3800-FM-BPNPSM0507 4/2014
Chapter 94 Report

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: 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:	**Lower Allen Township Authority**	Permit No.:	**PA0027189**
Mailing Address:	**120 Limekiln Road**	Effective Date:	**06/01/2022**
City, State, Zip:	**New Cumberland, PA 17070**	Expiration Date:	**05/31/2027**
Contact Person:	**Brian P. Kauffman, PE**	Renewal Due Date:	**12/02/2026**
Title:	**Manager/Engineer**	Municipality:	**Fairview Township**
Phone:	**717-774-0610**	County:	**York**
Email:	**bkauffman@latwp.org**	Consultant Name:	**N/A**

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 1**)
   ☒ DEP Chapter 94 Spreadsheet used (**Attachment 1**)
   ☐ 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 2**)
   ☒ DEP Chapter 94 Spreadsheet used (**Attachment 1**)
   ☐ 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))

   N/A

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 3**)

☒ List summarizing each extension or project attached (**Attachment 3**)

☒ Schedules describing how each project will be completed over time and effects attached (**Attachment 3**)

Comments:

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

See attachment 4

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

Check the appropriate boxes:

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

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

Comments:

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

Check the appropriate boxes:

☐ The collection system does not contain pump stations
☒ The collection system does contain pump stations (Number – **12**)
☒ Discussion of condition of each pump station attached (**Attachment 5**)

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 6**)

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 7**)

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 8**)

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).

Brian P. Kauffman, PE
Name of Responsible Official

Signature

717-774-0610
Telephone No.

3-25-24
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).

Brian P. Kauffman, PE
Name of Preparer

Signature

717-774-0610
Telephone No.

3-25-24
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Chapter 94 Report Instructions

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BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT INSTRUCTIONS

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

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

General Information

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

Chapter 94 Report Components

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

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

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

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

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

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

Certification

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

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

Attachment 1 Hydraulic Load
Lower Allen Township Authority
NPDES PA0027189

The PADEP Chapter 94 Spreadsheet and Line Graphs for hydraulic data with precipitation are contained in the report.

Additionally, the following information is included in the attachment.

Anticipated Connection Summary for the treatment plant service area as projected for the next five years based on available information.

The operating records for the treatment plant indicate compliance with the NPDES permit conditions during the reporting period, see Department Discharge Monitoring Report NPDES PA0027189 electronic file.

The plant was not hydraulicly overloaded in 2023 and is not projected to be overloaded in the next five years.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PADEP Chapter 94 Spreadsheet
Sewage Treatment Plants

Reporting Year: 2023

Facility Name: Lower Allen WWTP

Permit No.: PA0027189

Persons/EDU: 1.9

Existing Hydraulic Design Capacity:	13.5	MGD	**Existing Organic Design Capacity:**	10,000	lbs BOD5/day
Upgrade Planned in Next 5 Years?	NO	**Year:**	**Upgrade Planned in Next 5 Years?**	NO	**Year:**
Future Hydraulic Design Capacity:		MGD	**Future Organic Design Capacity:**		lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2019	2020	2021	2022	2023
January	10.894	6.915	6.429	5.503	5.515
February	9.856	7.352	6.144	7.062	4.538
March	10.67	7.099	7.489	6.449	4.992
April	9.505	7.409	6.868	8.159	4.674
May	9.855	7.824	6.211	9.376	5.604
June	8.39	6.968	6.063	6.669	4.399
July	7.431	5.566	7.067	5.993	5.75
August	5.98	5.085	5.861	4.938	4.243
September	5.335	4.233	8.915	5.143	4.368
October	5.538	3.595	6.612	4.572	4.522
November	6.893	4.342	6.4	3.9	4.148
December	6.758	5.652	4.926	5.22	6.044
Annual Avg	8.092	6.003	6.582	6.082	4.9
Max 3-Mo Avg	10.473	7.444	7.309	8.068	5.251
Max : Avg Ratio	1.29	1.24	1.11	1.33	1.07
Existing EDUs	22,940.0	23,040.0	23,232.0	23,514.0	23,842.0
Flow/EDU (GPD)	352.7	260.5	283.3	258.7	205.5
Flow/Capita (GPD)	185.7	137.1	149.1	136.1	108.2
Exist. Overload?	NO	NO	NO	NO	NO

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

Month	2019	2020	2021	2022	2023
January	7,329	6,715	6,327	6,354	6,224
February	7,549	7,068	6,284	6,962	5,652
March	7,414	6,586	7,805	6,454	5,371
April	7,604	6,086	6,672	6,918	5,290
May	7,242	5,775	6,437	6,563	5,296
June	6,778	5,969	6,147	6,146	5,018
July	6,545	5,516	6,386	6,224	5,001
August	6,108	5,279	6,031	5,618	4,945
September	5,696	5,317	7,589	5,625	4,238
October	6,047	4,923	6,802	5,198	4,957
November	6,590	6,126	5,870	5,700	4,746
December	6,326	5,391	5,871	6,445	5,771
Annual Avg	6,769	5,896	6,518	6,184	5,209
Max Mo Avg	7,604	7,068	7,805	6,962	6,224
Max : Avg Ratio	1.12	1.20	1.20	1.13	1.19
Existing EDUs	22,940	23,040	23,232	23,514	23,842
Load/EDU	0.295	0.256	0.281	0.263	0.218
Load/Capita	0.155	0.135	0.148	0.138	0.115
Exist. Overload?	NO	NO	NO	NO	NO

Projected Flows for Next Five Years (MGD)

	2024	2025	2026	2027	2028
New EDUs	285.0	245.0	190.0	183.0	172.0
New EDU Flow	0.06181	0.04455	0.03967	0.03504	0.0468
Proj. Annual Avg	6.394	6.43855	6.47822	6.51326	6.56006
Proj. Max 3-Mo Avg	7.728	7.782	7.829	7.872	7.928
Proj. Overload?	NO	NO	NO	NO	NO

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

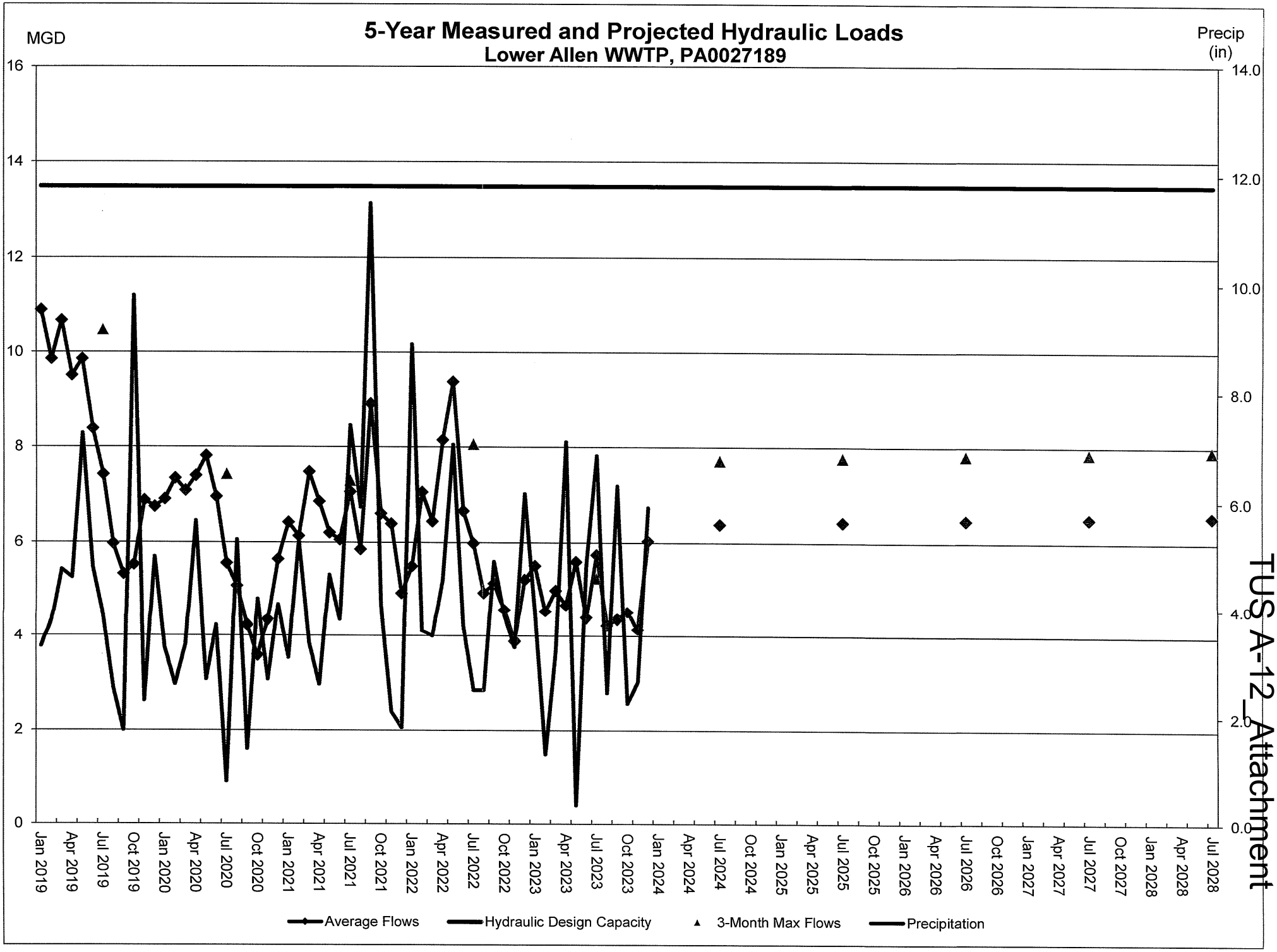
	2024	2025	2026	2027	2028
New EDUs	285	245	190	183	172
New EDU Load	74.842	64.338	49.895	48.057	45.168
Proj. Annual Avg	6,190	6,254	6,304	6,352	6,398
Proj. Max Avg	7,230	7,305	7,364	7,420	7,473
Proj. Overload?	NO	NO	NO	NO	NO

Show Precipitation Data on Hydraulic Graph?

Total Monthly Precipitation for Past Five Years (Inches)

Month	2019	2020	2021	2022	2023
January	3.31	3.3	3.1	8.9	3.95
February	3.78	2.6	5.3	3.6	1.3
March	4.75	3.33	3.4	3.5	3.21
April	4.6	5.65	2.6	4.55	7.1
May	7.25	2.7	4.65	7.05	0.35
June	4.8	3.7	3.8	3.7	4.85
July	3.9	0.8	7.4	2.5	6.85
August	2.55	5.3	5.9	2.5	2.45
September	1.75	1.4	11.5	4.9	6.3
October	9.8	4.2	4.1	3.9	2.25
November	2.3	2.7	2.1	3.3	2.65
December	4.99	4.1	1.8	6.15	5.9

TUS A-12_Attachment



TUS A-12_Attachment

Lower Allen Township Authority
Anticipated Connection Summary
2023 DEP Chapter 94 Report

Collection System		Year 2024	2025	2026	2027	2028
PA American Water	EDUs	120	120	120	120	120
Fairview Area LATA	GPD	27,000	27,000	27,000	27,000	27,000
PA Depart. Corrections SCIC	EDUs	0	0	0	0	0
	GPD	0	0	0	0	0
Upper Allen Twp to LATA	EDUs	91	80	52	47	41
	GPD	20,750	9,000	9,250	5,000	10,250
Lower Allen Township	EDUs	74	45	18	16	11
Authority Service Area	GPD	14,060	8,550	3,420	3,040	2,090
TOTAL	**EDUs**	**285**	**245**	**190**	**183**	**172**
	GPD	**61,810**	**44,550**	**39,670**	**35,040**	**39,340**

Note: Based on available estimated connection information.

Lower Allen Township Authority Service Area Connections		Year 2024	2025	2026	2027	2028
High Meadow	EDUs	1	1			
	GPD	190	190			
Birch Grove	EDUs	12				
	GPD	2280				
Arcona Phase 3	EDUs			5	5	5
	GPD			950	950	950
Arcona Phase 8.3/9	EDUs		25	25		
	GPD		4750	4750		
Arcona Phase 8.2	EDUs	40	34			
	GPD	7600	6460	0		
Lower Allen Commons	EDUs	1				
	GPD	190				
Lark Meadow	EDUs	6	6			
	GPD	1140	1140			
Sheepford Road	EDUs		3	3	3	3
	GPD		570	570	570	570
Miscellaneous	EDUs	3	3	3	3	3
	GPD	570	570	570	570	570
TOTAL	EDUs	63	72	36	11	11
	GPD	11970	13680	6840	2090	2090

Note: Based on available land development information for Lower Allen Township and Shiremanstown Borough.

Lower Allen Township Authority
Influent Loading Summary 2023

Month	Rainfall Inches	Flow MGD	BOD mg/L	BOD LBS/D	SS mg/L	TP mg/L	NH3-N mg/L	NO2/NO3 mg/L	TKN mg/L	TN mg/L
January	3.95	5.515	138	6224	114	3.22	13.10	0.831	19.7	20.50
February	1.30	4.538	150	5652	117	3.11	14.53	0.698	22.63	23.35
March	3.21	4.992	128	5371	117	2.97	12.69	0.921	20.6	21.55
April	7.10	4.674	135	5290	128	2.98	14.26	0.479	21.3	21.82
May	0.35	5.604	120	5296	117	3.06	13.10	0.509	20.1	20.80
June	4.85	4.399	139	5018	130	3.24	15.22	0.333	22.1	22.46
July	6.85	5.75	105	5001	112	2.5	12.7	0.235	18.63	18.90
August	2.45	4.243	140	4945	135	3.21	16.05	0.243	23.2	23.45
September	6.30	4.368	122	4238	131	3.12	16.84	0.207	24.38	24.38
October	2.25	4.522	130	4957	124	2.99	15.3	0.326	20.9	21.20
November	2.65	4.148	138	4746	138	3.39	17.55	0.428	23.95	24.40
December	5.90	6.044	119	5771	114	2.72	13.7	0.526	20.56	21.12
Total	**47.16**									
Average		**4.900**	**130**	**5209**	**123**	**3.04**	**14.59**	**0.478**	**21.5**	**22.0**

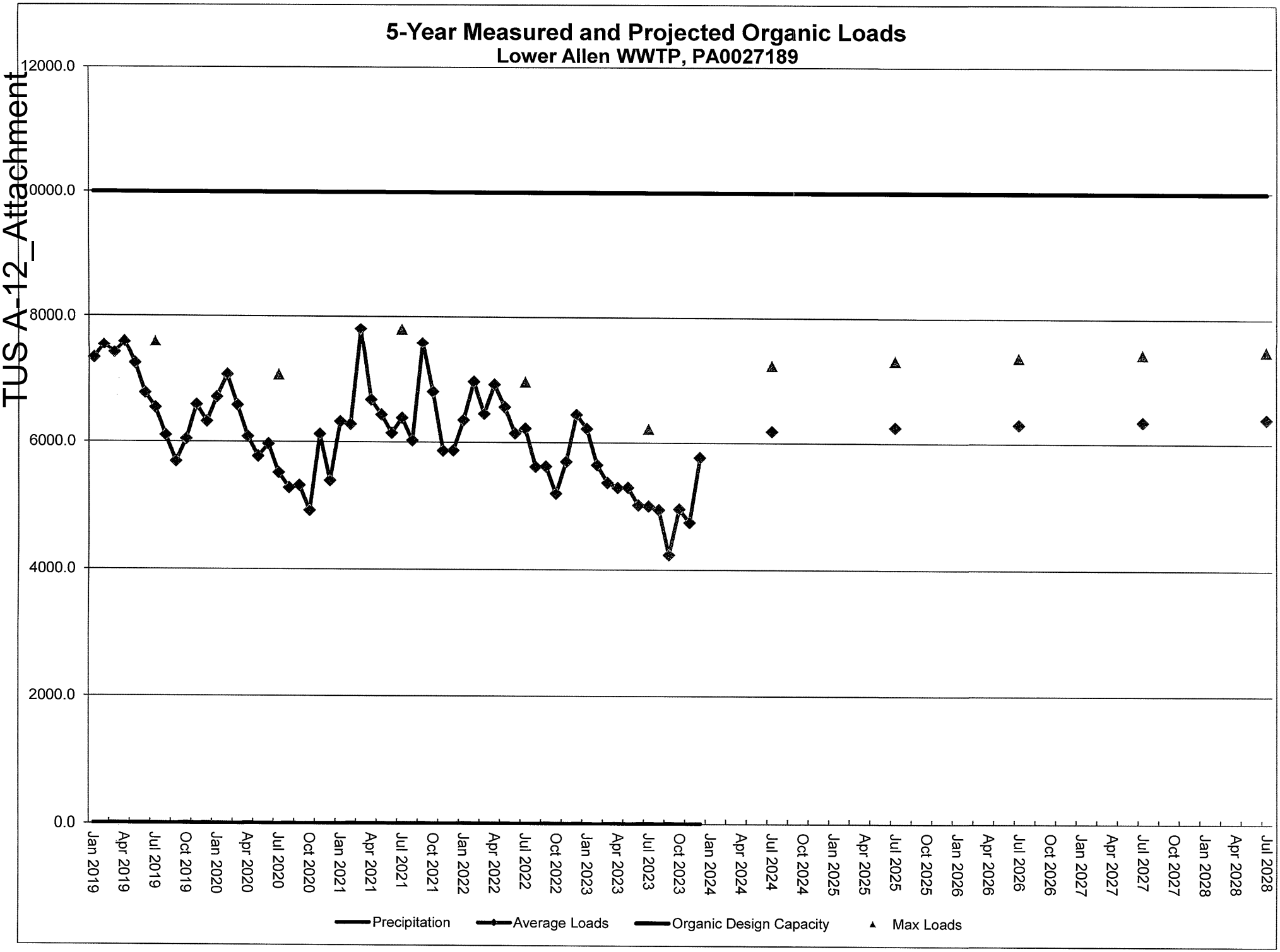
TUS A-12_Attachment

Attachment 2 Organic Load
Lower Allen Township Authority
NPDES PA0027189

The PADEP Chapter 94 Spreadsheet and Line Graph for organic data is contained in the report.

