPAIRS**

Upstream MH	Downstream MH	Interceptor Basin	Repair Date	Repair Type	Number of CIPP	Number of Joints Sealed	Gallons Grout Used for Main	Lateral Wyes Sealed	Gallons Grout Used For Laterals
13.1	13.1A	SC	4/17/2023	Pipe patch	6				
512A.4	512A.3	SC	5/22/2023	Pipe patch	2				
512A.3	512A.2	SC	5/22/2023	Pipe patch	1				
511A.4	511A.3	SC	5/22/2023	Pipe patch	2				
<b>2023</b>					<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Additionally, 30,731 LF (5,656 LF in BRI & 25,075 LF TCI) of televising and cleaning was completed including 6,381 LF of Heavy Cleaning.

TABLE A TOWAMENCIN TOWNSHIP SANITARY COLLECTION/CONVEYANCE SYSTEM ACTIVITY MATRIX - 2023						
	MONITORING	MAINTENANCE	REPAIRS	REHABILITATION	ROUTINE WORK	SPECIAL WORK
General activities associated with topics. These are examples to assist with grouping similar activities.	Televising inspection, flow metering, Open manholes to inspect and observe flows, property inspections, pump station metering & alarms.	Preventative activities to insure continued normal operation of flows through sewers.	Activities to restore normal operation to equipment or to remove clogs, roots, replace damaged pipes, etc...	Planned improvements to sewers, manholes, pump stations to return full functionality of design.	Flushing of sewers, cleaning of station wet wells. Generally the contracted work beyond the capabilities of the municipality.	The addition of new items to a collection system, manholes, or stations.
<b>DATE STARTED</b>	Manhole inspections ongoing from 2010, 'Open Channel Flow Metering-May 2011, Private property inspections-2012	There are no sanitary sewer collection system structures that require repeated or routine maintenance activities to insure proper system operation. Personnel conduct periodic visual inspections after heavy storm events to quickly resolve problems.	Four year contract, TOW21-01, for I&I inspection and repairs began in January 2021. See Figure A for locations of televising and repairs. Contract will be rebid after expiration.	All sanitary sewers are designed and constructed for the ultimate build out capacities. There are no planned improvements to any sewers at this time.	Towamencin Township contracts the operation, maintenance and repairs to the TMA for all municipal pump stations.	An upgrade of the Towamencin Creek Interceptor between the WWTP and MH 103 is completed. An upgrade of the Kriebel Road Interceptor between MH 3 and MH 30 is completed.
<b>DATE COMPLETED</b>	Work is ongoing	Work is ongoing	Work is ongoing for Contract TOW21-01.		Response to emergency situations conducted on a daily basis as required.	A replacement of sections of the SCI (509 to 509A, 512 to 512A and 512A to 513) is currently under construction to be replaced in kind with same size due to corrosion found.
<b>LOCATION</b>	See Figure A for locations of flow meters	Throughout entire system	Throughout entire system		There are no sanitary sewer collection system structures that require repeated or routine maintenance activities to insure proper system operation.	
<b>QTY. PERSONNEL</b>	2 Township employees experienced with sewers and construction methods	2 Township employees experienced with sewers and construction methods	Various personnel with inspection & repair qualifications employed by Sewer Specialty Service Co., Inc.			
<b>WORK ACTIVITIES</b>	Sewer line was walked and each manhole visually inspected for exterior and interior concrete & metal casting damage	Township personnel complete manhole casting replacement/ concrete mortaring on manholes as needed	Sewer main, laterals & building sewer internal televising with cameras, pipe joint testing and chemical grout sealing, manhole leak and lateral wye crack chemical grouting. High pressure hydraulic sewer flushing.			
<b>EQUIPMENT USED</b>	Manhole covers were removed with lifting picks and flashlights used to inspect the interior walls and bench	Manhole casting were removed, loose concrete mortar was replaced and the casting re-set on the concrete manhole.	Closed circuit televising and remote, inflatable sewer chemical grouting equipment. Manhole leak grout injection. Camera for sewer vent televising.			
<b>FREQUENCY</b>	Inspections are routinely conducted.	Inspections and repairs are routinely conducted every Spring	Sewer internal televising inspections and opening manholes for visual observations conducted during and subsequent to rain fall events. Repairs conducted during lower flow conditions. See Tables 2A & 2B for repairs completed during 2023.			
<b>QUALITY</b>	Manholes with broken or cracked concrete & mortar are scheduled for follow-up repairs. Manholes with interior leaks are scheduled for contractor chemical grout sealing. Property owners notified of deficiencies needing repair.		Holes in sewer mains repaired utilizing cured in place pipe liner.			
<b>DATA ANALYSIS</b>	Flow metering analysis ongoing	Not Applicable	Repairs are televised before and after the repair work to insure leak has been sealed. Open manhole inspections used to back-track higher flowing sewers to isolate problem areas for televising inspection.			

**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

**Municipality Name:** Lower Salford Township Authority **Date:** 1/29/2024

**A. SEWER SYSTEM DETAILS**

**1. Connected Population:**

Actual Year End <u>2023</u>	Projected <u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>
_____					

**2. Total length of gravity sewer main pipe in collection system:** 955 feet (actual or estimated)

**3. Range of pipe sizes:**

- a. Collection Sewers: Construction Materials: ACP  
 Smallest: 8 inches (actual or estimated) Largest: 10 inches (actual or estimated)
- b. Trunk Sewers: Construction Materials: \_\_\_\_\_  
 Smallest: \_\_\_\_\_ inches (actual or estimated) Largest: \_\_\_\_\_ inches (actual or estimated)

**4. Total number of manholes:** 7 (actual or estimated) Construction Materials: Concrete

**5. Major Trunk Sewers: (Greater than 10" diameter)** Construction Materials: \_\_\_\_\_

NAME	PIPE SIZE(S) (Min. to Max. Dia.)	LENGTH (Feet)	POPULATION Served (EDU)	DESIGN CAPACITY (At Limiting Section-gpm)	METERED	METERED
					ANNUAL AVG. FLOW (12 Month ADF-gpd)	PEAK HOURLY FLOW (Hourly Flow Rate-gpm)
n/a						
_____						
_____						
_____						
_____						
_____						

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Lower Salford Township Authority Date: 1/29/2024

**6. Trunk, Branch, or Collector Sewers – Flow Metering:**

As a supplement to this questionnaire form please provide a discussion regarding the following:

Existing sanitary sewer flow rates shall be documented with actual metering of sewers. A discussion and mapping of the historical, existing, and proposed future placement of flow metering equipment to accurately record and document 15-minute interval readings of sanitary sewer velocity, level, flow rates, and rainfall quantities shall be provided. Average daily total flows, maximum peak daily total flows, hourly flow rates one day prior to, during, and one day subsequent to a rainfall greater than 1" per continuous 24-hour period or less are required if an SSO occurred. The peaking factor comparing the peak flow recorded during the highest continuous 24-hour period to the annual average daily flow shall be provided in a tabular form for all metered sites. If surcharging was recorded, 15-minute rainfall versus sanitary flow rates shall be determined. Please provide a discussion that applies the rainfall to flow rate comparison to possible future I&I investigations.

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The Authority provides the water used by the customers connected to the TMA Interceptor and would be happy to discuss additional monitoring if necessary.

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**7. Collection System Capacity Problems:**

If existing or proposed flows exceed a sewer section capacity at any time for a period of a half hour (flow depths greater than the pipe diameter constitute a surcharge overload condition), discuss the municipality's on-going and proposed efforts to reduce the I&I flows contributing to the overload condition at each location. Provide documentation of investigative and corrective repair and/or rehabilitation efforts completed. Estimate the schedule of proposed efforts to eliminate the potential overload. Provide copies of all Sanitary Sewer Overflow (SSO) and Sanitary Sewer Discharge (SSD) reports during the year. Use additional sheets as necessary.

n/a

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**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

**Municipality Name:** Lower Salford Township Authority **Date:** 1/29/2024

**B. PUMPING STATIONS**

**1. Description: (Include all municipal and private stations discharging to the Authority)**

<u>Name/Number</u>	<u>Location</u>	<u>Capacity Existing</u>	<u>(mgd) Ultimate</u>	<u>Metered* (Yes/No)</u>	<u>Force Length (feet)</u>	<u>Main Diameter (inches)</u>	<u>Estimated Service Area Total EDU</u>
n/a							

**2. Pumping Station Flows:**

<u>NAME</u>	<u>Recorded Present 2023</u>		<u>Projected Annual Monthly Average &amp; Peak Daily Flows (mgd)</u>									
	<u>Avg.</u>	<u>Peak</u>	<u>2024</u>		<u>2025</u>		<u>2026</u>		<u>2027</u>		<u>2028</u>	
			<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>
Station:												
Station:												
Station:												
Station:												
Station:												
Station:												

**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

**Municipality Name:** Lower Salford Township Authority **Date:** 1/29/2024

**3. Pumping Stations – Flow Metering:**

As a supplement to this questionnaire form please provide a discussion for the following:

Existing sanitary sewer flow rates shall be documented with actual metering of influent flows into all pump stations. A discussion and copies of station plans of the actual and proposed placement of flow metering equipment to accurately record and document 15-minute readings of sanitary sewer influent flow rates, pumping rates, and rainfall quantities shall be provided. Average daily total flows, maximum peak daily total flows, hourly flow rates one day prior to, during, and one day subsequent to a rainfall greater than 1" per 24 hours or less shall be provided. The peaking factor comparing the peak flow recorded during the highest continuous 24-hour period to the annual average daily flow shall be provided in a tabular form for all pumping stations. If surcharging was recorded or if all pumps were in simultaneous operation for more than a half hour, a comparison of rainfall versus sanitary flow rates shall be determined. Please provide a discussion that applies the rainfall to flow rate comparison to possible future I&I investigations.

**4. Pumping Stations Capacity:**

If the existing metered and/or projected peak flow rates exceed the pumping station design capacity (gallons per minute without the largest pump) at any time for a period of a half hour, explain ongoing and proposed efforts to reduce the overload for each station. Provide documentation of investigative and corrective repair and/or rehabilitation efforts completed. Estimate the schedule of proposed efforts to reduce the overload. Provide copies of all Sanitary Sewer Overflow (SSO) and Sanitary Sewer Discharge (SSD) reports during the year. Use additional sheets as necessary to document existing recorded flows and provide a detailed discussion.

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TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Lower Salford Township Authority Date: 1/29/2024

C. **INDUSTRIAL FLOWS**

<u>Industry Name</u>	<u>SIC Code</u>	<u>Location</u>	<u>2023 Average Flow (GPD)</u>	<u>Current Metered (Yes/No)</u>	<u>Waste Strength (mg/L BOD<sub>5</sub>)</u>

D. **PROGRAM FOR SANITARY SEWER MONITORING, OPERATION AND MAINTENANCE AND REPAIRS** \* SEE NEXT PAGE \*

1. The program shall discuss the following activities:

- a. Monitoring    b. Maintenance    c. Repair    d. Rehabilitation    e. Routine & Special Activities
- f. Personnel & Equipment Used    g. Sampling Frequency    h. Quality Assurance    i. Data Analyses
- j. Infiltration / Inflow (I&I) monitoring-Explain municipality's application of flow metering data provided by TMA in your I&I program

2. Annual events & activities:

- a. Provide copies of SSO & SSD reports submitted to PADEP during the past year. Provide discussion on cause(s) of SSO/SSD and surcharges in the drainage area tributary to the manhole, the capacity of the sewers & pump station(s) downstream of the manhole and peak flow rates. Provide a comparison of dry weather average peak flows to average daily flows and wet weather peak flow rates and a hydraulic analysis of the problem sewers.
- b. Provide a discussion of repairs made to reduce the I&I causing the SSO/SSD and planned activities for 2024.
- c. Provide information for the total anticipated flow rates based on existing connections to the problem sewers and any proposed new connections and the anticipated dry and wet average and peak flow rates compared to sewer and pump station(s) capacity.
- d. Provide annual calibration reports for flow metering systems in sewers and pump stations.

**D. Program for Sanitary Sewer Monitoring, Operation & Maintenance & Repairs**

- The Authority had no SSO's on the system.

In 2023 the 4 Unit Apartment unit had a Certificate of Occupancy issued on 10/13/23.

- The Mainland Inn located at 17 Mainland Road closed in April 2017.
- The Inn reopened as the Mallard at the Mainland Inn. North Penn Water Authority records show the following water usage:
  - 8,229 gal from 8/29/23 – 9/28/23,
  - 68,820 gal from 9/29/23 - 10/31/23,
  - 29,174 gal from 11/1/23 – 11/30/23
  - 26,930 gal from 12/1/23 – 12/28/23.
- The 4 Unit Apartment building had minimal usage from 10/13/23 – 12/31/23. LSTA will send water usage to TMA until the NEW Meter Pit is operational.
- The old meter was damaged during the flooding associated with tropical storm Isaias on 8/4/20 and has not been replaced. Based on an agreement with TMA in May 2016, The Lower Salford Township Authority provides water usage from the public water detail, obtained from NPWA, for billing purposes.
- New Meter Pit - This is to be constructed according to TMA's specifications by the developer of the Creekside at Mainland 45 unit apartment development. The meter pit is to be completed sometime in 2024. The Lower Salford Township Authority does not have a completion date from the developer.

**Proposed Future Connections**

- The Creekside at Mainland. In 2021 the Lower Salford Township Authority received plans for a proposed Development of 45 privately owned rental apartments at 17 Mainland Road. The proposed connection point is the LSTA interceptor which flows to TMA WWTP. Construction for the Creekside at Mainland began January 9, 2023.

- Currently the only usage is from the Mallard at the Mainland Inn and a 4 Unit Apartment Building within the Creekside at Mainland Project.

- 285 Wambold Road. The existing residential home is currently directly connected to a TMA sewer line. The home will be demolished with the construction of a two-story office space, storage, and service area space. The increase to the projected sewer flow is one additional EDU.

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Lower Salford Township Authority Date: 1/29/2024

E. **SANITARY SEWER EXTENSIONS (2023 ONLY)\***

<u>Name/Area Served/Interceptor</u>	<u>Sewer Size</u>	<u>Extension Length</u>	<u>DEP Permit No.</u>	<u>Housing Units Served (Actual/Estimated)</u>					
				<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>
n/a									

\*Please attach plans of sanitary sewer system detailing additions made in 2023.

F. **PROPOSED HOUSING DEVELOPMENTS**


Proposed Housing Units to be Connected. These should match the projections on the Connection Management Plan (CMP) as applicable.

<u>Name/Area Served</u> <u>Segregate &amp; Total by each</u> <u>Interceptor Drainage Area</u>	<u>DEP Permits</u> <u>Obtained</u> <u>(Yes/ No)</u>	<u>DEP</u> <u>Permit</u> <u>No.</u>	<u>Proposed Housing Units to be Connected</u>					
			<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	
Creekside at Mainland			45 EDU's (Mainland Inn 3 EDU's Connected & 4 Unit Apt Connected 10/13/23)					
285 Wambold Road			1 EDU					

**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

**Municipality Name:** Lower Salford Township Authority **Date:** 1/29/2024

**G. CERTIFICATION**

Signed:  (SEAL)

Title: Operations Manager

Address: PO Box 243  
57 Main Street  
Harleysville, PA 19438

Phone No.: 215-256-8676

CREEKSIDE AT MAINLAND - DEP APPROVAL  
LETTER



September 26, 2022

**SENT VIA ELECTRONIC MAIL ONLY**

Mr. Joseph S. Czajkowski, Manager  
Lower Salford Township  
379 Main Street  
Harleysville, PA 19438  
township@lowersalfordtownship.org

Re: Approval Letter – Exemption  
Act 537 Planning  
Creekside at Mainland  
DEP Code No. 1-46938-241-E  
Lower Salford Township  
Montgomery County

Dear Mr. Czajkowski:

The Department of Environmental Protection (DEP) has received the above-referenced sewage facilities planning application. This letter confirms DEP's determination that the project is exempt from the requirement to revise the Official Plan for new land development. This determination is based in part on municipal and other signoffs. The proposed development is located at 7, 17 and 29 Mainland Road in Lower Salford Township, Montgomery County, on Tax Parcels 50-00-01681-00-6, 50-00-01684-00-3 and 50-00-01687-00-9.

This project proposes the construction of 10 apartment buildings with a total of 45 apartment units on 8.77 acres.

1. The following development is proposed for Parcel 50-00-01681-00-6 (7 Mainland Road) and Parcel 50-00-01684-00-3 (17 Mainland Road):
  - a. The two parcels will be consolidated, and the existing structure on Parcel 50-00-01681-00-6 will be removed.
  - b. Per the *Utility Plan: Creekside at Mainland (Sheet 09 of 33)*, prepared by Bursich Associates, dated September 28, 2021 and last revised August 16, 2022 (Site Plan), Apartment Units 1 through 36 will be constructed on the resulting lot. The building lateral system proposed to serve the property will connect to the existing Lower Salford Township Authority's (LSTA) sewer at Location XI on the Site Plan and will be privately owned.

Mr. Joseph S. Czajkowski

- 2 -

September 26, 2022

- c. The existing restaurant on Parcel 50-00-01684-00-3, currently connected to the LSTA collection system and tributary to the Towamencin Municipal Authority's (TMA) Wastewater Treatment Plant, will remain on the property. The existing lateral serving the restaurant will be relocated to connect to the proposed building lateral system for the new development. No changes to the restaurant, and no increase in flows from the restaurant, are proposed or approved with this project.
2. The following development is proposed for Parcel 50-00-01687-00-9 (29 Mainland Road):
- a. Apartment Units 37 through 45 will be constructed on the parcel. The private building lateral system proposed to serve the units will connect to the existing LSTA sewer at Location S7 on the Site Plan.
- b. The existing office building will remain on the property and is connected to the LSTA's collection system, tributary to LSTA Mainland Wastewater Treatment Plant. No change to the office building, and no increase in flows from the office building, are proposed or approved as part of this project.

No development and no sewage facilities are proposed for Parcel 53-00-08126-00-2, located in Towamencin Township adjacent to Parcel 50-00-01684-00-3 and under the same ownership.

The project will be connected to the Lower Salford Township Authority collection system and will generate an additional 11,700 gallons of sewage per day (gpd) to be treated at the Towamencin Municipal Authority Wastewater Treatment Plant.

Should any changes, renovations, expansions, or increase in flows be proposed for the existing office or restaurant, the project sponsor must submit an application mailer to DEP in order to determine whether additional sewage facilities planning is required.

This approval is made specifically contingent upon the applicant acquiring all necessary property rights, by easement or otherwise, providing for the satisfactory construction, operation, maintenance, and replacement of all sewerage structures associated with the approved discharge in, along, or across private property with full rights of ingress, egress, and regress.

Any person aggrieved by this action may appeal the action to the Environmental Hearing Board (Board), pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. § 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A. The Board's address is:

Environmental Hearing Board  
Rachel Carson State Office Building, Second Floor  
400 Market Street  
P.O. Box 8457  
Harrisburg, PA 17105-8457

Mr. Joseph S. Czajkowski

- 3 -

September 26, 2022

TDD users may contact the Environmental Hearing Board through the Pennsylvania Relay Service, 800-654-5984.

Appeals must be filed with the Board within 30 days of receipt of notice of this action unless the appropriate statute provides a different time. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

A Notice of Appeal form and the Board's rules of practice and procedure may be obtained online at <http://ehb.courtapps.com> or by contacting the Secretary to the Board at 717-787-3483. The Notice of Appeal form and the Board's rules are also available in braille and on audiotape from the Secretary to the Board.

**IMPORTANT LEGAL RIGHTS ARE AT STAKE. YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD AT 717-787-3483 FOR MORE INFORMATION. YOU DO NOT NEED A LAWYER TO FILE A NOTICE OF APPEAL WITH THE BOARD.**

**IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST BE FILED WITH AND RECEIVED BY THE BOARD WITHIN 30 DAYS OF RECEIPT OF NOTICE OF THIS ACTION.**

If you have any questions or concerns, please contact me at 484.250.5179 or [subanks@pa.gov](mailto:subanks@pa.gov).