Based on the above information, the treatment plant is not by PADEP definition organically overloaded nor projected to be overloaded in the next five years.

TUS A-12_Attachment

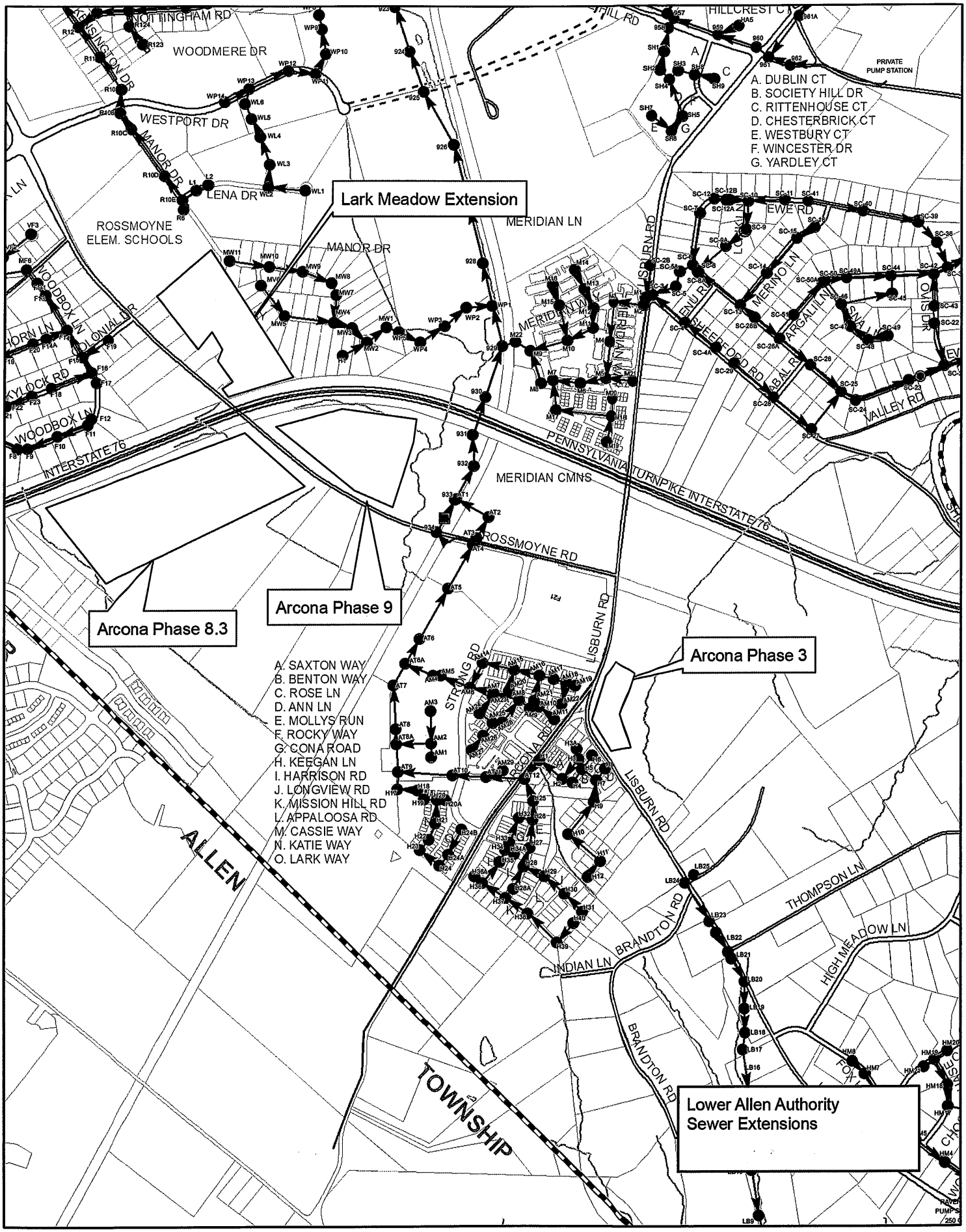


Attachment 3 Sewer Extensions
Lower Allen Township Authority
NPDES PA0027189

The sewer system base map sections included identify the Authority sewer system extension activity. Arcona Phase 8.3, 9 and 3 are pending. Lark Meadow, a new 15 home development is complete (2023).

Tributary collection system extension activity can be found in Attachment 10.

TUS A-12_Attachment



Attachment 4 Sewer System
Lower Allen Township Authority
NPDES PA0027189

The Lower Allen Township Authority sewer system remains in good condition due to the continuing maintenance program and rehabilitation work performed by the Authority staff. Sewer system I/I sources when identified are repaired and removed from the system in an ongoing program.

The Authority sewer system includes over 761,700 feet of collection sewers, 2,539 manholes, eight pumping stations and three metering chambers. The Authority owns and operates a sewer flusher truck, sewer line rapid acoustical assessment equipment, sewer televising system, flow metering equipment, and construction equipment for monitoring and maintaining the sewers. The Authority has a staff of 26 people with 11 licensed Class A operators plus 2 have the lab subclass certifications. Monthly summaries of major sewer system maintenance activities are included with this section.

The Authority personnel and contractors completed the following collection system maintenance and rehabilitation activities as listed below.

1. Internal camera inspection of 2681 feet of sewer main.
2. Responded to 15 blockage calls and cleaned 3,789 feet of sewer main related to calls. Seventy eight percent of blockages were identified as being in the home owner's lateral.
3. Sewer line rapid acoustical assessment was completed on 34,583 feet of sewer main resulting in 21,876 feet of pipe requiring flushing and retesting. This represents 15 percent of the sewer main system being tested and cleaned for the year.
4. Responded to over 1,959 PA One Call system requests for sewer system field location markings for utility protection.
5. Inspection of 55 new service connections, 63 service lateral repairs and 1 disconnect.

Infiltration flow monitoring was completed between 2 AM and 5 AM at 8 locations in April and October where tributary municipal systems connect to the Authority system. An average total of 88,456 GPD of unmetered infiltration was observed in April and 83,220 GPD in October at these locations. The tributary municipalities were notified of the metering results.

The Authority future sewer system activities are outlined in Attachment 7.

Staff Activity Summary Report – January 2023

Collection System

Responded to 105 PA-One Call utility location requests.

Inspected 9 lateral repairs, 0 lateral disconnects and 5 new service lateral connections.

Air and mandrel testing new mains of Arcona Phase 8.2.

Completed rapid sewer inspection on 0 feet of sewer main.

Flushed 744 feet of sewer main and 3 blockage calls.

Completed internal camera inspection of 343 feet of sewer main.

Treatment Plant

Replaced high water float at Beacon Hill pump station.

Replaced cord on roll up door in truck bay.

Replaced timer for fan at Windsor Park pump station.

Replaced bad electric contact at Shiremanstown pump station.

Replaced heater in primary pump room.

Replaced block heater at Linda Lane pump station.

Repaired lights in U.V. building.

Repaired lights at aeration tanks.

Preventative maintenance on golf cart.

Preventative maintenance on L.A.-29 Ford truck.

Preventative maintenance on L.A.-26 Ford truck.

Tightened up check valve packing nuts on #3 main pump.

State inspection on L.A.-27 Chevy truck.

Put rebuilt rotating assembly on #4 main pump and rebuilt old assembly.

Staff Activity Summary Report – February 2023

Collection System

Responded to 97 PA-One Call utility location requests.

Inspected 8 lateral repairs, 0 lateral disconnects and 2 new service lateral connections.

Air and mandrel testing new mains of Arcona Phase 8.2.

Completed rapid sewer inspection on 847 feet of sewer main.

Flushed 874 feet of sewer main and 0 blockage calls.

Completed internal camera inspection of 347 feet of sewer main.

Treatment Plant

Replaced glass on sand blaster.

Replaced main sewer pump #2 stand.

Repaired heater in truck loading bay.

Repaired wet well pan/hoist doors.

Rebuilt spare air release valve for Sheepford pump station.

Rebuilt spare rotating assembly for main sewer pumps #1 and #4.

Rebuilt spare drive shaft for main sewer pumps #1 and #4.

Installed new motor on reaeration blower #1.

Had main sewer pump #1 drive motor rebuilt.

Had main sewer pump #2 check valve rebuilt.

State inspection on LA-25 Mack dump truck.

State inspection on LA-22 International dump truck.

Staff Activity Summary Report – March 2023

Collection System

Responded to 164 PA-One Call utility location requests.

Inspected 3 lateral repairs, 0 lateral disconnects and 4 new service lateral connections.

Air and mandrel testing new mains of Arcona Phase 8.2.

Completed rapid sewer inspection on 7,291 feet of sewer main.

Flushed 4,145 feet of sewer main and 1 blockage call.

Completed internal camera inspection of 395 feet of sewer main.

Treatment Plant

Replaced 3-way switch in sludge disposal building.

Replaced pump and nozzle on bulk oil tank.

Replaced air release valve for Sheepford pump station.

Repaired lights in sludge disposal building office.

Repaired portable welder.

Repaired light at anoxic zone mixer 2B.

Repaired and state inspection on LA 29 Ford F250.

Repaired and state inspection on LA 26 Ford F150.

Preventative maintenance on LA 17 Chevrolet Colorado.

Preventative maintenance on air compressor in sludge disposal building.

Preventative maintenance and state inspection on LA 16 Ford Escape.

Preventative maintenance, repaired, and state inspection on LA 18 Ford F450.

Rebuilt back flow preventer in sludge disposal building.

Prepared snow blowers for storage and removed lawn mowers from storage.

Staff Activity Summary Report – April 2023

Collection System

Responded to 186 PA-One Call utility location requests.

Inspected 1 lateral repair, 0 lateral disconnects and 2 new service lateral connections.

Air and mandrel testing new mains of Arcona Phase 8.2.

Completed rapid sewer inspection on 14,156 feet of sewer main.

Flushed 10,566 feet of sewer main and 5 blockage calls.

Completed internal camera inspection of 1,063 feet of sewer main.

Preventative maintenance on #1 and #2 pumps at Raven Hill pump station.

Treatment Plant

Replaced the inner loop on main gate.

Repaired lights in plant.

Repaired flow meter on dilution line for alum pumps.

Repaired electrical system on 6-inch Ford pump.

Rebuilt 5x8 lawn mower trailer.

State inspection and new wiper blades on LA-28 Mack tractor.

Checked ATAD harmonics cooling fans.

Tightened mounting bolts on mixer 1A second anoxic zone.

Staff Activity Summary Report – May 2023

Collection System

Responded to 201 PA-One Call utility location requests.

Inspected 8 lateral repairs, 0 lateral disconnects and 5 new service lateral connections.

Air and mandrel testing new mains of Arcona Phase 8.2.

Completed rapid sewer inspection on 4,498 feet of sewer main.

Flushed 3,770 feet of sewer main and 1 blockage call.

Completed internal camera inspection of 300 feet of sewer main.

Treatment Plant

Replaced Exmark mower deck belts.

Replaced blades on Scag mower.

Replaced MCC cooling fan and filters.

Replaced broken weir plate brackets on all clarifiers.

Installed new weir plates and brackets on 3 final clarifier.

Tightened weir plate bolts on #1 and #2 final clarifiers.

Tightened weir plate bolts on #1 and #2 primary clarifiers.

Repaired biofilter drain pit pump, float and alarm.

Repaired lights on BNR tanks and substation #3.

State inspection on backhoe trailer.

State inspection on #1 and #2 Polar tankers.

Preventative maintenance on 6-inch Ford pump.

Preventative maintenance on LA-27 Chevy pickup.

Staff Activity Summary Report – June 2023

Collection System

Responded to 170 PA-One Call utility location requests.

Inspected 3 lateral repairs, 1 lateral disconnects and 3 new service lateral connections.

Air and mandrel testing new mains of Arcona Phase 8.2.

Completed rapid sewer inspection on 342 feet of sewer main.

Flushed 847 feet of sewer main and 2 blockage calls.

Completed internal camera inspection of 0 feet of sewer main.

Treatment Plant

Replaced #1 air release valve at Raven Hill pump station.

Rebuilt gear box on thickner #2 drive and replaced motor.

Replaced flap valve #1 pump at Sheepford pump station.

Replaced #1 secondary return pump solenoid valve, PSI gauge, and cleaned out lines.

Replaced #2 main pump volute, suction cover, stand, and did preventative maintenance.

Preventative maintenance on #1 and #2 primary's clarifiers.

Replaced light LED tubes in office.

Replaced #1 main pump PSI gauge.

Repaired lights at wet well stairs.

Preventative maintenance on U.V. system.

Replaced Train #1 internal mixer pump.

Staff Activity Summary Report – July 2023

Collection System

Responded to 208 PA-One Call utility location requests.

Inspected 6 lateral repairs, 0 lateral disconnects and 9 new service lateral connections.

Air and mandrel testing new mains of Arcona Phase 8.2.

Completed rapid sewer inspection on 0 feet of sewer main.

Flushed 0 feet of sewer main and 0 blockage calls.

Completed internal camera inspection of 0 feet of sewer main.

Preventative maintenance on Sheepford pump station Gen-set.

Preventative maintenance on #1 pump and Gen-set at Beacon Hill pump station.

Preventative maintenance on #1 and #2 pumps at Shiremanstown pump station.

Preventative maintenance on #1 and #2 pumps at Methodist Home pump station.

Treatment Plant

Repaired light in centrifuge room.

Rebuilt gear box on thickner #2 and replaced drive motor.

Reset VFD on U.V. room exhaust fan.

State inspection on LA-20 tv truck.

State inspection on LA-19 flusher truck.

Preventative maintenance on BNR Aerzen blowers #1 and #2.

Preventative maintenance on Exmark mower.

Preventative maintenance on push mower.

Preventative maintenance on Scag mower.

Preventative maintenance on all BNR aerators.

Preventative maintenance on all BNR mixers.

Staff Activity Summary Report – August 2023

Collection System

Responded to 190 PA-One Call utility location requests.

Inspected 0 lateral repairs, 0 lateral disconnects and 10 new service lateral connections.

Air and mandrel testing new mains of Arcona Phase 8.2.

Completed rapid sewer inspection on 0 feet of sewer main.

Flushed 0 feet of sewer main and 0 blockage calls.

Completed internal camera inspection of 0 feet of sewer main.

Preventative maintenance on Linda Lane pump station generator.

Preventative maintenance on Shiremanstown pump station generator.

Preventative maintenance on #1 and #2 pumps at Lisburn pump station.

Treatment Plant

Repaired light in shop lunch room.

Repaired lights in U.V. building.

Repaired lights in sludge disposal building.

Repaired U.V. building exhaust fan.

Repaired valve in sludge disposal building.

Repaired #2 main pump drive unit wiring.

Preventative maintenance on John Deere gator.

Preventative maintenance on pressure washer.

Preventative maintenance, tune up and new front brake pads and rotors on L.A.-29 Ford F-350.

Preventative maintenance on L.A.-26 Ford F-150.

Staff Activity Summary Report – September 2023

Collection System

Responded to 206 PA-One Call utility location requests.

Inspected 5 lateral repairs, 0 lateral disconnects and 4 new service lateral connections.

Air and mandrel testing new mains of Arcona Phase 8.2.

Completed rapid sewer inspection on 0 feet of sewer main.

Flushed 1,161 feet of sewer main and 1 blockage calls.

Completed internal camera inspection of 0 feet of sewer main.

Replaced starter on #1 pump at Lisburn pump station.