Sincerely,



Suzanne Banks  
Sewage Planning Specialist 2  
Clean Water

cc: Montgomery County Health Department (via email)  
Montgomery County Planning Commission (via email)  
Montgomery County Conservation District (via email)  
W.B. Homes, Inc. (via email)  
LSTA (via email)  
TMA (via email)  
Gilmore & Associates, Inc. (via email)  
Planning Section

CREEKSIDe AT MAINLAND - TMA CAPACITY  
APPROVAL LETTER



+

June 27, 2022

Donald Delamater, Manager  
Towamencin Township  
1090 Troxel Road  
P.O. Box 303  
Kulpsville, PA 19443

RE: Creekside at Mainland; Lower Salford Township  
Sewage Facilities Planning; Chapter 94 Consistency - Treatment  
Bursich Project No.: UPP-08 / #147467

Dear Mr. Delamater:

On behalf of the Towamencin Municipal Authority (TMA), we have reviewed the Sewage Facilities Planning Module Exemption Application information provided for the proposed Creekside at Mainland Development. The proposed development by W.B. Homes, Inc. will redevelop the existing Mainland Inn property with 9 new buildings containing 45 apartments and will connect via a private gravity sewer system and discharge into the Lower Salford Township Authority's (LSTA) existing connection to the Towamencin Township Skippack Creek Interceptor.

The 45 apartments are estimated to generate an average daily sanitary flow of 11,700 gpd, or 45 EDU's (at 280 gpd/EDU). Sanitary sewage will be conveyed from the site via the existing LSTA sanitary sewer through their existing connection to the Towamencin Township's Skippack Creek Interceptor and conveyed through the Rittenhouse Pumping Station to the TMA's WWTP. Please note the flow from the project in LSTA goes through LSTA's meter connection point and the LSTA has 150,000 gallons of previously purchased capacity.

In response to the Applicant's request, and on behalf of the Towamencin Municipal Authority, please be advised that TMA has sufficient capacity to accept the 11,700 gallons per day (gpd) of wastewater from the proposed development, and that the additional wastewater flow will not cause a projected hydraulic or organic overload of the wastewater treatment facilities within the next 5 years.

The Applicant should include a copy of this letter with their Planning Module Exemption submission.

ENGINEERS, LAND SURVEYORS, LANDSCAPE ARCHITECTS

 2129 E. High Street | Pottstown, PA 19464  
N 40° 14' 40.2" W 075° 36' 09.6" 610-323-4040  
www.bursich.com

4

Creekside at Mainland; Lower Salford Township  
Sewage Facilities Planning; Chapter 94 Consistency --Treatment  
June 27, 2022  
Page 2 of 2

Should you have any questions or need further information, please do not hesitate to contact me at 484-941-0415.

Sincerely,

*Ed McCorkle*

Edmond G. McCorkle, P.E.  
Senior Managing Engineer  
Bursich Associates, Inc., Pottstown Office

pc: Towamencin Municipal Authority  
Lower Salford Township Authority  
William Dingman, P.E. Gilmore & Associates, Inc.  
W.B. Homes, Inc:

10 SCHOOLHOUSE RD - NO ADDITIONAL CAPACITY  
REQUIRED LETTER



GILMORE & ASSOCIATES, INC.  
ENGINEERING & CONSULTING SERVICES

+

June 5, 2020

File No. 20-04055T

Rob Ford, Manager  
Towamencin Township  
P.O. Box 303  
Kulpsville, PA 19443

Reference: Swartley - 10 Schoolhouse Road  
Sanitary Preliminary / Final Plan Review 2

Dear Rob:

In accordance with the Township's request, we have reviewed the preliminary / final plan for the above referenced project relative to sanitary sewer service. The review consisted of 5 sheets, last revised May 28, 2020, as prepared by STA Engineering, Inc. The site is located in Lower Salford Township on the southwest corner of Schoolhouse Road (S.R. 1007) and Wambold Road (S.R. 1008). The proposed development consists of a 20,000 square foot office / warehouse building. Sewer service for the facility is a proposed grinder pump force main connection to an existing private sewer extension from an existing collector sewer located along Wambold Road. We offer the following comments for your consideration:

1. The plans as submitted are acceptable.
2. The two EDU (650 gpd) of LSTA capacity assigned to the property is adequate for the proposed use no additional capacity is required therefore no planning module approval is required for the project. The adjacent storage unit property on Wambold Road has been assigned one EDU by LSTA based on the prior purchase of a total of 3 EDU of capacity for the parent tract prior to any subdivision.

Should you have any questions, please feel free to contact me at [wdingman@gilmore-assoc.com](mailto:wdingman@gilmore-assoc.com).

Very truly yours,

A handwritten signature in cursive script that reads "William K. Dingman".

William K. Dingman, P.E.  
Senior Municipal Engineer  
Gilmore & Associates, Inc.

cc: Jennifer Guckin, Director of Community Planning, Towamencin Township (email only)  
Tom Zarko, P.E., CKS Engineers, Inc., Township Engineer (email only)  
STA Engineering, Inc. (email only)  
Brent Wagner, Manager, TMA (email only)  
Ed McCorkle, P.E., Bursich Associates (email only)  
Connie Weimer, LSTA Business Manager (email only)

184 West Main Street | Suite 300 | Trappe, PA 19426 | Phone: 610-489-4949 | Fax: 610-489-8447

10 SCHOOLHOUSE RD. - ENGINEERING LETTER



May 29, 2020

Gilmore & Associates, Inc.  
184 West Main Street  
Suite 300  
Trappe, PA 19426

Attn: William K. Dingman, P.E.

Subj: SBE Realty, LP. (Swartley Bros. Engineers, Inc.)  
Parcel No. 50-00-04024-00-3  
10 Schoolhouse Road  
Lower Salford Township, Montgomery County, PA  
STA Project #4557

Dear Bill:

As requested in your letter dated March 22, 2020, the following paragraphs demonstrate the peak flow estimates and justification for the proposed office/warehouse building for the above-referenced project.

Planning Approval:

As stated in your letter, three (3) EDU's of capacity were acquired for the property in 1999. One (1) EDU is now allocated to the TNC Storage Facility property – TMP #50-00-04024-02-4. Therefore, the remaining two (2) EDU's will be allocated to the Swartley Bros. Engineers property – TMP #50-00-04024-00-3.

Two (2) EDU's are equivalent to 650 gpd of capacity.

Existing and Proposed Uses that Generate Daily Sewage Flows:

1. Existing Buildings 1 and 2 (combined office and warehouse uses): As stated in your letter, historical water usage records demonstrate water usage of 454 gpd.
2. Proposed Office and Warehouse Building: In the absence of water usage records specific to the size and use of the proposed building, the following is offered for consideration:

The proposed building plan includes two (2) bathrooms. Six (6) existing employees will be transferred from the existing buildings into the new building with the idea of hiring up to four (4) new employees in the coming years.

The design daily flow rate per DEP guidelines for an office use is 10 gpd per employee.  
The design daily flow rate per DEP guidelines for a warehouse use is 35 gpd per employee.

William K. Dingman, P.E.  
May 29, 2020  
Page Two

Given the mix of office and warehouse employees, an average of 12.6 gpd is calculated for the existing condition – 454 gpd/36 existing employees.

Rounding up to 13 gpd for ten (10) employees occupying the proposed building estimates a need for an additional 130 gpd of capacity. Note that this estimate assumes all new employees when it is anticipated that existing employees will be moving to the new space – therefore, this estimate is conservative.

3. Existing and Proposed Building estimate of sewage capacity:  $454 \text{ gpd} + 130 \text{ gpd} = 584 \text{ gpd}$

Conclusion:

Applying the planned sewage flows of **650 gpd** to the Swartley Bros. site and utilizing available average daily sewage flow data for the existing and proposed uses that are expected to generate sewage flows on a daily basis demonstrates that the planning estimate (2 EDU's) is more than adequate for the addition of the proposed building.

Respectfully submitted,

*Susan A. Rice*

Susan A. Rice, P.E.  
S.T.A. Engineering, Inc.

cc: Rob Ford, Towamencin Township Manager  
Connie Weimer, LSTA Business Manager  
SBE Realty, LP  
Bernadette Kearny, Esq., HRMM&L



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**MEMORANDUM**

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**Date:** March 4, 2024

**To:** David Kraynik, Manager – Towamencin Township

**From:** Thomas J. Figaniak, P.E.

**cc:** David Hillmantel, Director of Public Works – Towamencin Township  
Robert J. Iannozzi, Jr, Towamencin Township Solicitor  
Mike McGann – Towamencin Municipal Authority  
Edmond G. McCorkle, P.E. – Bursich Associates

**Reference:** Inflow and Infiltration Report for Calendar Year 2023  
Towamencin Township

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The I/I reduction efforts in 2023 was performed in the TCI drainage basin. Over \$100,000 in I/I efforts were completed in 2023.

All of the I/I reduction efforts that the Township has completed over the years have proven successful, especially during 2018, being that it was one of the wettest years on record, which resulted in no SSO's occurring. Additionally, no SSO's occurred in 2019, which was also a wetter year. However, four (4) SSO's occurred in 2020, which were the direct result of very extreme and intense rain events. Two (2) SSO's occurred during one (1) event in 2021. No SSO's occurred in 2022. Three (3) SSO's occurred during one (1) very extreme and intense rain event in 2023. Though SSO's occurred in 2020, 2021, and 2023, it can be verified that significant successful strides have been made in I/I reduction within the collection and conveyance system over the years. Eleven (11) rain events >1.0" occurred in 2023

- April 30<sup>th</sup> (1.42") – No SSO's Observed
- June 12<sup>th</sup> (1.25") – No SSO's Observed
- July 9<sup>th</sup> (1.42") – No SSO's Observed
- September 24<sup>th</sup> (1.04") – No SSO's Observed
- September 25<sup>th</sup> (1.30") – No SSO's Observed
- November 26<sup>th</sup> (1.15") – No SSO's Observed
- December 10<sup>th</sup> (1.86") – No SSO's Observed
- December 17<sup>th</sup> (1.05") – No SSO's Observed
- December 18<sup>th</sup> (1.61") – 3 SSO's Observed (MH#134B, #135, and #136)
- December 27<sup>th</sup> (1.63") – No SSO's Observed

A.) Work Completed thru December 31, 2023:

1. Meters have collected data from 148 rain events greater than one inch from February 2012 through December 31, 2023.
2. Meter Locations (as of December 31, 2023)

TCI

1. MH159.1 – Susan Drive RW
2. MH110 – Sherwood RW
3. MH123.11 – Morgandale Community
4. MH123.5 – Morgandale Community
5. MH331 – Reiff Road
6. MH103D (TMA)
7. MH161 – Tennis Way
8. MH113 – Fairview Way
9. MH185 – Maxwell Ct
10. MH 150 – Freddy Hill Property