Treatment Plant

Repaired light on #2 final clarifier.

Replaced light on secondary pump room stairs.

Replaced buzzer on main gate to plant.

Replaced main pump #3 VFD.

Replaced oil seals and pressure gauge on BNR reaeration blower #2.

Replaced #2 bar screen outfall transducer.

State inspection on dig job trailer.

Installed new gear box on secondary anoxic mixer #1A on train #1.

Staff Activity Summary Report – October 2023

Collection System

Responded to 176 PA-One Call utility location requests.

Inspected 9 lateral repairs, 0 lateral disconnects and 2 new service lateral connections.

Air and mandrel testing new mains of Arcona Phase 8.2.

Completed rapid sewer inspection on 7,449 feet of sewer main.

Flushed 2,816 feet of sewer main and 0 blockage calls.

Completed internal camera inspection of 0 feet of sewer main.

Replaced air release valve at Raven Hill pump station.

Treatment Plant

Repaired lights and speaker for phone system in centrifuge room.

Repaired lights in sludge disposal room first floor.

Repaired #2 main sewer pump.

Repaired leaks on washdown pump.

Repaired window drive and rear wiper arm on Ford Escape.

Repaired #3 RAS pump seal water line.

Reglazed lunch room windows.

Checked #1 primary scum pump and reset.

Checked all in-plant generators fluid levels and refueled them.

Staff Activity Summary Report – November 2023

Collection System

Responded to 140 PA-One Call utility location requests.

Inspected 5 lateral repairs, 0 lateral disconnects and 1 new service lateral connection.

Air and mandrel testing new mains of Arcona Phase 8.2.

Completed rapid sewer inspection on 0 feet of sewer main.

Flushed 556 feet of sewer main and 2 blockage calls.

Completed internal camera inspection of 0 feet of sewer main.

Repaired pump #1 at Methodist Home pump station.

Treatment Plant

Repaired RAS pump #1 VFD in secondary pump room.

Repaired bar screen #2.

Repaired bar screen #1.

Repaired SNDR roof vent.

Repaired 4-20ma signal to main sewer pump #2 VFD.

Replaced ATAD foam pump VFD.

Replaced forklift bay heater thermostat.

Put main pump #3 VFD back in.

Staff Activity Summary Report – December 2023

Collection System

Responded to 116 PA-One Call utility location requests.

Inspected 5 lateral repairs, 0 lateral disconnects and 8 new service lateral connections.

Air and mandrel testing new mains of Arcona Phase 8.2.

Completed rapid sewer inspection on 0 feet of sewer main.

Flushed 233 feet of sewer main and 0 blockage call.

Completed internal camera inspection of 233 feet of sewer main.

Treatment Plant

Repaired lights in wet well.

Repaired outside lights in plant.

Repaired radiant heater and replaced heater fans in old garage.

Repaired RAS pump #1 at #3 secondary RAS pump room.

Repaired wet well hoist.

Repaired LA-26 Ford F-150.

Preventative maintenance on primary waste pumps #1 and #2.

Preventative maintenance on centrifuge and ATAD grinders.

Preventative maintenance on SNDR jet pump.

Preventative maintenance on Aerzen blowers for ATAD and SNDR.

Preventative maintenance on ATAD jet pump and foam pump.

Preventative maintenance on #3 secondary RAS pumps #1 and #2.

Replaced cord reel on garage door in new garage.

Replaced air compressors in main sewer pump panel.

Replaced belts on biofilter fan.

Cleaned U.V. channel #1.

Cleaned #2 secondary waste pump out.

Attachment 5 Pump Stations
Lower Allen Township Authority
NPDES PA0027189

The Lower Allen Township Authority collection system includes eight pumping stations. Table 1 included in this section provides a summary of station capacity, design capacity, current maximum flow and two-year maximum flow. Based on current information, all pumping stations have sufficient capacity for the projected two-year flows and beyond.

The Upper Allen Township collection system tributary to the Lower Allen Township Authority sewer system includes two pumping stations, see Attachment 10 of this report.

The Pennsylvania American Water - Fairview Township collection system tributary to the Lower Allen Township Authority sewer system includes two pumping stations, see Attachment 9 of this report.

Lower Allen Township Authority
2023 Pumping Station Flow Summary

Township / Pump Station	Design Capacity GPD	Average Daily Flow GPD	Current Max.Flow GPD	Two-Year Max.Flow GPD
Lower Allen Township				
Shiremanstown	684,000	40,712	46,455	46,455
Linda Lane	144,000	22,131	31,380	31,380
Sheepford Crossing	288,000	24,704	28,920	28,920
Raven Hill	360,000	88,229	109,750	109,750
Lisburn	288,000	30,519	38,640	36,000
Methodist Home	115,200	8,608	11,808	11,808
Beacon Hill	309,600	9,839	12,599	12,599
Windsor Park	230,400	15,907	18,112	18,112
Upper Allen Township				
See Attachment 10	Two Pump Stations			
PAW-Fairview Township				
See Attachment 10	Two Pump Stations			

Attachment 6 Industrial Pretreatment Report
Lower Allen Township Authority
NPDES PA0027189

There are three significant industrial dischargers located in Lower Allen Township, Dairy Farmers of America, The Warrell Corporation, and Supply Chain Facility at Yetter Court Vantage Foods PA LLC /Cargill Meat Solutions contributing flow to the Authority's wastewater treatment plant. The tributary municipalities identified no new significant industrial users (SIUs) connected to the collection system during the year.

No hauled or well drilling waste was received during the report period. There were no temporary discharge permits issued in 2023.

The 2023 Industrial Pretreatment Annual Report was submitted electronically to US EPA Region 3 as directed by the Agency and in accordance with the Authority's NPDES permit. A copy is provided to PADEP as required by the permit with this report as an attachment.

TUS A-12_Attachment

Facility Name: Lower Allen WWTP
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

Return to Home

Reporting Period

January 1 to December 31 of year	2023

POTW Contacts

Control Authority Name	Lower Allen Township Authority
NPDES Permit No	PA0027189
Permit Issuance Date	6/1/2022
Permit Expiration Date	5/31/2027
Facility Name	Lower Allen WWTP
Facility Address1	120 Limekiln Road
Facility Address2	
Facility City	New Cumberland
Facility County	Cumberland
Facility State	PA
Facility Zip	17070-2428

Pretreatment Contact(s) - List all Pretreatment Personnel

	Name	Title	Email
01	Brian Kauffman, PE	Manager/Engineer	bkauffman@latwp.org
02	Matthew Reitzel	Industrial Pretreatment Coordinator	mreitzel@latwp.org
03			
04			
05			
06			

Permit Signatory	Brian Kauffman, PE
Permit Signatory Title	Authority Assistant Secretary

Contact Phone	717-774-0610
Contact Email	bkauffman@latwp.org
POTW Site Address	120 Limekiln Road, New Cumberland, PA 17070-2428

Additional Information

/// End of Sheet

TUS A-12_Attachment

Facility Name: Lower Allen WWTP
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

Return to Home

POTW Information

Status of local limits	Not yet submitted to EPA
NPDES Effluent Violations?	No
Date of Violations	
Cause of NPDES permit violations?	
Sludge Disposal Method 1	PUBLIC DISTRIBUTION
Sludge Disposal Method 2	Transported to another Facility
Sludge Disposal Method 3	
Highest Treatment Level	Advanced

Parameter(s):

Treatment Types

Primary Clarification?	Yes	Lagoon?	No
Secondary Clarification?	Yes	Anaerobic Digestion?	No
Activated Sludge?	Yes	Aerobic Digestion?	Yes
Trickling Filter?	No	Chlorination?	No
Oxidation Ditch?	No	Dechlorination?	No
Biotowers?	No	UV Disinfection?	Yes
Rotating Biological Contacts?	No	BNR?	Yes
Other?			

POTW Design Flow (mgd)	7.5 AADF/13.5 Hydraulic Design	
POTW Actual Flow (mgd)	4.9	
Total SIU Flow (mgd)	0.221771	
% Industrial Flow	5	%
POTW Organic (BOD) Design Capacity (lbs/day)	10000	
POTW TSS Design Capacity (lbs/day)	8576	
POTW Ammonia (NH3) Design Capacity (lbs/day)	1239	
Actual or Estimated total Flow for Commercial (Non-SIU) Dischargers (mgd)	1.2	

Additional Information

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TUS A-12_Attachment

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

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Program Implementation

Number of Permitted Industrial Users as of December 31

CIUs	0
Total SIUs	3
Other Permitted IUs	0
Zero-Discharge CIUs	0
Permitted Zero-Discharge CIUs	0
Middle-Tier CIUs	0
Non-Significant CIUs	0

Includes CIUs, but excludes NSCIUs

SIUs with No/Expired Permit as of December 31	0
SIUs with Administratively Extended Permits >180 Days	0
Number of SIUs with current control mechanisms	3
Number of NSCIUs that have violated any pretreatment standard	0

Number of SIUs in significant non-compliance (SNC) as of December 31

	CIUs	Non Categorical SIUs	Total SIUs
SNC Self-monitoring	0	0	0
SNC Reporting	0	0	0
SNC PT Standards	0	0	0
SNC Prohibitions	0	0	0
SNC Compliance Schedule	0	0	0
SNC Pass Through/Interference	0	0	0
SNC Other SNC Violations	0	0	0

Number of SIUs in significant non-compliance (SNC) at any time	0
Number of non-SIUs in significant non-compliance (SNC) at any time	0
Number of SIUs in SNC during the previous calendar year	0
SNC during the July to December period	0

# Permitted Non-SIUs With Unknown Compliance Status	0
# SIUs With Unknown Compliance Status	0
Does the ERP include escalating enforcement actions for SNC	Yes

	CIUs	Non Categorical SIUs	Total SIUs
Number of SIUs with compliance schedule as of December 31	0	0	0

Additional Information

/ End of Sheet

TUS A-12_Attachment

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

Return to Home

Enforcement Actions

	Non-SIUs	SIUs
Number of NOVs	0	12
Number of Formal Enforcement Actions	0	0
Number of different IUs with Formal Enforcement Actions	0	0
Number of SIUs on formal compliance schedule	0	0

Formal actions at any time during the reporting year including administrative orders, show cause hearings, out-of-court settlements that are formal settlements, termination of service, formal compliance schedules, penalty actions EXCEPT civil or criminal suits.

	Civil	Criminal	Total
Number of suits filed against SIUs	0	0	**0**

	Non-SIUs	SIUs
Number of Different IUs From Whom Penalties Were Collected	0	0
Total Penalties Collected	$ -	$ -

Number of IUs Published As Being In SNC	0

Additional Information

/ End of Sheet

TUS A-12_Attachment

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

Return to Home

Compliance Monitoring

	Non-SIU	SIU
Number of individual permits issued	0	0
Number of general permits issued	0	0
Number of inspections in the reporting year	0	3

Overview description of Non-SIU inspections

Number of SIUs not inspected during the reporting year	0
Number of SIUs that submitted required Self-Monitoring Reports	3
Number of SIUs not sampled during the reporting year	0
Number of SIUs in SNC With Self-Monitoring Requirements That Were Not Inspected or Sampled	0
Number of annual certification statements received by NSCIUs	0

Additional Information

End of Sheet

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Auth

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Program Implementation - Resources

Number of Pretreatment FTEs	1
Significant Changes (+/- 20%) to The POTW's Pretreatment Program Budget or Staffing?	No
Source of Budget	user fees
Total Pretreatment Program Budget	$ 135,000

Number of Jurisdictions Covered By Pretreatment Program	
Adequate delegation in each jurisdiction?	Yes
Miscellaneous Developments and Special Initiatives?	Yes

Additional three priority polutant scans of influent, effluent and slude above one minimum required. SIU sampling beyond minimum. Grease trap installation requirementon nonresidential food preparation establishments. Biosolids processing to meet Exeptional Quality Class A criteria.

e.g., Fats, Oils, and Grease (FOG) program, PFAS monitoring

Additional Information

/ End of Sheet

TUS A-12_Attachment

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

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Program Implementation - Hauled Waste

Does the POTW receive any discharges of

Receive Groundwater From Hydrocarbon Cleanup Site?	No	
Receive Hauled Septage (Domestic Only)?	No	
Receive Hauled Waste From Industrial Sources?	No	
Receive Hauled Waste From Commercial Sources?	No	
Receive Hauled Categorical Waste?	No	
Receive Hauled Grease Interceptor/Trap Waste?	No	
Receive Landfill Leachate?	No	
Receive CERCLA Cleanup Wastes?	No	
Receive Hazardous (RCRA) Waste?	No	*As defined at 40 CFR Part 261 and delivered by truck, rail or dedicated pipeline*
RV Dump Stations in Service Area?	No	
Receive Other Unique Waste?	No	
Receive Oil & Gas Waste from Stripper wells?	No	

If you accept any trucked or hauled waste, indicate all of the following that apply to your POTW

Legal Authority To Control Hauled Waste?	
POTW Issues Permits For Hauled Wastes?	
POTW Has A Designated Disposal Site For Hauled Wastes?	
POTW Controls Access At The Designated Disposal Station?	
POTW Uses A Manifest System To Track/Control Hauled Wastes?	
POTW Believes That Illegal Dumping May Be Occurring In Its Jurisdiction?	

What parameter if any do you surcharge

Surcharge for BOD?	
Surcharge for TSS?	
Surcharge for Oil and Grease?	
Surcharge for Flow?	
Surcharge for Ammonia?	
Surcharge for COD?	
Surcharge for TKN?	
Surcharge for Other Parameters?	

Additional Information

End of Sheet

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Townsh Auth

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Program Implementation - Pass/INTF

Instances Of Interference At The POTW?	No
Instances Of Pass Through At The POTW?	No

Receive Notification Of The Discharge Of Any Hazardous Waste?	No

If so, names of IUs

01	
02	
03	
04	
05	
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09	
10	
11	

Additional Information

/ End of Sheet

TUS A-12_Attachment

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

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Attachment A: List of CIUs/SIUs

	PERMIT INFO						SIU INFO						
	SIU	Issued	Effective	Expires	Permit Type	Address (Number, Street, City, State, ZIP Code)	NPDES Permit No of POTW discharged to	Sampled	Inspected	MRS	# of self-monitorings conducted/ required	Limits Type	MWG	Jurisdiction
01	Dairy Farmers of	8/30/2022	9/1/2022	8/31/2026	IP	4825 Gettysburg Rd	PA0027189	1	1	12	2/2	Concentration-based		Lower Allen Tow
02	America					Mechanicsburg PA 17055			3/5/2023					
03	DFA 2022-26													
04														
05														
06														
07	Supply Chain	8/30/2022	9/1/2022	8/31/2026	IP	2700 Yetter Court	PA0027189	1	1	12	2/2	Concentration-based		Lower Allen Tow
08	Facility at Yetter					Camp Hill, PA 17011			4/6/2023					
09	Court (Cargill)													
10	SCF 2022-26													
11														
12	The Warrell	8/30/2022	9/1/2022	8/31/2026	IP	1250 Slate Hill Road	PA0027189	1	1	12	2/2	Concentration-based		Lower Allen Tow
13	Corporation					Camp Hill, PA 17011			4/12/2023					
14	WC 2022-26													
15														
16														
17														
18														
19														
20														

Add/Insert/Delete Rows

Additional Information (e.g. Permit coverage changes compared to the previous reporting year)

//End of Sheet

TUS A-12_Attachment

: Code1	SIC Code2	NAICS Code	Categorical Standard	Total Average Process Flow (gpd)	Total Average Facility Flow (gpd)	MTCIU or NSCIU?	Justification	Discharge Status	Description	SNC?
2086	2026	312111	N/A	157799	157799			Active, continuous	hot bottled milk/coffee	No
									drink	
201301	201302	311612	N/A	53866	65625			Active, continuous	beef and pork recutting and	No
									packaging for direct sale	
2064	2068	311352	N/A	10106	10106			Active, continuous	candy making and nut	No
									roasting	

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

Return to Home

Attachment B: Copy of Newspaper Notice of SNC

Provide a copy of the newspaper notice identifying all IUs which were in SNC during the reporting period. The notice must show the name of the paper and the date of publication.

Copy of Newspaper Notice of SNC submitted? No

Additional Information

No SNC

/ End of Sheet

TUS A-12_Attachment

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Auth

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Attachment C: Description of Each Incidence of Pass Through or Interference

Provide a description of each incidence of Pass Through or Interference at the wastewater treatment plant or collection system during the year, the cause if determined, and any actions taken by the POTW in response to the Pass Through or Interference.

	Description of Pass Through/Interference
01	N/A
02	
03	
04	
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06	
07	
08	
09	
10	
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Additional Information

/ End of Sheet

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Tow

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Attachment D: Description of Significant Change in Program Funding/Staffing

An explanation of any significant decrease (20% or greater) in pretreatment funding or staffing of the POTW's Pretreatment Program.