KRI

1. MH30.1 Valley View Way (TMA)
2. MH30.7 – Valley View Way(TMA)
3. MH17.2 Archer Lane(TMA)
4. MH16.2 – Flintlock Circle(TMA)
5. MH11.2 – Spring Valley Road(TMA)
6. MH138 – Hickory Court(TMA)
7. MH23 – Chatham Village(TMA)

BRI

1. MH531 - WWTP (TMA owned)

SCI  
None

2. Home inspections (As of December 31, 2023)
  - a. Since the beginning of 2013, 2,338 resale U&O inspections have been completed. 180 resale U&O inspections were completed in 2023.
  - b. Inspections include the sump pump discharge, A/C-Heater condensate discharge, sewer vents and downspouts. Any issues found have been repaired to date.
  - c. 650 letters were sent to residents for needed sewer vent repairs. To date 578 have completed the necessary repairs. Towamencin Condominiums and Charlestown Association account for most of the remaining issues, and are working on repairs. The Township has been in contact with them to set up a re-inspection date once they are all repaired. Some properties have since repaired their vents and passed U&O inspections at time of sale. List is being updated as inspections occur or phone calls received.
3. A total of 117 orangeburg lateral replacements have been completed in the Inglewood area; 12 laterals remain to be repaired/replaced.
4. The Township notified 47 residents that televising had identified defects in their laterals which require repair. To date, 21 of the residents have completed the repairs.
5. The Morgandale system consisting of approximately 8,700 linear feet of 8-inch sewer and 35 manholes was dedicated to the Township in September 2014. Morgandale Condominium Association (MCA) retains responsibility for the collectors and laterals. The sewer mains were televised, smoke tested and repaired using CIPP repairs, joint testing, grouting, lateral repairs and manhole repairs by Sewer Specialty Services Co., Inc. under Contract TOW 14-01 and TOW 17-01. The Township has made all repairs to mains, manholes and laterals that were found to be defective during wet weather televising. MCA has reported that they have completed televising the entire community, fixed defects and

complied with all aspects of the Agreement. G&A has reviewed MCA quarterly reports and analyzed flow data tributary to MCA. Peaking factors have been significantly reduced, however I/I is still present in the system. Upon reviewing the data, it appears infiltration has been reduced, but inflow is still present. G&A and the Township continue to work with MCA to focus on I/I removal.

6. Reports are issued to TMA as needed. PA DEP removed the CAP/CMP from the TCI on January 20, 2016.
7. Parallel TCI MH 100 – MH 103 – Project is completed.
8. Township reviewed potential funding sources and long term borrowing options.
9. I/I Contract work completed between February 2012 and December 31, 2020:
  - a. \$395,261.20 I/I contract (TOW 12-01) was completed (100%).
  - b. \$719,336.45 I/I contract (TOW 14-01) was completed (100%). The following work was completed for this contract:
    - 110,945 linear feet of sewer was cleaned and televised
    - 5 laterals televised
    - 11,982 linear feet of sewer hydraulically cleaned
    - 3,511 joints tested, 1,343 joints sealed with 4,257.5 gallons of grout
    - 3 protruding laterals were trimmed
    - 219 laterals were grouted with 2,026 gallons of grout
    - 49 manholes grouted with 2,427 gallons of grout
    - 238 CIPP liners installed
    - 9,251 linear feet of sewer smoke tested
  - c. \$252,576.20 I/I contract (TOW 17-01) was completed (100%). \$69,104.80 was completed in 2021. The following work was completed for this contract:
    - 100,528 linear feet of sewer was cleaned and televised (33,732 lf in 2021)
    - 1,058 linear feet of sewer was hydraulically cleaned
    - 41 Laterals were televised (12 laterals in 2021)
    - 1 protruding lateral was trimmed
    - 71 CIPP liners installed (11 CIPP liners in 2021)
    - 1 manhole was grouted with 40 gallons of grout (2021)
  - d. I/I contract (TOW 21-01) is underway and will expire on December 31, 2024. During 2021, \$14,557.10 was spent, \$35,808.50 was spent in 2022, and \$101,711.75 was spent in 2023. The contractor has completed the following work under the contract in 2021, 2022, and 2023:
    - 55,673 linear feet of sewer was cleaned and televised
    - 9,300 linear feet of sewer was hydraulically cleaned
    - 367 gallons of grout were used to seal manholes
    - 17 CIPP liners were installed
  - e. The Township received a Local Share Account Grant in the amount of \$200,000 for slip lining repairs in the Inglewood Area, tributary to the TCI.
    - Construction was completed in 2016 by Eagle Contracting, Inc. in the amount of \$339,121.98.
  - f. The Township received a PA Small Water and Sewer Grant in the amount of \$100,000 for repairs tributary to the KRI under contract 17-01.

- Work is 100% complete thru 12/31/21.
- g. The Township received a PA Small Water and Sewer Grant in the amount of \$500,0000 for repairs tributary to the SCI from Hatfield Township to the Turnpike.
  - Televising and Investigation work was completed in January 2021.
  - Based on the findings upon review of the inspection reports and videos, it was recommended that the worst sections of the interceptor be rehabilitated via pipe bursting. The project was put out to bid, and 1 bid was received which was rejected. The Township applied for a scope change to replace 3 sections of main, which was approved by DCED. The project is currently under construction to replace the sewer from 509 to 509A, 512 to 512A and 512A to 513. These sections were significantly tuberculted (corroded) and are partially located within the creek. Construction is anticipated to be completed in Spring, 2024.
- h. The Township applied for a DCED Local Share Account Grant for Phase 2 replacement of the SCI. The project involves approximately 1,200 LF of 18" gravity sanitary sewer from MH 500, located at the PA Turnpike crossing to MH 503.1B. Grant awards are expected in 2024 with design and construction to follow in 2025.

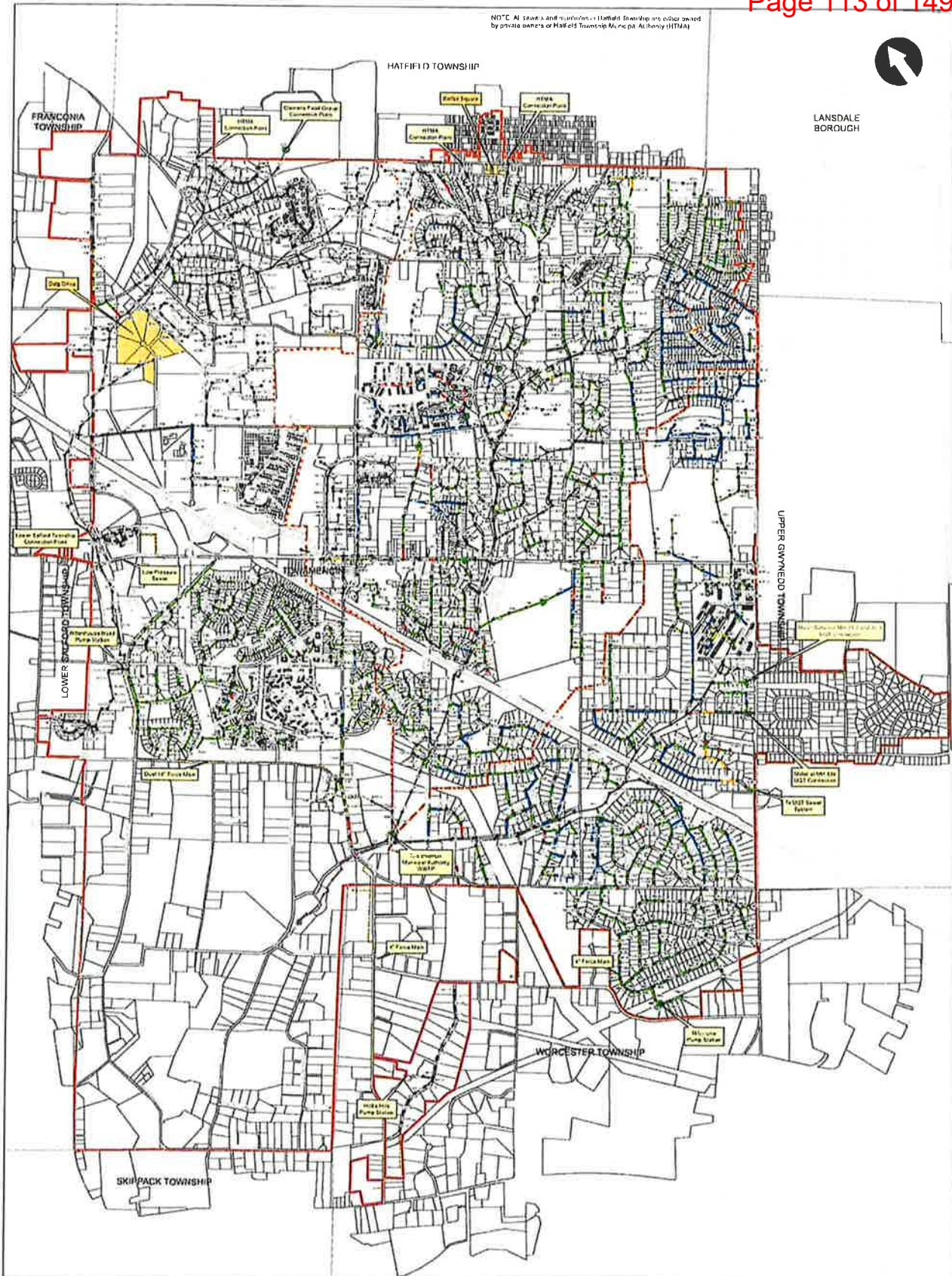
C.) I/I Work Completed during 2023

1. Retrieved flow meter data as necessary and analyzed data.
2. G&A continues to process data annually and incorporate into GIS and MuniLogic.
3. The contractor has completed the following work in 2023:
  - 35,495 linear feet of sewer was cleaned and televised
  - 8,577 linear feet of sewer was hydraulically cleaned
  - 163 gallons of grout were used to seal manholes
  - 12 CIPP liners were installed

D.) Scheduled Work

1. Continue overall flow metering and data evaluation;
2. Review lateral reports and send notification to owners;
3. Lateral replacement program;
4. Private property sewer inspections;
5. Community sewer system inspections;
6. GIS system documentation;
7. I/I investigation and I/I reduction efforts;
8. Investigation and repair work under I/I repair contracts;
9. Future I/I Contract Work
  - Evaluate outstanding additional minor repairs in the Inglewood area (non-grant application areas)
  - Televising sewers tributary to the KRI and make repairs as necessary
  - Repair additional portions of SCI from Hatfield Township to Turnpike as necessary/funds become available.
  - Continue to monitor and work with MCA and other community sewer systems to make repairs and upkeep their systems in good working order
10. Modify the I/I program as needed to focus on areas of concern.

NOTE: All streets and utilities in Hatfield Township are either owned by private owners or Hatfield Township Municipal Authority (HTMA)



**Legend**

<b>Sanitary Manholes</b>	<b>Sanitary Sewers</b>	<b>Towamencin Meter Basins</b>	<b>Towamencin Creek Sewer Basins</b>
<b>Repair Status</b>	<b>Repair Status</b>	<b>2022 Recommended</b>	<b>Development in Progress</b>
▲ Clean Out Block	— No Repairs Needed	▲ 2022	— Development in Progress
▲ Normal	— Minor	▲ 2021	— Development in Progress
● Repairs Complete	— Repairs Needed	▲ 2020	— Development in Progress
● Repairs Pending	— Repairs Complete	▲ 2019	— Development in Progress
▲ Recommended Work	— Repairs Pending	▲ 2018	— Development in Progress
▲ Utility Work	— Repairs Complete	▲ 2017	— Development in Progress
▲ Utility Location	— Recommended Work	▲ 2016	— Development in Progress
▲ Utility Service Meter Location	— Utility Work	▲ 2015	— Development in Progress
	— Utility Location	▲ 2014	— Development in Progress
	— Utility Service Meter Location	▲ 2013	— Development in Progress

NOTE: Repairs include work from 2012 through 2022. Sewer repairs and installation from January 2013 through 2022.

**TOWAMENCIN TOWNSHIP**  
**I & I INVESTIGATION & REPAIRS, 2012-2022**  
FOR THE MUNICIPAL AUTHORITY OF PENNSYLVANIA

**GILMORE & ASSOCIATES INC.**  
ENGINEERING & CONSULTING SERVICES

1000 N. 10th Street, Suite 200, Hatfield, PA 19029  
610-426-1111

DATE: February 2023

**APPENDIX B –  
UPPER GWYNEDD TOWNSHIP  
2023 CHAPTER 94 REPORT**



**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

Municipality Name: Upper Gwynedd Township Date: 3/6/24

**A. SEWER SYSTEM DETAILS**

**1. Connected Population: EDUs**

Actual Year End	Projected				
2023	2024	2025	2026	2027	2028
290	290	290	290	290	290

**2. Total length of gravity sewer main pipe in collection system:** ~23,431 feet (actual or estimated)

**3. Range of pipe sizes:**

- a. Collection Sewers: Construction Materials: PVC, ACP, VCP  
 Smallest: 8 inches (actual or estimated) Largest: 8 inches (actual or estimated)
- b. Trunk Sewers: Construction Materials: \_\_\_\_\_  
 Smallest: \_\_\_\_\_ inches (actual or estimated) Largest: \_\_\_\_\_ inches (actual or estimated)

**4. Total number of manholes:** 99 (actual or estimated) Construction Materials: \_\_\_\_\_

**5. Major Trunk Sewers: (Greater than 10" diameter)** Construction Materials: \_\_\_\_\_

NAME	PIPE SIZE(S) (Min. to Max. Dia.)	LENGTH (Feet)	POPULATION Served (EDU)	DESIGN CAPACITY (At Limiting Section-gpm)	METERED	METERED
					ANNUAL AVG. FLOW (12 Month ADF-gpd)	PEAK HOURLY FLOW (Hourly Flow Rate-gpm)
N/A						

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Upper Gwynedd Township Date: 3/6/24

**6. Trunk, Branch, or Collector Sewers – Flow Metering:**

As a supplement to this questionnaire form please provide a discussion regarding the following:

Existing sanitary sewer flow rates shall be documented with actual metering of sewers. A discussion and mapping of the historical, existing, and proposed future placement of flow metering equipment to accurately record and document 15-minute interval readings of sanitary sewer velocity, level, flow rates, and rainfall quantities shall be provided. Average daily total flows, maximum peak daily total flows, hourly flow rates one day prior to, during, and one day subsequent to a rainfall greater than 1" per continuous 24-hour period or less are required if an SSO occurred. The peaking factor comparing the peak flow recorded during the highest continuous 24-hour period to the annual average daily flow shall be provided in a tabular form for all metered sites. If surcharging was recorded, 15-minute rainfall versus sanitary flow rates shall be determined. Please provide a discussion that applies the rainfall to flow rate comparison to possible future I&I investigations.

The area was televised in the last decade, but specific areas of I/I Abatement have not been identified.

Towamencin owns and operates a meter at Manhole 21.2 that records flows leaving the Upper Gwynedd collection system.

Staff request that monthly average meter readings be shared so that an analysis of I/I flows can be performed in the future.

**7. Collection System Capacity Problems:**

If existing or proposed flows exceed a sewer section capacity at any time for a period of a half hour (flow depths greater than the pipe diameter constitute a surcharge overload condition), discuss the municipality's on-going and proposed efforts to reduce the I&I flows contributing to the overload condition at each location. Provide documentation of investigative and corrective repair and/or rehabilitation efforts completed. Estimate the schedule of proposed efforts to eliminate the potential overload. Provide copies of all Sanitary Sewer Overflow (SSO) and Sanitary Sewer Discharge (SSD) reports during the year. Use additional sheets as necessary.

Upper Gwynedd had no reported SSOs or SSDs within this collection system for 2023. Rehabilitation work has not been

performed within this portion of the collection system for several years.

**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

Municipality Name: Upper Gwynedd Township Date: 3/6/24

**B. PUMPING STATIONS**

1. Description: (Include all municipal and private stations discharging to the Authority)

<u>Name/Number</u>	<u>Location</u>	<u>Capacity Existing</u>	<u>(mgd) Ultimate</u>	<u>Metered* (Yes/No)</u>	<u>Force Length (feet)</u>	<u>Main Diameter (inches)</u>	<u>Estimated Service Area Total EDU</u>
N/A							

2. Pumping Station Flows:

<u>NAME</u>	<u>Recorded Present 2023</u>		<u>Projected Annual Monthly Average &amp; Peak Daily Flows (mgd)</u>									
	<u>Avg.</u>	<u>Peak</u>	<u>2024</u>		<u>2025</u>		<u>2026</u>		<u>2027</u>		<u>2028</u>	
			<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>
Station: <u>N/A</u>												
Station: _____												
Station: _____												
Station: _____												
Station: _____												
Station: _____												

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Upper Gwynedd Township Date: 3/6/24

**3. Pumping Stations – Flow Metering:**

As a supplement to this questionnaire form please provide a discussion for the following:

Existing sanitary sewer flow rates shall be documented with actual metering of influent flows into all pump stations. A discussion and copies of station plans of the actual and proposed placement of flow metering equipment to accurately record and document 15-minute readings of sanitary sewer influent flow rates, pumping rates, and rainfall quantities shall be provided. Average daily total flows, maximum peak daily total flows, hourly flow rates one day prior to, during, and one day subsequent to a rainfall greater than 1" per 24 hours or less shall be provided. The peaking factor comparing the peak flow recorded during the highest continuous 24-hour period to the annual average daily flow shall be provided in a tabular form for all pumping stations. If surcharging was recorded or if all pumps were in simultaneous operation for more than a half hour, a comparison of rainfall versus sanitary flow rates shall be determined. Please provide a discussion that applies the rainfall to flow rate comparison to possible future I&I investigations.

**4. Pumping Stations Capacity:**

If the existing metered and/or projected peak flow rates exceed the pumping station design capacity (gallons per minute without the largest pump) at any time for a period of a half hour, explain ongoing and proposed efforts to reduce the overload for each station. Provide documentation of investigative and corrective repair and/or rehabilitation efforts completed. Estimate the schedule of proposed efforts to reduce the overload. Provide copies of all Sanitary Sewer Overflow (SSO) and Sanitary Sewer Discharge (SSD) reports during the year. Use additional sheets as necessary to document existing recorded flows and provide a detailed discussion.

N/A

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TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Upper Gwynedd Township Date: 3/6/24

**C. INDUSTRIAL FLOWS**

<u>Industry Name</u>	<u>SIC Code</u>	<u>Location</u>	<u>2023 Average Flow (GPD)</u>	<u>Current Metered (Yes/No)</u>	<u>Waste Strength (mg/L BOD<sub>5</sub>)</u>
N/A					

**D. PROGRAM FOR SANITARY SEWER MONITORING, OPERATION AND MAINTENANCE AND REPAIRS**

**1. The program shall discuss the following activities:**

- a. Monitoring    b. Maintenance    c. Repair    d. Rehabilitation    e. Routine & Special Activities
- f. Personnel & Equipment Used    g. Sampling Frequency    h. Quality Assurance    i. Data Analyses
- j. Infiltration / Inflow (I&I) monitoring-Explain municipality's application of flow metering data provided by TMA in your I&I program

**2. Annual events & activities:**

- a. Provide copies of SSO & SSD reports submitted to PADEP during the past year. Provide discussion on cause(s) of SSO/SSD and surcharges in the drainage area tributary to the manhole, the capacity of the sewers & pump station(s) downstream of the manhole and peak flow rates. Provide a comparison of dry weather average peak flows to average daily flows and wet weather peak flow rates and a hydraulic analysis of the problem sewers.
- b. Provide a discussion of repairs made to reduce the I&I causing the SSO/SSD and planned activities for 2024.
- c. Provide information for the total anticipated flow rates based on existing connections to the problem sewers and any proposed new connections and the anticipated dry and wet average and peak flow rates compared to sewer and pump station(s) capacity.
- d. Provide annual calibration reports for flow metering systems in sewers and pump stations.

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Upper Gwynedd Township Date: 3/6/24

E. **SANITARY SEWER EXTENSIONS (2023 ONLY)\***

<u>Name/Area Served/Interceptor</u>	<u>Sewer Size</u>	<u>Extension Length</u>	<u>DEP Permit No.</u>	<u>Housing Units Served (Actual/Estimated)</u>					
				<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>
N/A									

\*Please attach plans of sanitary sewer system detailing additions made in 2023.

F. **PROPOSED HOUSING DEVELOPMENTS**


Proposed Housing Units to be Connected. These should match the projections on the Connection Management Plan (CMP) as applicable.