Description of Significant Change in Program Funding/Staffing

N/A

/ End of Sheet

Facility Name: Lower Allen WWTP
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

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Attachment E1: Permitted Industrial Users (part 1 of 2)

Provide a printout or listing of all permitted non-SIUs

	Permitted Non-SIUs	Address	County	Jurisdiction	SIC Code	NAICS Code	Rationale for permitting these non-SIUs
01	N/A						
02							
03							
04							
05							
06							
07							
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Add more rows

Additional Information

End of Sheet

TUS A-12_Attachment

Facility Name: Lower Allen WWTP
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

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Attachment E2: Permitted Industrial Users (part 2 of 2)

Provide a printout or listing of all SIUs covered by a General Permit

	SIUs covered by a General Permit	Justification Criteria
01	N/A	
02		
03		
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Add more rows

Additional Information

/ End of Sheet

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

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Attachment F: IUs in SNC During the Reporting Period

For those IUs in SNC during the Reporting Period

	IU Name	Reason for SNC	Date of Enforcement Action	Type of Enforcement Action	Parameter(s) Violated	Date in Compliance	Penalties Assessed	Penalties Collected	Quarters In SNC	In SNC during PRP?
01	N/A									
02										
03										
04										
05										
06										
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20										

Add more rows

Additional Information

/ End of Sheet

TUS A-12_Attachment

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

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Attachment G: Modification History

	Type of Modification	Description of Modification	Date of PN	Approval
01	N/A			
02				
03				
04				
05				
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19				
20				

Expected Modifications

/ End of Sheet

Facility Name: #NAME?
Permit Number: PA0027189
Reporting Period: 2023
POTW Name: Lower Allen Township Authority

Return to Home

Attachment H: Influent/Effluent and Biosolids Monitoring

Influent Monitoring Results Submitted or Attached?	Yes	*Includes priority pollutant scan where applicable*
Effluent Monitoring Results Submitted or Attached?	Yes	
Biosolids Monitoring Results Submitted or Attached?	Yes	*Includes priority pollutant scan where applicable*

Additional Information

/ End of Sheet

Email File to EPA Region 3

The signature certification page must be printed, signed, and sent in hard copy to U.S. EPA Region 3 at the address below. The QR code must be visible.

Attn: U.S. EPA Region 3 Pretreatment [3WD41]
Four Penn Center
1600 John F Kennedy Blvd
Philadelphia, PA 19103-2852

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

#NAME?

Authorized Signatory Official

03/21/2024
Date

BRIAN KAUFFMAN, ASST. SECRETARY
Print or type name and title

Note: The Signatory Official is the person authorized by the POTW to sign the Annual Report (see 40 CFR Section 403.12(m)).

The following documents may be attached to the email or hard copies can be mailed to US EPA Region 3

1. A copy of the newspaper notice identifying all IUs which were in SNC during the reporting period. The notice must show the name of the paper and the date of publication.
2. The results of all influent monitoring results that were performed as required in the Pretreatment section of your state issued NPDES permit. The results must include the name of the pollutant, measured concentration, analytical method used, detection
3. The results of all effluent monitoring results from the monitoring required by the Pretreatment section of your state issued NPDES permit. Provide monitoring results for those pollutants that were reported above the detection limit. The results must include the
4. The results of all monitoring results for biosolids (sludge) monitoring for any pollutants listed in 40 CFR Part 122, Appendix D, Table II, III, and V. This is for final sludge to disposal only. This monitoring may have been required by your state issued NPDES permit, or

Time Stamp:
User Stamp:

Facility Name:	LOWER ALLEN TOWNSHIP AUTHORITY								
Facility ID:	PAP027189	UNITS:	MG/L						
Location:	**INFLUENT**			Date	Date	Date	Date	Date	Date
	Pollutant	Goals	Frequency	3/14/2023	6/8/2023	8/30/2023	12/5/2023		
01002	ARSENIC- TOTAL	0.0136	4	<0.005	<0.005	<0.005	<0.005		
01027	CADMIUM- TOTAL	0.0087	4	<0.001	<0.001	<0.001	<0.001		
01034	CHROMIUM- TOTAL	0.404	4	<0.0025	<0.0025	<0.0025	<0.0025		
01042	COPPER- TOTAL	0.3374	4	0.034	0.036	0.049	0.042		
00720	CYANIDE- TOTAL	0.137	4	<.002	<.004	<.004	<.004		
01051	LEAD- TOTAL	0.0926	4	<0.003	<0.003	<0.003	<0.003		
71900	MERCURY- TOTAL	0.0042	4	<0.0002	<0.0002	<0.0002	<0.0002		
01062	MOLYBDENUM- TOTAL	0.0565	4	<0.01	<0.01	<0.01	<0.01		
01067	NICKEL- TOTAL	0.1492	4	<0.01	<0.01	<0.01	<0.01		
04166	PCB- TOTAL	0.0012	4	<0.000024	<0.000097	<0.000097	<0.0005		
01147	SELENIUM- TOTAL	0.0298	4	<0.01	<0.01	<0.01	<0.01		
01077	SILVER- TOTAL	0.3125	4	<0.002	<0.002	<0.002	<0.002		
01092	ZINC- TOTAL	0.411	4	0.14	0.15	0.06	0.12		

TUS A-12_Attachment

Facility Name:	LOWER ALLEN TOWNSHIP AUTHORITY										
Facility ID:	PAP027189	UNITS:	MG/L								
Location:	**EFFLUENT**			Date	Date	Date	Date	Date	Date	Date	
	Pollutant	Goals	Frequency	1/26/2024	2/21/2024	3/14/2024	4/26/2023	5/11/2023	6/8/2023	7/19/2023	
01002	ARSENIC- TOTAL	0.8796	4			<0.005			<0.005		
01027	CADMIUM- TOTAL	0.0264	4			<0.001			<0.001		
01034	CHROMIUM- TOTAL	6.5098	4			<0.0025			<0.0025		
01042	COPPER- TOTAL	0.9315	4			<0.005			<0.005		
00720	CYANIDE- TOTAL	0.4574	4			<0.002			<0.004		
01051	LEAD- TOTAL	0.338	4			<0.003			<0.003		
71900	MERCURY- TOTAL	0.0044	4			<0.0002			<0.0002		
01062	MOLYBDENUM- TOTAL	0.0677	4			<0.01			<0.01		
01067	NICKEL- TOTAL	5.2023	4			<0.01			<0.01		
04166	PCB- TOTAL	0.0009	4			<0.000024			<0.000024		
01147	SELENIUM- TOTAL	0.4398	4			<0.01			<0.01		
01077	SILVER- TOTAL	0.4297	4			<0.002			<0.002		
01092	ZINC- TOTAL	11.9513	4	0.058	0.047	0.058	0.055	0.049	0.052	0.033	

TUS A-12_Attachment

Facility Name:	LOWER ALLEN TOWNSHIP AUTHORITY							
Facility ID:	PAP027189							
Location:	**EFFLUENT**	Date	Date	Date	Date	Date	Date	Date
	Pollutant	8/13/2023	8/30/2023	9/21/2023	10/18/2023	11/30/2023	12/5/2023	12/19/2023
01002	ARSENIC- TOTAL		<0.005				<0.005	
01027	CADMIUM- TOTAL		<0.001				<0.001	
01034	CHROMIUM- TOTAL		<0.0025				<0.0025	
01042	COPPER- TOTAL		0.01				0.011	
00720	CYANIDE- TOTAL		<0.004				<0.004	
01051	LEAD- TOTAL		<0.003				<0.003	
71900	MERCURY- TOTAL		<0.0002				<0.0002	
01062	MOLYBDENUM- TOTAL		<0.01				<0.01	
01067	NICKEL- TOTAL		<0.01				<0.01	
04166	PCB- TOTAL		<0.0001				<0.0001	
01147	SELENIUM- TOTAL		<0.01				<0.01	
01077	SILVER- TOTAL		<0.002				<0.002	
01092	ZINC- TOTAL	0.031	0.081	0.051	0.058	0.067	0.065	0.043

TUS A-12_Attachment

Facility Name:	LOWER ALLEN TOWNSHIP AUTHORITY								
Facility ID:	PAP027189	**UNITS:**	MG/KG DRY WT	Date	Date	Date	Date	Date	Date
Location:	**SLUDGE**								
	Pollutant	Goals	Frequency	3/6/2023	3/21/2023	5/15/2023	6/7/2021	8/15/2023	8/30/2023
01002	ARSENIC- TOTAL	41	4	2.5	<7.2	2.1	<7.5	<5.3	<7.8
01027	CADMIUM- TOTAL	39	4	1.1	<1.8	1.3	<1.9	<1.7	<2.0
01034	CHROMIUM- TOTAL	1200	4	32.2	36	34.5	<3.7	46.25	47.8
01042	COPPER- TOTAL	1500	4	466.1	488	517.1	<7.5	627.7	631.4
00720	CYANIDE- TOTAL	Monitor	4	<2.9	9.5	<2.8	8	<3.55	3.9
01051	LEAD- TOTAL	300	4	7.5	<7.2	8.8	<7.5	16.65	20.3
71900	MERCURY- TOTAL	17	4	0.47	0.32	0.58	0.75	0.52	0.64
01062	MOLYBDENUM- TOTAL	75	4	10.3	10.3	12.7	<7.5	12.15	12.4
01067	NICKEL- TOTAL	420	4	20.7	21.9	24.8	<7.5	27.85	28.6
04166	PCB- TOTAL	4	4	<.04	<0.13	<0.04	<0.12	<0.26	<0.39
01147	SELENIUM- TOTAL	100	4	4.7	<18.0	5.1	<18.7	<12.4	<19.5
01077	SILVER- TOTAL	Monitor	4		1.9		<1.9	2.5	2.5
01092	ZINC- TOTAL	2800	4	1314.900	1300	1776.1	21.6	1699.05	1940

TUS A-12_Attachment

Facility Name:	LOWER ALLEN TOWNSHIP AUTHORITY		
Facility ID:	PAP027189		
Location:	**SLUDGE**	Date	Date
	Pollutant	11/6/2023	11/16/2023
01002	ARSENIC- TOTAL	6.4	10.7
01027	CADMIUM- TOTAL	<4.6	<7.8
01034	CHROMIUM- TOTAL	45.65	56.8
01042	COPPER- TOTAL	648.05	779
00720	CYANIDE- TOTAL	<2.8	2.8
01051	LEAD- TOTAL	13.45	18.1
71900	MERCURY- TOTAL	0.51	0.58
01062	MOLYBDENUM- TOTAL	14.25	15.8
01067	NICKEL- TOTAL	27.05	29.3
04166	PCB- TOTAL	<0.085	<0.13
01147	SELENIUM- TOTAL	<12.4	<19.6
01077	SILVER- TOTAL	3.1	3.1
01092	ZINC- TOTAL	1878.05	1980

TUS A-12_Attachment

Attachment 7 Sewage Sludge
Lower Allen Township Authority
NPDES PA0027189

The Phase 1 Solids Facility Upgrade Project was completed and placed into operation in 2011. The PADEP issued the Authority a Beneficial Use Exceptional Quality Class A Biosolids permit in February 2012, PAG-07-3519. The Notice of Intent for continued use was granted by the Department and General Permit extensions as published by the Department.

The biosolids data indicates the quality remains high with the concentrations of regulated parameters lower than regulatory limits for high quality land application material, volatile solids reduction exceeds the minimum requirement, and quarterly fecal coliform bacteria analysis are significantly below the limit for classification as a beneficial use Exceptional Quality Class A biosolids material.

The 2023 calculated expected sewage sludge production using the Department mandated methodology contained in the 1984 EPA Handbook Improving POTW Performance is 821.8 dry tons, see the following page 1. The plant solids process data indicates the sewage sludge production was 814.2 dry tons prior to digestion, and after digestion biosolids production was 385.5 dry tons before dewatering, see page 2. During 2023, biosolids distribution totaled 404.6 with 373.2 dry tons going to beneficial use and 31.4 dry tons sent to Harrisburg AWWTF.

Annual Biosolids Reports for 2023 were submitted in February 2023 to the PADEP and EPA Region 7 as required by permit conditions and should be referenced for additional program details.

The 2023 annual average effluent flow was 4.9 MGD, average influent BOD concentration was 130 mg/L and the average effluent CBOD concentration was 3.0 mg/L. The combined total volume of primary and waste activated sludge flow was 42,626,100 gallons and the average solids concentration of return activated sludge was 10,594 mg/L as reported in the DMRs submitted to PADEP and EPA Region 3, see page 2 of this attachment.

The DEP sludge Calculator I indicates the actual wasted amount is 136% greater than the calculated amount and the DEP Calculator 2 indicates actual production is more than 15% less than the calculated value. It is noted that Calculator 1 does not include 1.7 lbs/TSS for primary sludge and Calculator 2 uses 0.4 digester reduction factor and our reduction for the year is 0.52 in line with the 0.5 value used in calculator 1.

Lower Allen Township Authority
Expected Sewage Sludge Production 2022
DEP Mandated Methodology - EPA Handbook Improving POTW Performance 1984

Month	Days	Influent		BNR Infl.	Effluent		Primary	Secondary	Total	
		Flow MGD	BOD mg/L	BOD mg/L	Flow MGD	CBOD mg/L	Sludge lbs/D (1)	Sludge lbs/D (1)	Sludge lbs/D	DT/Mon.
January	31	5.515	138	119	5.446	4.3	1485.6	3646.7	5132.4	79.6
February	28	4.538	150	113	4.441	3.8	2380.6	2831.2	5211.8	73.0
March	31	4.992	128	101	4.740	3.3	1911.0	2703.6	4614.5	71.5
April	30	4.674	135	108	5.35	2.3	1789.2	3301.4	5090.6	76.4
May	31	5.604	120	109	5.641	2.9	874.0	3494.1	4368.1	67.7
June	30	4.399	139	117	4.369	3.1	1372.1	2905.2	4277.3	64.2
July	31	5.75	105	84	6.042	1.6	1712.0	2906.5	4618.5	71.6
August	31	4.243	140	110	4.114	2.1	1804.7	2591.5	4396.2	68.1
September	30	4.368	122	102	3.851	1.6	1238.6	2257.2	3495.8	52.4
October	31	4.522	130	95	3.416	1.8	2244.0	1858.7	4102.6	63.6
November	30	4.148	138	109	3.497	4.6	1705.5	2131.4	3836.9	57.6
December	31	6.044	119	90	4.863	4.2	2485.1	2435.9	4920.9	76.3
TOTAL										821.8
AVERAGE		4.900	130		4.648	3.0			4505.464	

Notes:

1. EPA Unit Sludge Production Values: Primary Clarification 1.7 lbs TSS sludge/ lb BOD Removed; Activated Sludge w/Primary Clarifier 0.7 lbs TSS sludge/ lb BOD Removed
2. EPA sludge production values are assumed and do not reflect BNR process conditions.
3. Method does not properly account for changes in recycle loads at higher flows.

TUS A-12_Attachment

Lower Allen Township Authority
Expected Sewage Sludge Production 2023
Based On Monthly Solids Process Data

Month	Days	Primary Sludge MG	WAS Pumped MG	RAS Concent. mg/L	ATAD Feed MG	Solids %	Total (1) Sludge DT/Mon.	ATAD Feed VSS %	ATAD VSS Reduc %	Total (2) Biosolids DT/Mon.
January	31	1.544700	1.849400	13580	0.468100	3.86	75.3	83.35	66.15	33.8
February	28	2.015700	1.775100	12685	0.375800	3.75	58.8	83.33	59.92	29.4
March	31	1.572500	1.921500	12023	0.450500	4.12	77.4	84.83	62.48	36.4
April	30	1.418900	1.911100	10343	0.304700	4.22	53.6	84.46	66.84	23.3
May	31	1.706200	2.280600	9325	0.414100	3.75	64.8	82.29	63.26	31.0
June	30	1.738500	1.775300	10913	0.427200	3.36	59.9	81.33	57.18	32.0
July	31	1.814600	1.950500	9264	0.516900	3.56	76.7	82.65	60.55	38.3
August	31	1.630800	1.567300	9197	0.440900	3.73	68.6	82.58	63.25	32.8
September	30	1.605300	1.290900	10877	0.487100	3.75	76.2	82.72	64.96	35.2
October	31	1.742000	2.151600	9635	0.453900	3.91	74.0	82.18	60.87	37.0
November	30	1.678600	1.928800	9957	0.384200	4.13	66.2	83.53	66.26	29.5
December	31	1.823400	1.932800	9325	0.339900	4.43	62.8	84.25	68.39	26.6
TOTAL		20.291200	22.334900		5.063300		814.2			385.5
AVERAGE				10594		3.88		83	63	

Notes:

1. Based on actual combined thickened primary and WAS sludge measured values in ATAD Feed.
2. Based on actual measured ATAD VSS reduction values prior to dewatering.

TUS A-12_Attachment

Solids Management (Sludge) Calculator

This worksheet calculates the expected sludge volume that should be produced by various treatment processes over a one-year period. Enter data into green cells - hit the Tab key to move between cells. Red cells are calculated.

Facility Name: **Lower Allen WWTP** Permit No.: **PA0027189**

Evaluation Period: *Enter Date* **1/1/2023** to *Enter Date* **12/31/2023**

Design Flow: **7.5** MGD Actual Annual Average Flow: **4.9** MGD

Type of Biological Treatment Process: **Activated Sludge with Primary Clarification** Treatment Factor: **0.7**

Type of Digestion Process: **Aerobic Thermophilic** Digestion Factor: **0.5**

Total Population Served by Treatment Plant: **45,296**

Average Annual Influent BOD5 Load (per Ch. 94 Report): **5,209.0** lbs/day

Average Annual Influent BOD5 Load (Expected based on Population): **7,700.3** lbs/day *(Population x 0.17)*

% of Influent BOD5 Load per Ch. 94 Report / Influent Load Expected: **67.6%** *(Influent Load per Ch. 94 Report / Influent Load based on Population)*

Average Annual Effluent Concentration of **CBOD5** : **3** mg/L ***Assume 3.6 mg/L BOD5***

Average Annual Pounds (lbs) of BOD5 Discharged: **147.12** lbs/day *(Actual Flow x Effluent BOD5 Concentration x 8.34)*

Influent BOD5 Load per Person per Day (based on Ch. 94): **0.115** *(Influent BOD5 Load per Ch. 94 Report / Population - 0.17 to 0.22 is typical)*

Pounds of BOD5 Removed (based on Ch. 94): **5,061.9** lbs/day *(Influent BOD5 Load per Ch. 94 Report - BOD5 Discharged)*

Pounds of BOD5 Removed (based on Population): **7,553.2** lbs/day *(Influent BOD5 Load Expected based on Population - BOD5*

Sludge Removed from Treatment Plant (Previous Year): **440.9** Dry Tons = **881,800** Dry lbs

Sludge Production and Wasting Calculations

Based on Chapter 94 Report		***Based on Population***	
5,061.9	BOD5 Removed / Day (lbs)	**7,553.2**	BOD5 Removed / Day (lbs)
X **0.7**	Treatment Factor	X **0.7**	Treatment Factor
3,543.32	Daily Solids Production (lbs)	**5,287.24**	Daily Solids Production (lbs)
X **0.5**	Digestion Factor	X **0.5**	Digestion Factor
1,771.66	Daily Digested Solids (lbs)	**2,643.62**	Daily Digested Solids (lbs)
X **365**	Days per Year	X **365**	Days per Year
646,655	Solids Generated / Year (lbs)	**964,922**	Solids Generated / Year (lbs)
- **881,800**	Solids Actually Wasted / Year (lbs)	**881,800**	Solids Actually Wasted / Year (lbs)
-235,145	Difference (lbs)	***83,122***	Difference (lbs)
136%	% of Expected Volume Wasted *(85 - 115% is generally acceptable)*	**91%**	% of Expected Volume Wasted *(85 - 115% is generally acceptable)*
3.9%	Percent Solids of Wasted Solids	**3.9%**	Percent Solids of Removed Solids
1,998,367	Volume of Solids to Remove Annually (gallons)	**2,981,908**	Volume of Solids to Remove Annually (gallons)
- **2,725,036**	Volume of Solids Actually Removed Annually (gallons)	- **2,725,036**	Volume of Solids Actually Removed Annually (gallons)
-726,670	Difference (gallons)	***256,872***	Difference (gallons)

TUS A-12_Attachment

SLUDGE GENERATION CALCULATION

Facility Name: Lower Allen WWTP
Permit Number: PA0027189
Date of Calculation: #######

Required Information For Calculation

Average Daily Flow (mgd):	4.9	Digester Capacity (gal):	912000
Influent BOD (mg/l):	130	%Solids of Outgoing Sludge:	24
Effluent BOD (mg/l):	3	Monitoring Period (days):	365

Wastewater Treatment Processes

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

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

Operational Information

BOD Removed (lbs/day):	5190	TSS Removed (lbs/day):	5449

Digester Information

Type of Digester

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

Aerobic Digestion	x	Anaerobic Digestion		None	

Sludge Feed Rate to Digesters (gpd):	20688.165
Digester Hydraulic Detention Time (days):	44
Estimated Total Solids Reduction (%):	0.4

Sludge Generation

dry lbs/day	3270	wet lbs/day	13624
dry tons/monitoring period	597	wet tons/monitoring period	2486
gal/day	1634	gal/monitoring period	596241

Amount of Sludge Reported as Being Generated by the Facility

wet tons/monitoring period: 0

OR

dry tons/monitoring period: 404.6

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

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

NO explanation: **LESS THAN 15% RANGE**

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

Dates used: TO

Name of person performing the calculation:

Attachment 8 Flow Meter Calibration
Lower Allen Township Authority
NPDES PA0027189

The treatment plant influent and effluent flow metering equipment were checked for calibration and operational parameters per the manufacturer's specifications monthly. Copies of the meter certifications are included in this section.

Control Systems 21

"Your Process Control Specialists"

CERTIFICATE of CALIBRATION

Cal Certificate # 76674

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **CEDAR RUN**

Description Flow Meter
Manufacturer Sigma
Model Number 950
Serial Number N/A
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 40
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 01/10/2023
Next Due Date 02/28/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.40 MGD	+/-0.02	0.40 MGD	P	0.40 MGD	P	0.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

Equipment listed on this cert is certified in reference to our current work instructions as part of our quality system.

Where applicable and noted calibrations were performed using standards whose calibration is traceable through NIST or another National Metrology Institute to the International System of Units (SI units).

Control Systems 21 utilizes the comparison method of calibration. Results are reviewed, when applicable, and any results exceeding the agreed upon specifications are indicated by red and/or bold print

All results with this certification relate only to the item(s) calibrated. This certificate shall not be reproduced except in full and with written consent of Control Systems 21. Unless otherwise noted all calibrations were performed in the field at the customers location.

Please note: *any number of factors may cause the calibration item to drift out of tolerance before the calibration interval has expired.*

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Tim Starr

Finalized By: Tim Starr 10 January 2023 9:01:54AM

Print Date: 01/10/2023

Control Systems 21
713 Range End Rd. • Dillsburg, PA 17019 • Voice: 717 432-5511 • Fax: 717 432-7550
email@controlsystems21.com

Control Systems 21

"Your Process Control Specialists"

CERTIFICATE of CALIBRATION

Cal Certificate # 76675

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **ROSSMOYNE**

Description Flow Meter
Manufacturer Hach
Model Number SC200
Serial Number 8712A808118
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 40
Cal Proc 4.8
Adjusted To Improve Yes
Calibration Frequency Monthly
Calibrated 01/10/2023
Next Due Date 02/28/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.08 MGD	+0.05/-0.05	1.39 MGD	*F*	1.06 MGD	P	-0.02

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

Equipment listed on this cert is certified in reference to our current work instructions as part of our quality system.

Where applicable and noted calibrations were performed using standards whose calibration is traceable through NIST or another National Metrology Institute to the International System of Units (SI units).

Control Systems 21 utilizes the comparison method of calibration. Results are reviewed, when applicable, and any results exceeding the agreed upon specifications are indicated by red and/or bold print

All results with this certification relate only to the item(s) calibrated. This certificate shall not be reproduced except in full and with written consent of Control Systems 21. Unless otherwise noted all calibrations were performed in the field at the customers location.

Please note: *any number of factors may cause the calibration item to drift out of tolerance before the calibration interval has expired.*

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Tim Starr

Finalized By: Tim Starr 10 January 2023 9:07:15AM

Print Date: 01/10/2023

Control Systems 21
713 Range End Rd. • Dillsburg, PA 17019 • Voice: 717 432-5511 • Fax: 717 432-7550
email@controlsystems21.com

Control Systems 21

"Your Process Control Specialists"

CERTIFICATE of CALIBRATION

Cal Certificate # 76676

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **SCIC PRISON METER**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	40
Model Number	SC200	**Cal Proc**	4.8
Serial Number	1412C0141778	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	01/10/2023
Department	N/A	**Next Due Date**	02/28/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	256.400 GPM	+12.820/-12.820	256.700 GPM	P	256.700 GPM	P	0.300

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Please note: *any number of factors may cause the calibration item to drift out of tolerance before the calibration interval has expired.*

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Tim Starr

Finalized By: Tim Starr 10 January 2023 9:19:02AM

Print Date: 01/10/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 76677

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **PLANT INFLUENT**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	70
Model Number	SC200	**Cal Proc**	4.8
Serial Number	1506C0147261	**Adjusted To Improve**	No
Location	Influent	**Calibration Frequency**	Monthly
Building		**Calibrated**	01/10/2023
Department	N/A	**Next Due Date**	02/28/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	5.909 MGD	+/-0.295	5.860 MGD	P	5.860 MGD	P	-0.049

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Tim Starr

Finalized By: Tim Starr 10 January 2023 9:38:18AM

Print Date: 01/10/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 76678

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **EFFLUENT FLOW**

Description	Flow Meter	**Status**	Active
Manufacturer	Siemens	**Temp °F**	60
Model Number	OCM III	**Cal Proc**	4.8
Serial Number	PBD/U1090008-022405101XV	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	01/10/2023
Department	N/A	**Next Due Date**	02/28/2023

Calibration Specifications

Group Name Inches (Pass 1)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.000 Inches	+/-0.020	1.130 Inches	*F*	0.980 Inches	P	-0.020

Group Name Echo Strength (D-18) Pass 1

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Group Name Inches (Pass 2)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.000 Inches	+/-0.020	0.980 Inches	P	0.980 Inches	P	-0.020

Group Name Echo Strength (D-18) Pass 2

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	81.00 %	P	81.00 %	P	-19.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Print Date: 01/10/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 76678

Calibration Result: Calibration Successful

Calibrated By: Tim Starr

Finalized By: Tim Starr 10 January 2023 11:48:46AM

Print Date: 01/10/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 77583

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **CEDAR RUN**

Description Flow Meter
Manufacturer Sigma
Model Number 950
Serial Number N/A
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 40
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 02/08/2023
Next Due Date 03/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.36 MGD	+/-0.02	0.37 MGD	P	0.37 MGD	P	0.01

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Please note: *any number of factors may cause the calibration item to drift out of tolerance before the calibration interval has expired.*

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 08 February 2023 8:28:14AM

Print Date: 02/08/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 77584

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **ROSSMOYNE**

Description Flow Meter
Manufacturer Hach
Model Number SC200
Serial Number 8712A808118
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 40
Cal Proc 4.8
Adjusted To Improve Yes
Calibration Frequency Monthly
Calibrated 02/08/2023
Next Due Date 03/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.07 MGD	+0.05/-0.05	1.21 MGD	*F*	1.07 MGD	P	0.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 08 February 2023 8:45:19AM

Print Date: 02/08/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 77585

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **SCIC PRISON METER**

Description Flow Meter
Manufacturer Hach
Model Number SC200
Serial Number 1412C0141778
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 40
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 02/08/2023
Next Due Date 03/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	250.800 GPM	+/-12.540	262.600 GPM	P	262.600 GPM	P	11.800

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 08 February 2023 8:56:09AM

Print Date: 02/08/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 77586

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **PLANT INFLUENT**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	70
Model Number	SC200	**Cal Proc**	4.98
Serial Number	1506C0147261	**Adjusted To Improve**	No
Location	Influent	**Calibration Frequency**	Monthly
Building		**Calibrated**	02/08/2023
Department	N/A	**Next Due Date**	03/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	5.412 MGD	+0.271/-0.27 1	5.400 MGD	P	5.400 MGD	P	-0.012

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 08 February 2023 9:19:36AM

Print Date: 02/08/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 77587

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **EFFLUENT FLOW**

Description Flow Meter
Manufacturer Siemens
Model Number OCM III
Serial Number PBD/U1090008-022405101XV
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 60
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 02/08/2023
Next Due Date 03/31/2023

Calibration Specifications

Group Name Inches (Pass 1)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	-2.500 Inches	+/-0.050	-2.500 Inches	P	-2.500 Inches	P	0.000

Group Name Echo Strength (D-18) Pass 1

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Group Name Inches (Pass 2)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.875 Inches	+0.018/-0.017	0.870 Inches	P	0.870 Inches	P	-0.005

Group Name Echo Strength (D-18) Pass 2

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
M-003	Komelon	SL2825	N/A	5/31/2023

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Print Date: 02/08/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 77587

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 08 February 2023 9:29:27AM

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CERTIFICATE of CALIBRATION

Cal Certificate # 78306

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **CEDAR RUN**

Description	Flow Meter	**Status**	Active
Manufacturer	Sigma	**Temp °F**	40
Model Number	950	**Cal Proc**	4.8
Serial Number	N/A	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	03/07/2023
Department	N/A	**Next Due Date**	04/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.39 MGD	+/-0.02	0.38 MGD	P	0.38 MGD	P	-0.01

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 March 2023 8:27:26AM

Print Date: 03/07/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 78307

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **ROSSMOYNE**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	40
Model Number	SC200	**Cal Proc**	4.8
Serial Number	8712A808118	**Adjusted To Improve**	Yes
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	03/07/2023
Department	N/A	**Next Due Date**	04/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.08 MGD	+0.05/-0.05	0.99 MGD	*F*	1.05 MGD	P	-0.03

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 March 2023 8:43:48AM

Print Date: 03/07/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 78308

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **SCIC PRISON METER**

Description Flow Meter
Manufacturer Hach
Model Number SC200
Serial Number 1412C0141778
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 40
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 03/07/2023
Next Due Date 04/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	303.100 GPM	+/-15.155	302.200 GPM	P	302.200 GPM	P	-0.900

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 March 2023 8:55:06AM

Print Date: 03/07/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 78309

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **PLANT INFLUENT**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	70
Model Number	SC200	**Cal Proc**	4.8
Serial Number	1506C0147261	**Adjusted To Improve**	No
Location	Influent	**Calibration Frequency**	Monthly
Building		**Calibrated**	03/07/2023
Department	N/A	**Next Due Date**	04/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	5.990 MGD	+0.300/-0.29 9	6.050 MGD	P	6.050 MGD	P	0.060

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 March 2023 9:12:12AM

Print Date: 03/07/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 78310

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **EFFLUENT FLOW**

Description	Flow Meter	**Status**	Active
Manufacturer	Siemens	**Temp °F**	70
Model Number	OCM III	**Cal Proc**	4.8
Serial Number	PBD/U1090008-022405101XV	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	03/07/2023
Department	N/A	**Next Due Date**	04/30/2023

Calibration Specifications

Group Name Inches (Pass 1)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.700 Inches	+/-0.014	0.710 Inches	P	0.710 Inches	P	0.010

Group Name Echo Strength (D-18) Pass 1

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Group Name Inches (Pass 2)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	-0.270 Inches	+0.005/-0.00 5	-0.270 Inches	P	-0.270 Inches	P	0.000

Group Name Echo Strength (D-18) Pass 2

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
M-003	Komelon	SL2825	N/A	5/31/2023

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Print Date: 03/07/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 78310

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 March 2023 9:22:13AM

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 79188

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **CEDAR RUN**

Description	Flow Meter	**Status**	Active
Manufacturer	Sigma	**Temp °F**	50
Model Number	950	**Cal Proc**	4.8
Serial Number	N/A	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	04/12/2023
Department	N/A	**Next Due Date**	05/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.45 MGD	+/-0.02	0.46 MGD	P	0.46 MGD	P	0.01

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 12 April 2023 8:50:23AM

Print Date: 04/12/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 79189

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **ROSSMOYNE**

Description	Flow Meter
Manufacturer	Hach
Model Number	SC200
Serial Number	8712A808118
Location	N/A
Building	N/A
Department	N/A

Status	Active
Temp °F	50
Cal Proc	4.8
Adjusted To Improve	No
Calibration Frequency	Monthly
Calibrated	04/12/2023
Next Due Date	05/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.02 MGD	+/-0.05	0.99 MGD	P	0.99 MGD	P	-0.03

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 12 April 2023 9:02:00AM

Print Date: 04/12/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 79190

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **SCIC PRISON METER**

Description Flow Meter
Manufacturer Hach
Model Number SC200
Serial Number 1412C0141778
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 50
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 04/12/2023
Next Due Date 05/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	191.700 GPM	+/-9.585	198.800 GPM	P	198.800 GPM	P	7.100

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 12 April 2023 9:16:04AM

Print Date: 04/12/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 79191

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **PLANT INFLUENT**

Description Flow Meter
Manufacturer Hach
Model Number SC200
Serial Number 1506C0147261
Location Influent
Building
Department N/A