<u>Name/Area Served Segregate &amp; Total by each Interceptor Drainage Area</u>	<u>DEP Permits Obtained (Yes/ No)</u>	<u>DEP Permit No.</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>
			N/A				

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Upper Gwynedd Township Date: 3/6/24

G. CERTIFICATION

Signed:  \_\_\_\_\_

Title: Upper Gwynedd Township Sewer Engineer (SEAL)

Address: Gilmore & Associates, Inc., Attn: Steve Walsh, PE  
65 E Butler Ave., Suite 100  
New Britain, PA 18901

Phone No.: 215 345-4330

**APPENDIX C –  
HATFIELD TOWNSHIP  
2023 CHAPTER 94 QUESTIONNAIRE**



TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: HATFIELD TWP MUNICIPAL AUTH. Date: 3/1/24

**A. SEWER SYSTEM DETAILS**

1. Connected Population: (ASSUMING YOU MEAN NEW PROPOSED)

Actual Year End	Projected				
2023	2024	2025	2026	2027	2028
0	0	?	?	?	?

ADVANCED LIVING HAS ASKED ABOUT CAPACITY. THEY WERE DIRECTED TO CONTACT TOWAMENCIN FIRST. WE HAVE RECEIVED NO FURTHER CONTACT.

2. Total length of gravity sewer main pipe in collection system: 4870 feet (actual or estimated)

3. Range of pipe sizes:

a. Collection Sewers: Construction Materials: PVC/DUCTILE  
Smallest: 8 inches (actual or estimated) Largest: \_\_\_\_\_ inches (actual or estimated)

b. Trunk Sewers: Construction Materials: PVC/DUCTILE  
Smallest: 8 inches (actual or estimated) Largest: \_\_\_\_\_ inches (actual or estimated)

4. Total number of manholes: 32 (actual or estimated) Construction Materials: CONCRETE

5. Major Trunk Sewers: (Greater than 10" diameter) Construction Materials: \_\_\_\_\_

NAME	PIPE SIZE(S) (Min. to Max. Dia.)	LENGTH (Feet)	POPULATION Served (EDU)	DESIGN CAPACITY (At Limiting Section-gpm)	METERED	METERED
					ANNUAL AVG. FLOW (12 Month ADF-gpd)	PEAK HOURLY FLOW (Hourly Flow Rate-gpm)

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: PLATFIELD TOWNSHIP

Date: 3/1/2024

6. Trunk, Branch, or Collector Sewers – Flow Metering:

As a supplement to this questionnaire form please provide a discussion regarding the following:

Existing sanitary sewer flow rates shall be documented with actual metering of sewers. A discussion and mapping of the historical, existing, and proposed future placement of flow metering equipment to accurately record and document 15-minute interval readings of sanitary sewer velocity, level, flow rates, and rainfall quantities shall be provided. Average daily total flows, maximum peak daily total flows, hourly flow rates one day prior to, during, and one day subsequent to a rainfall greater than 1" per continuous 24-hour period or less are required if an SSO occurred. The peaking factor comparing the peak flow recorded during the highest continuous 24-hour period to the annual average daily flow shall be provided in a tabular form for all metered sites. If surcharging was recorded, 15-minute rainfall versus sanitary flow rates shall be determined. Please provide a discussion that applies the rainfall to flow rate comparison to possible future I&I investigations.

N/A

7. Collection System Capacity Problems:

If existing or proposed flows exceed a sewer section capacity at any time for a period of a half hour (flow depths greater than the pipe diameter constitute a surcharge overload condition), discuss the municipality's on-going and proposed efforts to reduce the I&I flows contributing to the overload condition at each location. Provide documentation of investigative and corrective repair and/or rehabilitation efforts completed. Estimate the schedule of proposed efforts to eliminate the potential overload. Provide copies of all Sanitary Sewer Overflow (SSO) and Sanitary Sewer Discharge (SSD) reports during the year. Use additional sheets as necessary.

NONE OBSERVED

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: NATFIELD TOWNSHIP Date: 3/1/2024

**B. PUMPING STATIONS**

1. Description: (Include all municipal and private stations discharging to the Authority)

<u>Name/Number</u>	<u>Location</u>	<u>Capacity Existing</u>	<u>(mgd) Ultimate</u>	<u>Metered* (Yes/No)</u>	<u>Force Length (feet)</u>	<u>Main Diameter (inches)</u>	<u>Estimated Service Area Total EDU</u>
None							

2. Pumping Station Flows:

<u>NAME</u>	<u>Recorded Present 2023</u>		<u>Projected Annual Monthly Average &amp; Peak Daily Flows (mgd)</u>									
	<u>Avg.</u>	<u>Peak</u>	<u>2024</u>		<u>2025</u>		<u>2026</u>		<u>2027</u>		<u>2028</u>	
			<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>
Station: <u>N/A</u>												
Station: _____												
Station: _____												
Station: _____												
Station: _____												
Station: _____												

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: HATFIELD TOWNSHIP

Date: 3-1-2020

**3. Pumping Stations – Flow Metering:**

As a supplement to this questionnaire form please provide a discussion for the following:

Existing sanitary sewer flow rates shall be documented with actual metering of influent flows into all pump stations. A discussion and copies of station plans of the actual and proposed placement of flow metering equipment to accurately record and document 15-minute readings of sanitary sewer influent flow rates, pumping rates, and rainfall quantities shall be provided. Average daily total flows, maximum peak daily total flows, hourly flow rates one day prior to, during, and one day subsequent to a rainfall greater than 1" per 24 hours or less shall be provided. The peaking factor comparing the peak flow recorded during the highest continuous 24-hour period to the annual average daily flow shall be provided in a tabular form for all pumping stations. If surcharging was recorded or if all pumps were in simultaneous operation for more than a half hour, a comparison of rainfall versus sanitary flow rates shall be determined. Please provide a discussion that applies the rainfall to flow rate comparison to possible future I&I investigations.

**4. Pumping Stations Capacity:**

If the existing metered and/or projected peak flow rates exceed the pumping station design capacity (gallons per minute without the largest pump) at any time for a period of a half hour, explain ongoing and proposed efforts to reduce the overload for each station. Provide documentation of investigative and corrective repair and/or rehabilitation efforts completed. Estimate the schedule of proposed efforts to reduce the overload. Provide copies of all Sanitary Sewer Overflow (SSO) and Sanitary Sewer Discharge (SSD) reports during the year. Use additional sheets as necessary to document existing recorded flows and provide a detailed discussion.

N/A

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TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: NATFIELD TOWNSHIP

Date: 3-1-2024

C. INDUSTRIAL FLOWS

<u>Industry Name</u>	<u>SIC Code</u>	<u>Location</u>	<u>2023 Average Flow (GPD)</u>	<u>Current Metered (Yes/No)</u>	<u>Waste Strength (mg/L BOD<sub>5</sub>)</u>
N/A					

D. PROGRAM FOR SANITARY SEWER MONITORING, OPERATION AND MAINTENANCE AND REPAIRS

1. The program shall discuss the following activities:

- a. Monitoring
- b. Maintenance
- c. Repair
- d. Rehabilitation
- e. Routine & Special Activities
- f. Personnel & Equipment Used
- g. Sampling Frequency
- h. Quality Assurance
- i. Data Analyses
- j. Infiltration / Inflow (I&I) monitoring-Explain municipality's application of flow metering data provided by TMA in your I&I program

2. Annual events & activities:

- a. Provide copies of SSO & SSD reports submitted to PADEP during the past year. Provide discussion on cause(s) of SSO/SSD and surcharges in the drainage area tributary to the manhole, the capacity of the sewers & pump station(s) downstream of the manhole and peak flow rates. Provide a comparison of dry weather average peak flows to average daily flows and wet weather peak flow rates and a hydraulic analysis of the problem sewers.
- b. Provide a discussion of repairs made to reduce the I&I causing the SSO/SSD and planned activities for 2024.
- c. Provide information for the total anticipated flow rates based on existing connections to the problem sewers and any proposed new connections and the anticipated dry and wet average and peak flow rates compared to sewer and pump station(s) capacity.
- d. Provide annual calibration reports for flow metering systems in sewers and pump stations.

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: NATFIELD TOWNSHIP Date: 3-1-2025

**E. SANITARY SEWER EXTENSIONS (2023 ONLY)\***

<u>Name/Area Served/Interceptor</u>	<u>Sewer Size</u>	<u>Extension Length</u>	<u>DEP Permit No.</u>	<u>Housing Units Served (Actual/Estimated)</u>					
				<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>
<u>N/A</u>									

\*Please attach plans of sanitary sewer system detailing additions made in 2023.

**F. PROPOSED HOUSING DEVELOPMENTS**

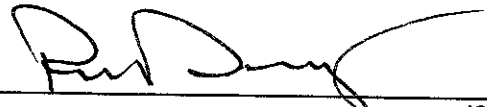
Proposed Housing Units to be Connected. These should match the projections on the Connection Management Plan (CMP) as applicable.

<u>Name/Area Served</u> <u>Segregate &amp; Total by each</u> <u>Interceptor Drainage Area</u>	<u>DEP Permits</u> <u>Obtained</u>  <u>(Yes/ No)</u>	<u>DEP</u> <u>Permit</u>  <u>No.</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: HATFIELD TOWNSHIP Date: 3-1-2024

G. CERTIFICATION

Signed: 

Title: EXEC DIRECTOR (SEAL)

Address: HTMA  
3200 ADVANCE LN.  
COLMAR PA 18915

Phone No.: 215 822 9300

**APPENDIX D –  
LANSDALE BOROUGH  
2023 CHAPTER 94 QUESTIONNAIRE**



**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

Municipality Name: Lansdale Borough Date: January 16, 2024

**A. SEWER SYSTEM DETAILS**

1. **Connected Population:**

Actual					
<u>Year End</u>	Projected				
<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>
<u>42</u>	<u>42</u>	<u>42</u>	<u>42</u>	<u>42</u>	<u>42</u>

2. **Total length of gravity sewer main pipe in collection system:** 2,400 feet (actual or estimated)

3. **Range of pipe sizes:**

- a. Collection Sewers: Construction Materials: Terra Cotta  
 Smallest: 8 inch inches (actual or estimated) Largest: 8 inch inches (actual or estimated)
- b. Trunk Sewers: Construction Materials: N/A  
 Smallest: N/A inches (actual or estimated) Largest: N/A inches (actual or estimated)

4. **Total number of manholes:** 11 (actual or estimated) Construction Materials: Brick

5. **Major Trunk Sewers: (Greater than 10" diameter)** Construction Materials: \_\_\_\_\_

NAME	PIPE SIZE(S) (Min. to Max. Dia.)	LENGTH (Feet)	POPULATION Served (EDU)	DESIGN CAPACITY (At Limiting Section-gpm)	METERED ANNUAL AVG. FLOW (12 Month ADF-gpd)	METERED PEAK HOURLY FLOW (Hourly Flow Rate-gpm)

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Lansdale Borough Date: January 16, 2024

6. Trunk, Branch, or Collector Sewers – Flow Metering:

As a supplement to this questionnaire form please provide a discussion regarding the following:

Existing sanitary sewer flow rates shall be documented with actual metering of sewers. A discussion and mapping of the historical, existing, and proposed future placement of flow metering equipment to accurately record and document 15-minute interval readings of sanitary sewer velocity, level, flow rates, and rainfall quantities shall be provided. Average daily total flows, maximum peak daily total flows, hourly flow rates one day prior to, during, and one day subsequent to a rainfall greater than 1" per continuous 24-hour period or less are required if an SSO occurred. The peaking factor comparing the peak flow recorded during the highest continuous 24-hour period to the annual average daily flow shall be provided in a tabular form for all metered sites. If surcharging was recorded, 15-minute rainfall versus sanitary flow rates shall be determined. Please provide a discussion that applies the rainfall to flow rate comparison to possible future I&I investigations.