Status Active
Temp °F 70
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 04/12/2023
Next Due Date 05/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	4.697 MGD	+0.235/-0.23 5	4.710 MGD	P	4.710 MGD	P	0.013

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 12 April 2023 9:33:08AM

Print Date: 04/12/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 79192

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **EFFLUENT FLOW**

Description	Flow Meter	**Status**	Active
Manufacturer	Siemens	**Temp °F**	70
Model Number	OCM III	**Cal Proc**	4.8
Serial Number	PBD/U1090008-022405101XV	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	04/12/2023
Department	N/A	**Next Due Date**	05/31/2023

Calibration Specifications

Group Name Inches (Pass 1)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	-1.875 Inches	+0.037/-0.038	-1.910 Inches	P	-1.910 Inches	P	-0.035

Group Name Echo Strength (D-18) Pass 1

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Group Name Inches (Pass 2)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.150 Inches	+0.023/-0.023	1.150 Inches	P	1.150 Inches	P	0.000

Group Name Echo Strength (D-18) Pass 2

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
M-003	Komelon	SL2825	N/A	5/31/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 79192

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 12 April 2023 9:44:39AM

Print Date: 04/12/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 79628

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **CEDAR RUN**

Description	Flow Meter
Manufacturer	Sigma
Model Number	950
Serial Number	N/A
Location	N/A
Building	N/A
Department	N/A

Status	Active
Temp °F	50
Cal Proc	4.8
Adjusted To Improve	No
Calibration Frequency	Monthly
Calibrated	05/02/2023
Next Due Date	06/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.55 MGD	+0.03/-0.03	0.54 MGD	P	0.54 MGD	P	-0.01

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 02 May 2023 8:27:12AM

Print Date: 05/02/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 79629

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **ROSSMOYNE**

Description	Flow Meter
Manufacturer	Hach
Model Number	SC200
Serial Number	8712A808118
Location	N/A
Building	N/A
Department	N/A

Status	Active
Temp °F	50
Cal Proc	4.8
Adjusted To Improve	No
Calibration Frequency	Monthly
Calibrated	05/02/2023
Next Due Date	06/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.81 MGD	+/-0.09	1.81 MGD	P	1.81 MGD	P	0.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 02 May 2023 8:45:34AM

Print Date: 05/02/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 79630

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **SCIC PRISON METER**

Description Flow Meter
Manufacturer Hach
Model Number SC200
Serial Number 1412C0141778
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 50
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 05/02/2023
Next Due Date 06/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	256.400 GPM	+12.820/-12.820	258.100 GPM	P	258.100 GPM	P	1.700

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 02 May 2023 9:24:56AM

Print Date: 05/02/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 79631

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **RAVEN HILL PUMP STATION**

Description	Flow Meter	**Status**	Active
Manufacturer	E & H	**Temp °F**	55
Model Number	ProMag 53	**Cal Proc**	4.9
Serial Number	N2039116000	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	6 Months
Building	N/A	**Calibrated**	05/02/2023
Department	N/A	**Next Due Date**	11/30/2023

Calibration Specifications

Group Name Transmitter Test % Deviation @ 5%

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.00 %	+/-1.50	0.74 %	P	0.74 %	P	0.74

Group Name Transmitter Test % Deviation @ 10%

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.00 %	+/-1.00	0.99 %	P	0.99 %	P	0.99

Group Name Transmitter Test % Deviation @ 50%

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.00 %	+/-0.60	0.10 %	P	0.10 %	P	0.10

Group Name Transmitter Test % Deviation @ 100%

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.00 %	+/-0.55	-0.07 %	P	-0.07 %	P	-0.07

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
E&H SIMUBOX	Endress & Hauser Flowtec AG	CH-4153	D7186102000	11/30/2023

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Print Date: 05/02/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 79631

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 02 May 2023 9:20:10AM

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CERTIFICATE of CALIBRATION

Cal Certificate # 79632

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **PLANT INFLUENT**

Description Flow Meter
Manufacturer Hach
Model Number SC200
Serial Number 1506C0147261
Location Influent
Building
Department N/A

Status Active
Temp °F 70
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 05/02/2023
Next Due Date 06/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	9.295 MGD	+/-0.465	9.320 MGD	P	9.320 MGD	P	0.025

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 02 May 2023 9:52:23AM

Print Date: 05/02/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 79633

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **EFFLUENT FLOW**

Description Flow Meter
Manufacturer Siemens
Model Number OCM III
Serial Number PBD/U1090008-022405101XV
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 60
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 05/02/2023
Next Due Date 06/30/2023

Calibration Specifications

Group Name Inches (Pass 1)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.760 Inches	+/-0.015	0.770 Inches	P	0.770 Inches	P	0.010

Group Name Echo Strength (D-18) Pass 1

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Group Name Inches (Pass 2)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.850 Inches	+/-0.017	0.840 Inches	P	0.840 Inches	P	-0.010

Group Name Echo Strength (D-18) Pass 2

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	98.00 %	P	98.00 %	P	-2.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
M-003	Komelon	SL2825	N/A	5/31/2023

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Remarks or Special Requirements:

Print Date: 05/02/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 79633

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 02 May 2023 10:26:55AM

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 80192

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **CEDAR RUN**

Description	Flow Meter	**Status**	Active
Manufacturer	Sigma	**Temp °F**	70
Model Number	950	**Cal Proc**	4.8
Serial Number	N/A	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	06/07/2023
Department	N/A	**Next Due Date**	07/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.55 MGD	+/-0.08	1.53 MGD	P	1.53 MGD	P	-0.02

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Please note: *any number of factors may cause the calibration item to drift out of tolerance before the calibration interval has expired.*

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 June 2023 8:28:25AM

Print Date: 06/07/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 80193

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **ROSSMOYNE**

Description	Flow Meter
Manufacturer	Hach
Model Number	SC200
Serial Number	8712A808118
Location	N/A
Building	N/A
Department	N/A

Status	Active
Temp °F	70
Cal Proc	4.8
Adjusted To Improve	No
Calibration Frequency	Monthly
Calibrated	06/07/2023
Next Due Date	07/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.86 MGD	+/-0.04	0.85 MGD	P	0.85 MGD	P	-0.01

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 June 2023 8:41:02AM

Print Date: 06/07/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 80194

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **SCIC PRISON METER**

Description	Flow Meter
Manufacturer	Hach
Model Number	SC200
Serial Number	1412C0141778
Location	N/A
Building	N/A
Department	N/A

Status	Active
Temp °F	70
Cal Proc	4.8
Adjusted To Improve	No
Calibration Frequency	Monthly
Calibrated	06/07/2023
Next Due Date	07/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	352.600 GPM	+/-17.630	358.500 GPM	P	358.500 GPM	P	5.900

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 June 2023 8:54:48AM

Print Date: 06/07/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 80195

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **PLANT INFLUENT**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	70
Model Number	SC200	**Cal Proc**	4.8
Serial Number	1506C0147261	**Adjusted To Improve**	No
Location	Influent	**Calibration Frequency**	Monthly
Building		**Calibrated**	06/07/2023
Department	N/A	**Next Due Date**	07/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	4.697 MGD	+0.235/-0.23 5	4.920 MGD	P	4.920 MGD	P	0.223

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Please note: *any number of factors may cause the calibration item to drift out of tolerance before the calibration interval has expired.*

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 June 2023 9:11:37AM

Print Date: 06/07/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 80196

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **EFFLUENT FLOW**

Description	Flow Meter	**Status**	Active
Manufacturer	Siemens	**Temp °F**	70
Model Number	OCM III	**Cal Proc**	4.8
Serial Number	PBD/U1090008-022405101XV	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	06/07/2023
Department	N/A	**Next Due Date**	07/31/2023

Calibration Specifications

Group Name Inches (Pass 1)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	-2.125 Inches	+0.042/-0.043	-2.160 Inches	P	-2.160 Inches	P	-0.035

Group Name Echo Strength (D-18) Pass 1

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	98.00 %	P	98.00 %	P	-2.00

Group Name Inches (Pass 2)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.000 Inches	+/-0.020	1.000 Inches	P	1.000 Inches	P	0.000

Group Name Echo Strength (D-18) Pass 2

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	99.00 %	P	99.00 %	P	-1.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
M-003	Komelon	SL2825	N/A	5/31/2024

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Print Date: 06/07/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 80196

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 June 2023 9:27:24AM

Print Date: 06/07/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 81073

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **CEDAR RUN**

Description Flow Meter
Manufacturer Sigma
Model Number 950
Serial Number N/A
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 70
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 07/12/2023
Next Due Date 08/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.44 MGD	+/-0.02	0.46 MGD	P	0.46 MGD	P	0.02

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
TAPE MEASURE	N/A	N/A	N/A	

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Dylan Smith 12 July 2023 9:02:17AM

Print Date: 07/12/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 81074

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **ROSSMOYNE**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	70
Model Number	SC200	**Cal Proc**	4.8
Serial Number	8712A808118	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	07/12/2023
Department	N/A	**Next Due Date**	08/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.33 MGD	+/-0.07	1.29 MGD	P	1.29 MGD	P	-0.04

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
TAPE MEASURE	N/A	N/A	N/A	

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Dylan Smith 12 July 2023 9:21:31AM

Print Date: 07/12/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 81075

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **SCIC PRISON METER**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	70
Model Number	SC200	**Cal Proc**	4.8
Serial Number	1412C0141778	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	07/12/2023
Department	N/A	**Next Due Date**	08/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	362.100 GPM	+/-18.105	360.400 GPM	P	360.400 GPM	P	-1.700

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
TAPE MEASURE	N/A	N/A	N/A	

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Dylan Smith 12 July 2023 9:58:46AM

Print Date: 07/12/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 81076

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **PLANT INFLUENT**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	70
Model Number	SC200	**Cal Proc**	4.8
Serial Number	1506C0147261	**Adjusted To Improve**	No
Location	Influent	**Calibration Frequency**	Monthly
Building		**Calibrated**	07/12/2023
Department	N/A	**Next Due Date**	08/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	7.310 MGD	+0.366/-0.365	7.230 MGD	P	7.230 MGD	P	-0.080

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
TAPE MEASURE	N/A	N/A	N/A	

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Dylan Smith 12 July 2023 10:15:03AM

Print Date: 07/12/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 81077

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **EFFLUENT FLOW**

Description	Flow Meter	**Status**	Active
Manufacturer	Siemens	**Temp °F**	70
Model Number	OCM III	**Cal Proc**	4.8
Serial Number	PBD/U1090008-022405101XV	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	07/12/2023
Department	N/A	**Next Due Date**	08/31/2023

Calibration Specifications

Group Name Inches (Pass 1)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.600 Inches	+/-0.012	0.600 Inches	P	0.600 Inches	P	0.000

Group Name Echo Strength (D-18) Pass 1

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	99.00 %	P	99.00 %	P	-1.00

Group Name Inches (Pass 2)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.420 Inches	+0.028/-0.028	1.440 Inches	P	1.440 Inches	P	0.020

Group Name Echo Strength (D-18) Pass 2

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
TAPE MEASURE	N/A	N/A	N/A	

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Print Date: 07/12/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 81077

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Dylan Smith 12 July 2023 10:56:13AM

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 81506

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **CEDAR RUN**

Description Flow Meter
Manufacturer Sigma
Model Number 950
Serial Number N/A
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 70
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 08/01/2023
Next Due Date 09/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.38 MGD	+/-0.02	0.39 MGD	P	0.39 MGD	P	0.01

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 01 August 2023 8:23:32AM

Print Date: 08/01/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 81507

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **ROSSMOYNE**

Description	Flow Meter
Manufacturer	Hach
Model Number	SC200
Serial Number	8712A808118
Location	N/A
Building	N/A
Department	N/A

Status	Active
Temp °F	70
Cal Proc	4.8
Adjusted To Improve	No
Calibration Frequency	Monthly
Calibrated	08/01/2023
Next Due Date	09/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.91 MGD	+/-0.05	0.90 MGD	P	0.90 MGD	P	-0.01

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 01 August 2023 8:37:31AM

Print Date: 08/01/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 81508

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **SCIC PRISON METER**

Description Flow Meter
Manufacturer Hach
Model Number SC200
Serial Number 1412C0141778
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 70
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 08/01/2023
Next Due Date 09/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	250.800 GPM	+/-12.540	260.100 GPM	P	260.100 GPM	P	9.300

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Please note: *any number of factors may cause the calibration item to drift out of tolerance before the calibration interval has expired.*

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 01 August 2023 8:54:14AM

Print Date: 08/01/2023

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Control Systems 21

"Your Process Control Specialists"

CERTIFICATE of CALIBRATION

Cal Certificate # 81509

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **PLANT INFLUENT**

Description Flow Meter
Manufacturer Hach
Model Number SC200
Serial Number 1506C0147261
Location Influent
Building
Department N/A

Status Active
Temp °F 70
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 08/01/2023
Next Due Date 09/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	5.090 MGD	+0.255/-0.25 4	5.220 MGD	P	5.220 MGD	P	0.130

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

Equipment listed on this cert is certified in reference to our current work instructions as part of our quality system.

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Control Systems 21 utilizes the comparison method of calibration. Results are reviewed, when applicable, and any results exceeding the agreed upon specifications are indicated by red and/or bold print

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 01 August 2023 9:21:14AM

Print Date: 08/01/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 81510

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **EFFLUENT FLOW**

Description Flow Meter
Manufacturer Siemens
Model Number OCM III
Serial Number PBD/U1090008-022405101XV
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 70
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 08/01/2023
Next Due Date

Calibration Specifications

Group Name Inches (Pass 1)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.750 Inches	+/-0.015	0.670 Inches	*F*	0.630 Inches	*F*	-0.120

Group Name Echo Strength (D-18) Pass 1

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Group Name Inches (Pass 2)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	-0.580 Inches	+/-0.012	-0.580 Inches	P	-0.580 Inches	P	0.000

Group Name Echo Strength (D-18) Pass 2

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Print Date: 08/01/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 81510

Pass # 1 jumping around and not holding steady readings. Needs new meter and transducer.

Calibration Result: Calibration Failed

Calibrated By: Dylan Smith

Finalized By: Tim Starr 01 August 2023 10:19:36AM

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CERTIFICATE of CALIBRATION

Cal Certificate # 82227

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **CEDAR RUN**

Description	Flow Meter	**Status**	Active
Manufacturer	Sigma	**Temp °F**	70
Model Number	950	**Cal Proc**	4.8
Serial Number	N/A	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	09/07/2023
Department	N/A	**Next Due Date**	10/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.45 MGD	+/-0.02	0.44 MGD	P	0.44 MGD	P	-0.01

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Please note: *any number of factors may cause the calibration item to drift out of tolerance before the calibration interval has expired.*

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 September 2023 8:20:59AM

Print Date: 09/07/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 82228

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **ROSSMOYNE**

Description	Flow Meter
Manufacturer	Hach
Model Number	SC200
Serial Number	8712A808118
Location	N/A
Building	N/A
Department	N/A

Status	Active
Temp °F	70
Cal Proc	4.8
Adjusted To Improve	No
Calibration Frequency	Monthly
Calibrated	09/07/2023
Next Due Date	10/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.95 MGD	+/-0.05	0.92 MGD	P	0.92 MGD	P	-0.03

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 September 2023 8:45:48AM

Print Date: 09/07/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 82229

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **SCIC PRISON METER**

Description Flow Meter
Manufacturer Hach
Model Number SC200
Serial Number 1412C0141778
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 70
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 09/07/2023
Next Due Date 10/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	262.100 GPM	+/-13.105	267.300 GPM	P	267.300 GPM	P	5.200

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 September 2023 8:56:33AM

Print Date: 09/07/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 82230

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **PLANT INFLUENT**

Description	Flow Meter
Manufacturer	Hach
Model Number	SC200
Serial Number	1506C0147261
Location	Influent
Building	
Department	N/A

Status	Active
Temp °F	70
Cal Proc	4.8
Adjusted To Improve	No
Calibration Frequency	Monthly
Calibrated	09/07/2023
Next Due Date	10/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	3.448 MGD	+/-0.172	3.450 MGD	P	3.450 MGD	P	0.002

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 September 2023 9:24:40AM

Print Date: 09/07/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 82231

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **EFFLUENT FLOW**

Description Flow Meter
Manufacturer Siemens
Model Number OCM III
Serial Number PBD/U1090008-022405101XV
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 70
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 09/07/2023
Next Due Date 10/31/2023

Calibration Specifications

Group Name Inches (Pass 1)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.300 Inches	+/-0.026	1.300 Inches	P	1.300 Inches	P	0.000

Group Name Echo Strength (D-18) Pass 1

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	96.00 %	P	96.00 %	P	-4.00

Group Name Inches (Pass 2)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.625 Inches	+0.033/-0.03 2	1.650 Inches	P	1.650 Inches	P	0.025