Lansdale Borough monitors I&I throughout the Borough's sanitary sewer collection system and Lansdale Borough is not aware of any issues relating to flows, SSOs, or I&I in the sanitary sewer collection system.

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7. Collection System Capacity Problems:

If existing or proposed flows exceed a sewer section capacity at any time for a period of a half hour (flow depths greater than the pipe diameter constitute a surcharge overload condition), discuss the municipality's on-going and proposed efforts to reduce the I&I flows contributing to the overload condition at each location. Provide documentation of investigative and corrective repair and/or rehabilitation efforts completed. Estimate the schedule of proposed efforts to eliminate the potential overload. Provide copies of all Sanitary Sewer Overflow (SSO) and Sanitary Sewer Discharge (SSD) reports during the year. Use additional sheets as necessary.

N/A

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TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Lansdale Borough

Date: January 16, 2024

**B. PUMPING STATIONS**

1. Description: (Include all municipal and private stations discharging to the Authority)

<u>Name/Number</u>	<u>Location</u>	<u>Capacity</u>		<u>Metered*</u> (Yes/No)	<u>Force</u>		<u>Main</u> <u>Diameter</u> (inches)	<u>Estimated</u> <u>Service Area</u> <u>Total EDU</u>	
		<u>Existing</u>	<u>(mgd)</u> <u>Ultimate</u>		<u>Length</u> (feet)	<u>Diameter</u> (inches)			
<u>N/A</u>									

2. Pumping Station Flows:

<u>NAME</u>	<u>Recorded</u>		<u>Projected Annual Monthly Average &amp; Peak Daily Flows (mgd)</u>									
	<u>Present 2023</u>		<u>2024</u>		<u>2025</u>		<u>2026</u>		<u>2027</u>		<u>2028</u>	
	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>
Station:	_____											
Station:	_____											
Station:	_____											
Station:	_____											
Station:	_____											
Station:	_____											

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Lansdale Borough Date: January 16, 2024

**3. Pumping Stations – Flow Metering:**

As a supplement to this questionnaire form please provide a discussion for the following:

Existing sanitary sewer flow rates shall be documented with actual metering of influent flows into all pump stations. A discussion and copies of station plans of the actual and proposed placement of flow metering equipment to accurately record and document 15-minute readings of sanitary sewer influent flow rates, pumping rates, and rainfall quantities shall be provided. Average daily total flows, maximum peak daily total flows, hourly flow rates one day prior to, during, and one day subsequent to a rainfall greater than 1" per 24 hours or less shall be provided. The peaking factor comparing the peak flow recorded during the highest continuous 24-hour period to the annual average daily flow shall be provided in a tabular form for all pumping stations. If surcharging was recorded or if all pumps were in simultaneous operation for more than a half hour, a comparison of rainfall versus sanitary flow rates shall be determined. Please provide a discussion that applies the rainfall to flow rate comparison to possible future I&I investigations.

**4. Pumping Stations Capacity:**

If the existing metered and/or projected peak flow rates exceed the pumping station design capacity (gallons per minute without the largest pump) at any time for a period of a half hour, explain ongoing and proposed efforts to reduce the overload for each station. Provide documentation of investigative and corrective repair and/or rehabilitation efforts completed. Estimate the schedule of proposed efforts to reduce the overload. Provide copies of all Sanitary Sewer Overflow (SSO) and Sanitary Sewer Discharge (SSD) reports during the year. Use additional sheets as necessary to document existing recorded flows and provide a detailed discussion.

N/A

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TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Lansdale Borough Date: January 16, 2024

C. INDUSTRIAL FLOWS

<u>Industry Name</u>	<u>SIC Code</u>	<u>Location</u>	<u>2023 Average Flow (GPD)</u>	<u>Current Metered (Yes/No)</u>	<u>Waste Strength (mg/L BOD<sub>5</sub>)</u>
N/A					

D. PROGRAM FOR SANITARY SEWER MONITORING, OPERATION AND MAINTENANCE AND REPAIRS

1. The program shall discuss the following activities:

- a. Monitoring    b. Maintenance    c. Repair    d. Rehabilitation    e. Routine & Special Activities
- f. Personnel & Equipment Used    g. Sampling Frequency    h. Quality Assurance    i. Data Analyses
- j. Infiltration / Inflow (I&I) monitoring-Explain municipality's application of flow metering data provided by TMA in your I&I program

2. Annual events & activities:

- a. Provide copies of SSO & SSD reports submitted to PADEP during the past year. Provide discussion on cause(s) of SSO/SSD and surcharges in the drainage area tributary to the manhole, the capacity of the sewers & pump station(s) downstream of the manhole and peak flow rates. Provide a comparison of dry weather average peak flows to average daily flows and wet weather peak flow rates and a hydraulic analysis of the problem sewers.
- b. Provide a discussion of repairs made to reduce the I&I causing the SSO/SSD and planned activities for 2024.
- c. Provide information for the total anticipated flow rates based on existing connections to the problem sewers and any proposed new connections and the anticipated dry and wet average and peak flow rates compared to sewer and pump station(s) capacity.
- d. Provide annual calibration reports for flow metering systems in sewers and pump stations.

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Lansdale Borough Date: January 16, 2024

E. SANITARY SEWER EXTENSIONS (2023 ONLY)\*

<u>Name/Area Served/Interceptor</u>	<u>Sewer Size</u>	<u>Extension Length</u>	<u>DEP Permit No.</u>	<u>Housing Units Served (Actual/Estimated)</u>					
				<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>
<u>N/A</u>									

\*Please attach plans of sanitary sewer system detailing additions made in 2023.

F. PROPOSED HOUSING DEVELOPMENTS

Proposed Housing Units to be Connected. These should match the projections on the Connection Management Plan (CMP) as applicable.

<u>Name/Area Served</u> <u>Segregate &amp; Total by each</u> <u>Interceptor Drainage Area</u>	<u>DEP Permits</u> <u>Obtained</u>  <u>(Yes/ No)</u>	<u>DEP</u> <u>Permit</u>  <u>No.</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Lansdale Borough Date: January 16, 2024

G. CERTIFICATION

Signed:  \_\_\_\_\_ (SEAL)

Title: WWTP Superintendent

Address: One Vine Street

Lansdale, PA 19446

Phone No.: (215) 361-8362

**APPENDIX E –  
LOWER SALFORD TOWNSHIP  
2023 CHAPTER 94 QUESTIONNAIRE**



**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

**Municipality Name:** Lower Salford Township Authority **Date:** 1/29/2024

**A. SEWER SYSTEM DETAILS**

**1. Connected Population:**  
 Actual  
Year End                      Projected  
2023                              2024                      2025                      2026                      2027                      2028

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**2. Total length of gravity sewer main pipe in collection system:** 955 feet (actual or estimated)

**3. Range of pipe sizes:**

a. Collection Sewers: Construction Materials: ACP  
 Smallest: 8 inches (actual or estimated)      Largest: 10 inches (actual or estimated)

b. Trunk Sewers: Construction Materials: \_\_\_\_\_  
 Smallest: \_\_\_\_\_ inches (actual or estimated)      Largest: \_\_\_\_\_ inches (actual or estimated)

**4. Total number of manholes:** 7 (actual or estimated)      Construction Materials: Concrete

**5. Major Trunk Sewers: (Greater than 10" diameter)**      Construction Materials: \_\_\_\_\_

NAME	PIPE SIZE(S) (Min. to Max. Dia.)	LENGTH (Feet)	POPULATION Served (EDU)	DESIGN CAPACITY (At Limiting Section-gpm)	METERED	METERED
					ANNUAL AVG. FLOW (12 Month ADF-gpd)	PEAK HOURLY FLOW (Hourly Flow Rate-gpm)
n/a						

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Lower Salford Township Authority Date: 1/29/2024

**6. Trunk, Branch, or Collector Sewers – Flow Metering:**

As a supplement to this questionnaire form please provide a discussion regarding the following:

Existing sanitary sewer flow rates shall be documented with actual metering of sewers. A discussion and mapping of the historical, existing, and proposed future placement of flow metering equipment to accurately record and document 15-minute interval readings of sanitary sewer velocity, level, flow rates, and rainfall quantities shall be provided. Average daily total flows, maximum peak daily total flows, hourly flow rates one day prior to, during, and one day subsequent to a rainfall greater than 1" per continuous 24-hour period or less are required if an SSO occurred. The peaking factor comparing the peak flow recorded during the highest continuous 24-hour period to the annual average daily flow shall be provided in a tabular form for all metered sites. If surcharging was recorded, 15-minute rainfall versus sanitary flow rates shall be determined. Please provide a discussion that applies the rainfall to flow rate comparison to possible future I&I investigations.

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The Authority provides the water used by the customers connected to the TMA Interceptor and would be happy to discuss additional monitoring if necessary.