Group Name Echo Strength (D-18) Pass 2

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	99.00 %	P	99.00 %	P	-1.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
M-003	Komelon	SL2825	N/A	5/31/2024

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Print Date: 09/07/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 82231

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 07 September 2023 9:33:09AM

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 82989

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **CEDAR RUN**

Description	Flow Meter
Manufacturer	Sigma
Model Number	950
Serial Number	N/A
Location	N/A
Building	N/A
Department	N/A

Status	Active
Temp °F	50
Cal Proc	4.8
Adjusted To Improve	No
Calibration Frequency	Monthly
Calibrated	10/12/2023
Next Due Date	11/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.43 MGD	+/-0.02	0.43 MGD	P	0.43 MGD	P	0.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 12 October 2023 8:40:20AM

Print Date: 10/12/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 82990

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **ROSSMOYNE**

Description	Flow Meter
Manufacturer	Hach
Model Number	SC200
Serial Number	8712A808118
Location	N/A
Building	N/A
Department	N/A

Status	Active
Temp °F	50
Cal Proc	4.8
Adjusted To Improve	No
Calibration Frequency	Monthly
Calibrated	10/12/2023
Next Due Date	11/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.77 MGD	+/-0.04	0.79 MGD	P	0.79 MGD	P	0.02

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 12 October 2023 8:54:42AM

Print Date: 10/12/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 82991

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **SCIC PRISON METER**

Description Flow Meter
Manufacturer Hach
Model Number SC200
Serial Number 1412C0141778
Location N/A
Building N/A
Department N/A

Status Active
Temp °F 50
Cal Proc 4.8
Adjusted To Improve No
Calibration Frequency Monthly
Calibrated 10/12/2023
Next Due Date 11/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	431.500 GPM	+/-21.575	438.900 GPM	P	438.900 GPM	P	7.400

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 12 October 2023 9:04:38AM

Print Date: 10/12/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 82992

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **PLANT INFLUENT**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	70
Model Number	SC200	**Cal Proc**	4.8
Serial Number	1506C0147261	**Adjusted To Improve**	No
Location	Influent	**Calibration Frequency**	Monthly
Building		**Calibrated**	10/12/2023
Department	N/A	**Next Due Date**	11/30/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	4.775 MGD	+0.239/-0.23 9	4.750 MGD	P	4.750 MGD	P	-0.025

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 12 October 2023 9:22:50AM

Print Date: 10/12/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 82993

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **EFFLUENT FLOW**

Description	Flow Meter	**Status**	Active
Manufacturer	Siemens	**Temp °F**	70
Model Number	OCM III	**Cal Proc**	4.8
Serial Number	PBD/U1090008-022405101XV	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	10/12/2023
Department	N/A	**Next Due Date**	11/30/2023

Calibration Specifications

Group Name Inches (Pass 1)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.750 Inches	+/-0.015	0.740 Inches	P	0.740 Inches	P	-0.010

Group Name Echo Strength (D-18) Pass 1

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	98.00 %	P	98.00 %	P	-2.00

Group Name Inches (Pass 2)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	-1.300 Inches	+/-0.026	-1.310 Inches	P	-1.310 Inches	P	-0.010

Group Name Echo Strength (D-18) Pass 2

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Print Date: 10/12/2023

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Control Systems 21

"Your Process Control Specialists"

CERTIFICATE of CALIBRATION

Cal Certificate # 82993

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 12 October 2023 9:45:41AM

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Control Systems 21

"Your Process Control Specialists"

CERTIFICATE of CALIBRATION

Cal Certificate # 83462

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **CEDAR RUN**

Description	Flow Meter	**Status**	Active
Manufacturer	Sigma	**Temp °F**	35
Model Number	950	**Cal Proc**	4.8
Serial Number	N/A	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	11/01/2023
Department	N/A	**Next Due Date**	12/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.36 MGD	+/-0.02	0.35 MGD	P	0.35 MGD	P	-0.01

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Please note: *any number of factors may cause the calibration item to drift out of tolerance before the calibration interval has expired.*

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 01 November 2023 8:29:27AM

Print Date: 11/01/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 83463

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **ROSSMOYNE**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	35
Model Number	SC200	**Cal Proc**	4.8
Serial Number	8712A808118	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	11/01/2023
Department	N/A	**Next Due Date**	12/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.00 MGD	+/-0.05	0.99 MGD	P	0.99 MGD	P	-0.01

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 01 November 2023 8:45:17AM

Print Date: 11/01/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 83464

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **SCIC PRISON METER**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	35
Model Number	SC200	**Cal Proc**	4.9
Serial Number	1412C0141778	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	11/01/2023
Department	N/A	**Next Due Date**	12/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	245.200 GPM	+/-12.260	245.400 GPM	P	245.400 GPM	P	0.200

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 01 November 2023 9:25:25AM

Print Date: 11/01/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 83465

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **PLANT INFLUENT**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	70
Model Number	SC200	**Cal Proc**	4.8
Serial Number	1506C0147261	**Adjusted To Improve**	No
Location	Influent	**Calibration Frequency**	Monthly
Building		**Calibrated**	11/01/2023
Department	N/A	**Next Due Date**	12/31/2023

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	4.775 MGD	+0.239/-0.23 9	4.810 MGD	P	4.810 MGD	P	0.035

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 01 November 2023 9:49:31AM

Print Date: 11/01/2023

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CERTIFICATE of CALIBRATION

Cal Certificate # 83466

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **RAVEN HILL PUMP STATION**

Description	Flow Meter	**Status**	Active
Manufacturer	E & H	**Temp °F**	60
Model Number	ProMag 53	**Cal Proc**	4.9
Serial Number	N2039116000	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	6 Months
Building	N/A	**Calibrated**	11/01/2023
Department	N/A	**Next Due Date**	05/31/2024

Calibration Specifications

Group Name Transmitter Test % Deviation @ 5%

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.00 %	+/-1.50	0.97 %	P	0.97 %	P	0.97

Group Name Transmitter Test % Deviation @ 10%

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.00 %	+/-1.00	-0.24 %	P	-0.24 %	P	-0.24

Group Name Transmitter Test % Deviation @ 50%

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.00 %	+/-0.60	-0.21 %	P	-0.21 %	P	-0.21

Group Name Transmitter Test % Deviation @ 100%

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.00 %	+/-0.55	-0.15 %	P	-0.15 %	P	-0.15

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
E&H SIMUBOX	Endress & Hauser Flowtec AG	CH-4153	D7186102000	11/30/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 83466

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 01 November 2023 9:50:39AM

Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 83467

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **EFFLUENT FLOW**

Description	Flow Meter	**Status**	Active
Manufacturer	Siemens	**Temp °F**	70
Model Number	OCM III	**Cal Proc**	4.8
Serial Number	PBD/U1090008-022405101XV	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	11/01/2023
Department	N/A	**Next Due Date**	12/31/2023

Calibration Specifications

Group Name Inches (Pass 1)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.000 Inches	+/-0.020	1.000 Inches	P	1.000 Inches	P	0.000

Group Name Echo Strength (D-18) Pass 1

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Group Name Inches (Pass 2)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.310 Inches	+/-0.026	1.300 Inches	P	1.300 Inches	P	-0.010

Group Name Echo Strength (D-18) Pass 2

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	100.00 %	P	100.00 %	P	0.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Print Date: 11/01/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 83467

Calibration Result: Calibration Successful

Calibrated By: Dylan Smith

Finalized By: Tim Starr 01 November 2023 11:01:49AM

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 84044

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **CEDAR RUN**

Description	Flow Meter	**Status**	Active
Manufacturer	Sigma	**Temp °F**	40
Model Number	950	**Cal Proc**	4.8
Serial Number	N/A	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	12/06/2023
Department	N/A	**Next Due Date**	01/31/2024

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.40 MGD	+/-0.02	0.42 MGD	P	0.42 MGD	P	0.02

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Jon Wirth

Finalized By: Tim Starr 06 December 2023 8:48:43AM

Print Date: 12/06/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 84045

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID ROSSMOYNE

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	40
Model Number	SC200	**Cal Proc**	4.8
Serial Number	8712A808118	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	12/06/2023
Department	N/A	**Next Due Date**	01/31/2024

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.84 MGD	+/-0.04	0.80 MGD	P	0.80 MGD	P	-0.04

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Jon Wirth

Finalized By: Tim Starr 06 December 2023 8:59:31AM

Print Date: 12/06/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 84046

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **SCIC PRISON METER**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	40
Model Number	SC200	**Cal Proc**	4.8
Serial Number	1412C0141778	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	12/06/2023
Department	N/A	**Next Due Date**	01/31/2024

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	346.200 GPM	+/-17.310	331.200 GPM	P	331.200 GPM	P	-15.000

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Jon Wirth

Finalized By: Tim Starr 06 December 2023 9:10:35AM

Print Date: 12/06/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 84047

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **PLANT INFLUENT**

Description	Flow Meter	**Status**	Active
Manufacturer	Hach	**Temp °F**	70
Model Number	SC200	**Cal Proc**	4.8
Serial Number	1506C0147261	**Adjusted To Improve**	No
Location	Influent	**Calibration Frequency**	Monthly
Building		**Calibrated**	12/06/2023
Department	N/A	**Next Due Date**	01/31/2024

Calibration Specifications

Group Name MGD

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	5.576 MGD	+0.279/-0.279	5.670 MGD	P	5.670 MGD	P	0.094

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Jon Wirth

Finalized By: Tim Starr 06 December 2023 9:28:26AM

Print Date: 12/06/2023

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Control Systems 21

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CERTIFICATE of CALIBRATION

Cal Certificate # 84048

Company Name Lower Allen Township
120 Limekiln Road
New Cumberland, PA 17070

Instrument ID **EFFLUENT FLOW**

Description	Flow Meter	**Status**	Active
Manufacturer	Siemens	**Temp °F**	60
Model Number	OCM III	**Cal Proc**	4.8
Serial Number	PBD/U1090008-022405101XV	**Adjusted To Improve**	No
Location	N/A	**Calibration Frequency**	Monthly
Building	N/A	**Calibrated**	12/06/2023
Department	N/A	**Next Due Date**	01/31/2024

Calibration Specifications

Group Name Inches (Pass 1)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	1.000 Inches	+/-0.020	0.980 Inches	P	0.980 Inches	P	-0.020

Group Name Echo Strength (D-18) Pass 1

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	99.00 %	P	99.00 %	P	-1.00

Group Name Inches (Pass 2)

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	0.750 Inches	+/-0.015	0.750 Inches	P	0.750 Inches	P	0.000

Group Name Echo Strength (D-18) Pass 2

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	100.00 %	+/-50.00	98.00 %	P	98.00 %	P	-2.00

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
M-003	Komelon	SL2825	N/A	5/31/2024

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Remarks or Special Requirements:

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Control Systems 21

"Your Process Control Specialists"

CERTIFICATE of CALIBRATION

Cal Certificate # 84048

Calibration Result: Calibration Successful

Calibrated By: Jon Wirth

Finalized By: Tim Starr 06 December 2023 9:48:14AM

Control Systems 21

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email@controlsystems21.com

Attachment 9 Tributary Sewer Systems
Lower Allen Township Authority
NPDES PA0027189

The Lower Allen Township Authority wastewater treatment plant receives wastewater from Lower Allen Township, Borough of Shiremanstown, portions of Upper Allen Township and Pennsylvania American Water - Fairview Township, and the State Correctional Institution at Camp Hill. The Authority owns and operates the collection system in Lower Allen Township and Shiremanstown Borough, and the Lower Allen treatment plant. The tributary users are responsible for the condition of their sewer systems and were requested to submit information for this report. Documentation received from the tributary users is included in this section.

3800-FM-BPNPSM0507 4/2014
Chapter 94 Report

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: 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:	**Pennsylvania American Water**	Permit No.:	**PA0081868**
Mailing Address:	**852 Wesley Drive**	Effective Date:	**Febuary 1,2022**
City, State, Zip:	**Mechanicsburg, PA 17055**	Expiration Date:	**January 31, 2027**
Contact Person:	**Stephen DeFriece**	Renewal Due Date:	**August 4, 2026**
Title:	**Engineering Project Manager**	Municipality:	**Fairview Township North**
Phone:	**(717) 550-1608**	County:	**York**
Email:	**Stephen.DeFriece@amwater.com**	Consultant Name:	**N/A**

CHAPTER 94 REPORT COMPONENTS

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

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

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

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

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

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

Check the appropriate boxes:

☒ Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment 2**)

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

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

Comments:

Sienna is a Residential Development that has a build out of 655 EDUs, the anticipated schedule of construction is 40 EDUs starting in 2024.
Green Lane Meadows is a Residential Development that has a build out of 208 EDUs, the anticipated schedule of construction is 40 EDUs starting in 2024.
100 Spanglers Mill Road is a Residential Development that has a build out of 227 EDUs, the anticipated schedule of construction is 40 EDUs starting in 2026.

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))

Typically, the collection system maintenance program consists of systematic checks on manholes throughout the collection system. Televising inspections are periodically performed to identify potential problem areas.

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:

During 2023 PAWC personnel monitored and maintained the collection system, no maintenance or capacity concerns were discovered.

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

Check the appropriate boxes:

- ☐ The collection system does not contain pump stations
- ☐ The collection system does contain pump stations (Number –)
- ☒ Discussion of condition of each pump station attached (**Attachment 1**)

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

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

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

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

Check the appropriate boxes:

- ☐ Industrial waste report as described in 8 a., b. and c. attached (**Attachment**)
- ☐ Industrial pretreatment report as required in an NPDES permit attached (**Attachment**)

9. Existing or Projected Overload.

Check the appropriate boxes:

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

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

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

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

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

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

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

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

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

RESPONSIBLE OFFICIAL CERTIFICATION

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

Bruce Aiton, VP Engineering	Bruce Aiton
Name of Responsible Official	Signature
(717) 550-1610	3-14-24
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).

Stephen DeFriece	Stephen DeFriece
Name of Preparer	Signature
(717) 550-1608	**3/14/2024**
Telephone No.	Date

Attachment No.1

PAWC owns and operates eleven (11) pump stations in the Fairview North Sewer Service Area. Each pump station is equipped with two (2) pumps and a device that records pump operating (run) time. The rated capacities are determined by assuming one pump is in standby mode, in conformance with DEP guidelines. The maximum capacity of each pump station is expected to be less than the combined individual capacity of the two (2) pumps. Data for each of the pump stations is provided in Table 1.

Lower Allen Township receives flows from two (2) of the eleven (11) stations Pin Oak, and Corporate Circle. The daily average and maximum monthly flow from the Pin Oak Pump Station are estimated based on pump run times and rated capacities. And Corporate Circle is equipped with a flow meter and is based on actual monthly gallons pumped.

Projected Max Monthly Flow= (Peaking factor * Max Monthly Flow, GPD) + 5%
The Peaking factor ("Max : Avg Ratio")= 3mo. Avg GPD / Daily avg Flow GPD
Maximum month flows through 2026 are projected to increase by 5% since only minimal growth is anticipated in the collection system tributary to these pump stations. As the data indicates in Table 1, the pump stations are not currently hydraulically overloaded or anticipated to be overloaded within the next 2 years.