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**7. Collection System Capacity Problems:**

If existing or proposed flows exceed a sewer section capacity at any time for a period of a half hour (flow depths greater than the pipe diameter constitute a surcharge overload condition), discuss the municipality's on-going and proposed efforts to reduce the I&I flows contributing to the overload condition at each location. Provide documentation of investigative and corrective repair and/or rehabilitation efforts completed. Estimate the schedule of proposed efforts to eliminate the potential overload. Provide copies of all Sanitary Sewer Overflow (SSO) and Sanitary Sewer Discharge (SSD) reports during the year. Use additional sheets as necessary.

n/a

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**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

**Municipality Name:** Lower Salford Township Authority **Date:** 1/29/2024

**B. PUMPING STATIONS**

**1. Description: (Include all municipal and private stations discharging to the Authority)**

<u>Name/Number</u>	<u>Location</u>	<u>Capacity Existing</u>	<u>(mgd) Ultimate</u>	<u>Metered* (Yes/No)</u>	<u>Force Length (feet)</u>	<u>Main Diameter (inches)</u>	<u>Estimated Service Area Total EDU</u>
n/a							

**2. Pumping Station Flows:**

<u>NAME</u>	<u>Recorded Present 2023</u>		<u>Projected Annual Monthly Average &amp; Peak Daily Flows (mgd)</u>									
	<u>Avg.</u>	<u>Peak</u>	<u>2024</u>		<u>2025</u>		<u>2026</u>		<u>2027</u>		<u>2028</u>	
			<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>	<u>Avg.</u>	<u>Peak</u>
Station:												
Station:												
Station:												
Station:												
Station:												
Station:												

**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

**Municipality Name:** Lower Salford Township Authority **Date:** 1/29/2024

**3. Pumping Stations – Flow Metering:**

As a supplement to this questionnaire form please provide a discussion for the following:

Existing sanitary sewer flow rates shall be documented with actual metering of influent flows into all pump stations. A discussion and copies of station plans of the actual and proposed placement of flow metering equipment to accurately record and document 15-minute readings of sanitary sewer influent flow rates, pumping rates, and rainfall quantities shall be provided. Average daily total flows, maximum peak daily total flows, hourly flow rates one day prior to, during, and one day subsequent to a rainfall greater than 1" per 24 hours or less shall be provided. The peaking factor comparing the peak flow recorded during the highest continuous 24-hour period to the annual average daily flow shall be provided in a tabular form for all pumping stations. If surcharging was recorded or if all pumps were in simultaneous operation for more than a half hour, a comparison of rainfall versus sanitary flow rates shall be determined. Please provide a discussion that applies the rainfall to flow rate comparison to possible future I&I investigations.

**4. Pumping Stations Capacity:**

If the existing metered and/or projected peak flow rates exceed the pumping station design capacity (gallons per minute without the largest pump) at any time for a period of a half hour, explain ongoing and proposed efforts to reduce the overload for each station. Provide documentation of investigative and corrective repair and/or rehabilitation efforts completed. Estimate the schedule of proposed efforts to reduce the overload. Provide copies of all Sanitary Sewer Overflow (SSO) and Sanitary Sewer Discharge (SSD) reports during the year. Use additional sheets as necessary to document existing recorded flows and provide a detailed discussion.

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TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Lower Salford Township Authority Date: 1/29/2024

C. **INDUSTRIAL FLOWS**

<u>Industry Name</u>	<u>SIC Code</u>	<u>Location</u>	<u>2023 Average Flow (GPD)</u>	<u>Current Metered (Yes/No)</u>	<u>Waste Strength (mg/L BOD<sub>5</sub>)</u>

D. **PROGRAM FOR SANITARY SEWER MONITORING, OPERATION AND MAINTENANCE AND REPAIRS** \* SEE NEXT PAGE \*

1. **The program shall discuss the following activities:**

- a. Monitoring    b. Maintenance    c. Repair    d. Rehabilitation    e. Routine & Special Activities
- f. Personnel & Equipment Used    g. Sampling Frequency    h. Quality Assurance    i. Data Analyses
- j. Infiltration / Inflow (I&I) monitoring-Explain municipality's application of flow metering data provided by TMA in your I&I program

2. **Annual events & activities:**

- a. Provide copies of SSO & SSD reports submitted to PADEP during the past year. Provide discussion on cause(s) of SSO/SSD and surcharges in the drainage area tributary to the manhole, the capacity of the sewers & pump station(s) downstream of the manhole and peak flow rates. Provide a comparison of dry weather average peak flows to average daily flows and wet weather peak flow rates and a hydraulic analysis of the problem sewers.
- b. Provide a discussion of repairs made to reduce the I&I causing the SSO/SSD and planned activities for 2024.
- c. Provide information for the total anticipated flow rates based on existing connections to the problem sewers and any proposed new connections and the anticipated dry and wet average and peak flow rates compared to sewer and pump station(s) capacity.
- d. Provide annual calibration reports for flow metering systems in sewers and pump stations.

**D. Program for Sanitary Sewer Monitoring, Operation & Maintenance & Repairs**

- The Authority had no SSO's on the system.

In 2023 the 4 Unit Apartment unit had a Certificate of Occupancy issued on 10/13/23.

- The Mainland Inn located at 17 Mainland Road closed in April 2017.
- The Inn reopened as the Mallard at the Mainland Inn. North Penn Water Authority records show the following water usage:
  - 8,229 gal from 8/29/23 – 9/28/23,
  - 68,820 gal from 9/29/23 - 10/31/23,
  - 29,174 gal from 11/1/23 – 11/30/23
  - 26,930 gal from 12/1/23 – 12/28/23.
- The 4 Unit Apartment building had minimal usage from 10/13/23 – 12/31/23. LSTA will send water usage to TMA until the NEW Meter Pit is operational.
- The old meter was damaged during the flooding associated with tropical storm Isaias on 8/4/20 and has not been replaced. Based on an agreement with TMA in May 2016, The Lower Salford Township Authority provides water usage from the public water detail, obtained from NPWA, for billing purposes.
- New Meter Pit - This is to be constructed according to TMA's specifications by the developer of the Creekside at Mainland 45 unit apartment development. The meter pit is to be completed sometime in 2024. The Lower Salford Township Authority does not have a completion date from the developer.

**Proposed Future Connections**

- The Creekside at Mainland. In 2021 the Lower Salford Township Authority received plans for a proposed Development of 45 privately owned rental apartments at 17 Mainland Road. The proposed connection point is the LSTA interceptor which flows to TMA WWTP. Construction for the Creekside at Mainland began January 9, 2023.

- Currently the only usage is from the Mallard at the Mainland Inn and a 4 Unit Apartment Building within the Creekside at Mainland Project.

- 285 Wambold Road. The existing residential home is currently directly connected to a TMA sewer line. The home will be demolished with the construction of a two-story office space, storage, and service area space. The increase to the projected sewer flow is one additional EDU.

TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE

Municipality Name: Lower Salford Township Authority Date: 1/29/2024

E. **SANITARY SEWER EXTENSIONS (2023 ONLY)\***

<u>Name/Area Served/Interceptor</u>	<u>Sewer Size</u>	<u>Extension Length</u>	<u>DEP Permit No.</u>	<u>Housing Units Served (Actual/Estimated)</u>					
				<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>
n/a									

\*Please attach plans of sanitary sewer system detailing additions made in 2023.

F. **PROPOSED HOUSING DEVELOPMENTS**


Proposed Housing Units to be Connected. These should match the projections on the Connection Management Plan (CMP) as applicable.

<u>Name/Area Served</u> <u>Segregate &amp; Total by each</u> <u>Interceptor Drainage Area</u>	<u>DEP Permits</u> <u>Obtained</u> <u>(Yes/ No)</u>	<u>DEP</u> <u>Permit</u> <u>No.</u>	<u>Proposed Housing Units to be Connected. These should match the projections on the Connection Management Plan (CMP) as applicable.</u>					
			<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	
Creekside at Mainland			45 EDU's (Mainland Inn 3 EDU's Connected & 4 Unit Apt Connected 10/13/23)					
285 Wambold Road			1 EDU					

**TOWAMENCIN MUNICIPAL AUTHORITY  
2023 TRIBUTARY SEWER SYSTEM QUESTIONNAIRE**

**Municipality Name:** Lower Salford Township Authority **Date:** 1/29/2024

**G. CERTIFICATION**

Signed:  (SEAL)

Title: Operations Manager

Address: PO Box 243  
57 Main Street  
Harleysville, PA 19438

Phone No.: 215-256-8676

**APPENDIX F –  
WORCESTER TOWNSHIP  
2023 CHAPTER 94 QUESTIONNAIRE**





4259 W. Swamp Road  
Suite 410  
Doylestown, PA 18902

www.cksengineers.com  
215.340.0600

January 18, 2024  
Ref: # 7200-51

Herbert, Rowland & Grubic, Inc.  
501 Allendale Road, Suite 203  
King of Prussia, PA 19406

Attention: Christopher J. Ferdik, P.E.

Reference: Worcester Township, Chapter 94 - 2023

Dear Mr. Ferdik:

CKS Engineers is providing this letter on behalf of Worcester Township in conjunction with the Chapter 94 tributary municipality reporting requirements. As a municipality contributing wastewater to your wastewater treatment plant, Worcester Township is providing the information required to assist you with completion of your Chapter 94 reporting requirements. Accordingly, we are providing the following information:

### **94.12 ANNUAL REPORT**

Section (a)(4): There were no new sewer extensions or sewer connections constructed in calendar year 2023, tributary to your facility. Therefore, no new map has been provided.

Section (a)(5): The Towamencin Municipal Authority (TMA) owns the portion of the sanitary sewer system in Worcester Township which connects to Towamencin Township. The TMA owns and maintains the two sewage pumping stations which are part of the collection system (Hollis and Milestone pumping stations). The TMA leases back the collection system to Towamencin Township, which maintains the collection system in Worcester, with the exception of the pumping stations. The TMA report includes information required for this section of their Chapter 94 Report.

Section (a)(6): Information required by this section is part of the TMA Chapter 94 Report.

Section (a)(7): Information required by this section is part of the TMA Chapter 94 Report.

CKS Engineers

January 18, 2024  
Ref:# 7200-51  
Page 2

Section (a)(8)            There are no industrial wastes discharged into the sewer system within Worcester Township.

Section (a)(9):            Information required by this section is part of the TMA Chapter 94 Report.

The above information should enable you to complete your annual report. Please contact me if you have any questions.

Very truly yours,  
CKS Engineers  
Township Engineers



John W. Evarts, P.E.

JWE/paf

cc:    Sean Halbom, Manager, Worcester Township  
      Dustin Schrieber, Worcester Township  
      Joseph J. Nolan, P.E., CKS Engineers  
      File