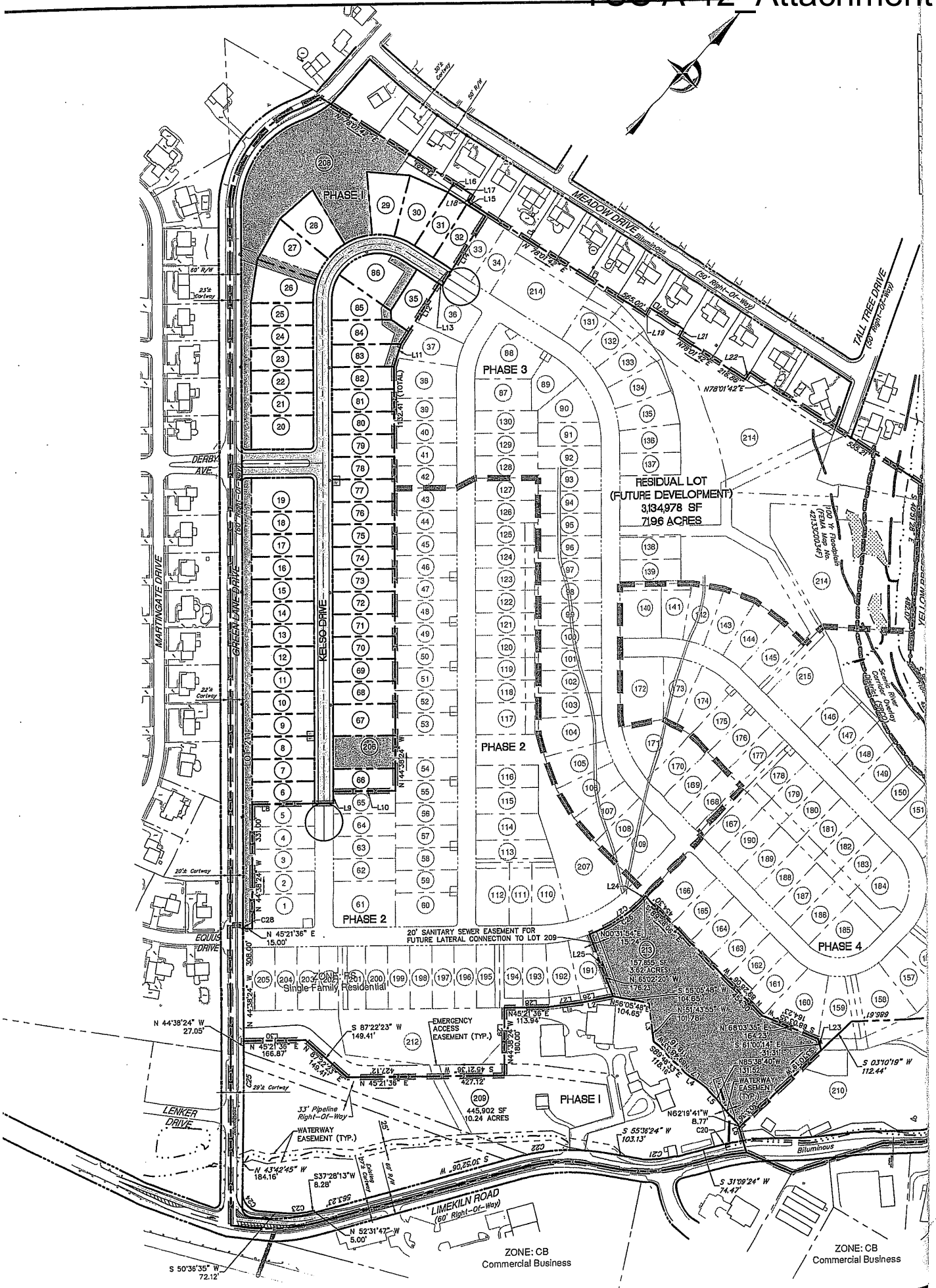
Normal preventative maintenance and repairs of the Pump Stations are performed on a needed basis during the year and are in good condition.

Table 1. Pump Station Data

Pump Station	Rated Capacity	3MO,MAX AVG GPD	2023 Average Daily Flow, GPD	Peaking Factor Max : Avg Ratio	2023 Max. Month Flow, GPD	2026 Projected Max. Month Flow, GPD[1]
10. Corporate Circle	55 GPM 79,200 GPD	2,568	1,503	1.71	3,228	5,791
11. Pin Oak	210 GPM 302,400 GPD	8,133	7,741	1.05	9,308	10,268

[1] Based on 5% increase.

TUS A-12_Attachment



LOT CURVE TABLE					
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD DIRECTION	CHORD LENGTH
C20	80.07	690.00	6°38'56"	S 34°28'53" W	80.03
C21	127.66	493.22	14°49'48"	S 38°34'18" W	127.31
C22	241.94	560.34	24°44'18"	S 43°14'15" W	240.06
C23	68.62	218.33	18°00'24"	S 41°36'22" W	68.33
C24	74.77	50.00	85°40'41"	N 86°33'05" W	67.99
C25	191.10	11843.26	0°55'28"	N 44°10'29" W	191.10
C26	170.55	400.00	24°25'46"	N 12°44'47" E	169.26
C27	170.55	400.00	24°25'46"	S 12°44'47" W	169.26
C28	15.71	10.00	90°00'00"	S 89°38'24" E	14.14

EXISTING LEGEND

- Boundary Line
- Legal Right-Of-Way Line
- Easement Line
- Building
- Edge Of Road
- Curbing
- Fence Line
- Existing Edge of Creek
- Wetlands
- Tree Line
- Floodway
- 100 Year Floodplain
- Scenic River Corridor Overlay District (SRCO)
- County/Township Line
- Zone Line

PROPOSED LEGEND

- PROPOSED PROPERTY LINE
- PROPOSED RIGHT-OF-WAY LINE
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED CURB
- PROPOSED EDGE OF PAVEMENT
- PROPOSED PHASE LINE
- PROPOSED SANITARY SEWER EASEMENT
- PROPOSED STORMWATER EASEMENT

LOT 209

LINE TABLE		
LINE NO.	DIRECTION	LENGTH
L1	N 37°51'53" E	91.96
L2	N 34°43'35" E	86.21
L3	S 51°43'55" E	101.78
L4	N 79°43'03" E	72.26
L5	S 85°38'40" E	131.52
L6	S 62°19'41" E	45.11

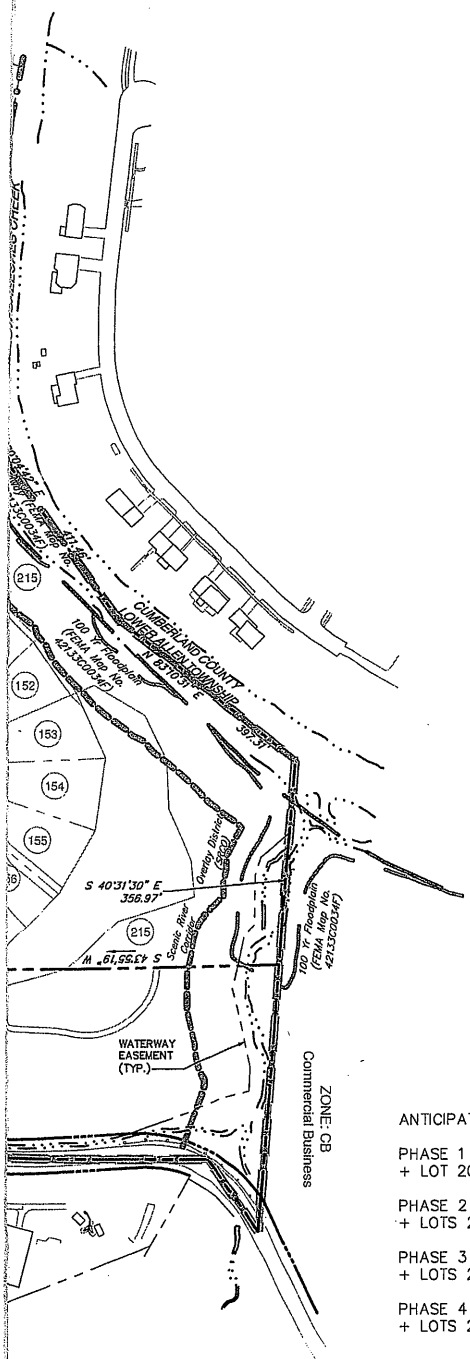
LOT 213

LINE TABLE		
LINE NO.	DIRECTION	LENGTH
L7	S 79°43'03" W	72.26

OVERALL RESIDUAL LOT

LINE TABLE		
LINE NO.	DIRECTION	LENGTH
L8	N 45°21'36" E	243.00
L9	N 44°38'24" W	31.59
L10	N 45°21'36" E	168.00
L11	N 26°54'09" W	62.99
L12	N 11°58'18" W	190.07
L13	N 78°01'42" E	9.85
L14	N 11°58'18" W	218.00
L15	S 78°01'42" W	120.00
L16	N 11°58'18" W	30.00
L17	N 78°01'42" E	60.95
L18	S 11°58'18" E	22.00
L19	N 11°58'18" W	22.00
L20	N 78°01'42" E	108.43
L21	S 11°58'18" E	22.00
L22	N 11°58'18" W	22.00
L23	N 61°00'14" W	31.31
L24	S 0°31'54" W	15.24
L25	S 65°02'20" E	176.23
L26	S 34°43'35" W	86.21
L27	S 37°51'53" W	91.96

LINE TABLE		
LINE NO.	DIRECTION	LENGTH
L28	S 45°21'36" W	113.94
L29	S 44°38'24" E	180.00
L30	S 45°21'36" W	166.87



GENERAL NOTES:

1. LOT 209 HAS EXISTING NON-CONFORMITIES. THE PARCEL CONTAINS TWO (2) STRUCTURES, BOTH LOCATED WITHIN THE FRONT YARD SETBACK.

INSPECTION OF IMPROVEMENTS DURING CONSTRUCTION NOTES

A. PRIOR TO THE INITIATION OF CONSTRUCTION, THE DEVELOPER SHALL NOTIFY THE TOWNSHIP SO THAT AN INSPECTION SCHEDULE CAN BE COORDINATED WITH THE CONSTRUCTION SCHEDULE. ADDITIONALLY, THE TOWNSHIP AND THE TOWNSHIP ENGINEER SHALL BE NOTIFIED FOUR WORKING DAYS IN ADVANCE OF ANY INTENDED DATE OF CONSTRUCTION. THE PROVISIONS STATED HEREIN SHALL BE CONSTRUED AS MANDATING PERIODIC INSPECTIONS AND THE UNDERTAKING OF PERIODIC INSPECTIONS SHALL NOT BE CONSTRUED AS AN ACCEPTANCE OF THE WORK DURING CONSTRUCTION OR AS A FINAL INSPECTION OF THE CONSTRUCTION.

B. THE APPLICANT SHALL REIMBURSE THE TOWNSHIP FOR THE REASONABLE AND NECESSARY EXPENSE INCURRED FOR THE INSPECTION OF IMPROVEMENTS. SUCH REIMBURSEMENT SHALL BE BASED UPON TIME AND MATERIAL COSTS FOR THE REFERENCED INSPECTIONS. SUCH EXPENSE SHALL BE REASONABLE AND IN ACCORDANCE WITH THE ORDINARY AND CUSTOMARY FEES CHARGED BY THE TOWNSHIP ENGINEER FOR WORK PERFORMED FOR SIMILAR SERVICES IN THE COMMUNITY, BUT IN NO EVENT SHALL THE FEES EXCEED THE RATE OR COST CHARGED BY THE TOWNSHIP ENGINEER TO THE TOWNSHIP WHEN FEES ARE NOT REIMBURSED OR OTHERWISE IMPOSED ON APPLICANTS.

C. IT IS THE PRACTICE OF THE TOWNSHIP TO REQUIRE THE DEVELOPER TO FUND AN ESCROW ACCOUNT ESTABLISHED BY THE TOWNSHIP IN THE AMOUNT OF A PERCENTAGE OF THE IMPROVEMENT GUARANTEE AMOUNT PRIOR TO FINAL PLAN APPROVAL FOR THE PURPOSE OF FUNDING ENGINEERING INSPECTIONS OF DEVELOPER-INSTALLED FACILITIES. THE PERCENTAGE SHALL BE ESTABLISHED BY THE FEE SCHEDULE. THE TOWNSHIP SHALL PAY ENGINEERING SERVICES OUT OF THE ESCROWED AMOUNT FOLLOWING RECEIPT OF THE INVOICE.
(1) IF DURING THE COURSE OF THE PROJECT, ADDITIONAL FEES ARE REQUIRED, THE APPLICANT/DEVELOPER SHALL FUND THE ESCROW ACCOUNT TO AN APPROPRIATE AMOUNT.
(2) IF AT THE END OF THE PROJECT, THERE ARE FUNDS REMAINING IN THE ESCROW ACCOUNT, THE TOWNSHIP SHALL REFUND TO THE APPLICANT/DEVELOPER THE REMAINING BALANCE.

D. THE TOWNSHIP, AT THE EXPENSE OF THE DEVELOPER, RESERVES THE RIGHT TO REQUIRE TESTS OF THE IMPROVEMENTS TO DETERMINE WHETHER THE IMPROVEMENT COMPLIES IN ALL RESPECTS WITH THE REQUIREMENTS OF THE TOWNSHIP.

ANTICIPATED PHASING SCHEDULE:

PHASE 1 = 49 BUILDING LOTS
+ LOT 208, 213 – 2023 BUILD OUT

PHASE 2 = 61 BUILDING LOTS
+ LOTS 206, 207, 209, 212, 213 – 2025 BUILD OUT

PHASE 3 = 48 BUILDING LOTS
+ LOTS 214 – 2027 BUILD OUT

PHASE 4 = 47 BUILDING LOTS
+ LOTS 210, 215 – 2029 BUILD OUT

150 0 150 300
SCALE: 1" = 150'

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4250 Crums Mill Road
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Harrisburg, PA 17112
t: 888.432.9663
f: 717.732.8596

REVISIONS

NO.	DATE	DESCRIPTION	CHECKED	DRAWN

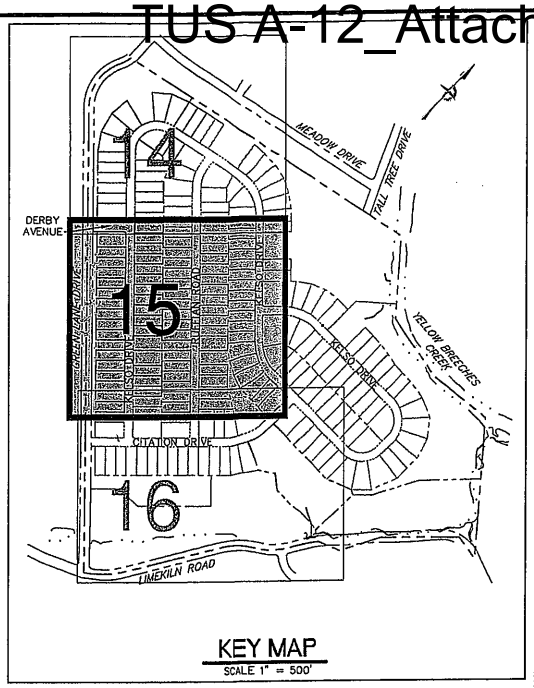
FINAL SUBDIVISION / LAND DEVELOPMENT PLAN
FOR
GREEN LANE MEADOWS - PHASE 1
FAIRVIEW TOWNSHIP PENNSYLVANIA
YORK COUNTY

DRAWING TITLE
OVERALL LOT SUBDIVISION PLAN

DATE	FEBRUARY 3, 2022
JOB NO.	2000297.00
FILE NAME	LDE-FL-SV01
DRAWN BY	CZ/HAB
CHECKED BY	TLG
SHEET NO.	7 OF 42

SITE UTILITY NOTES:

1. EXISTING LOCATIONS OF SEWER, WATER, GAS, DATA, CABLE, PHONE AND POWER ARE APPROXIMATED FROM RECORD DRAWINGS AND LIMITED FIELD LOCATES. THE CONTRACTOR SHALL VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING ANY WORK.
2. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO COORDINATE WORK FOR NEW SERVICES, CONNECTIONS AND EXTENSIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS RELATIVE TO THE DEMOLITION AND / OR CONSTRUCTION SHOWN ON THESE PLANS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL, TRENCH BARRICADING AND SHEETING AND SHORING.
5. ALL SANITARY SEWER CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST STANDARDS OF PA AMERICAN SEWER AUTHORITY AND SHALL BE SUBJECT TO APPROVAL BY THE TOWNSHIP ENGINEER.
6. THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH APPLICABLE TOWNSHIP CODES, UTILITY REGULATIONS AND CONSTRUCTION SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO TRENCHING, MATERIALS AND LINE SEPARATION REQUIREMENTS.
7. CONSTRUCTION OF ALL WORK WITHIN THE PUBLIC STREET RIGHT-OF-WAY AND WORK RELATED TO STORM DRAINAGE FACILITIES REQUIRES INSPECTION BY THE TOWNSHIP. PROVIDE A MINIMUM 48 HOURS NOTICE TO THE TOWNSHIP BEFORE STARTING WORK.
8. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE DONE DUE TO CONTRACTOR NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT EXPENSE OF THE CONTRACTOR.
9. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITIES BE UNCOVERED DURING EXCAVATION, CONSULT THE UTILITY OWNER OR ENGINEER IMMEDIATELY FOR DIRECTION BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ANY AND ALL EXISTING UNDERGROUND UTILITIES IN THE VICINITY OF THE CONTRACTOR'S WORK. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF SUPPORT AND PROTECTION DURING EXCAVATION OPERATIONS WHEN IT IS INDICATED THAT THESE UTILITIES ARE TO REMAIN IN PLACE.
11. ALL SITE WATER PIPING SHALL BE CEMENT LINED CLASS 52 DUCTILE IRON PIPE.
12. CONTRACTOR SHALL INSTALL BRIGHTLY COLORED WARNING TAPE WITH TRACE WIRE IN ALL UTILITY TRENCHES AT 12 INCHES BELOW FINISHED GRADE.
13. ALL WORK WITHIN THE EXISTING OR PROPOSED RIGHT OF WAY SHALL BE RESTORED TO TOWNSHIP STANDARDS.
14. IT SHALL BE THE SITE CONTRACTOR'S RESPONSIBILITY TO CONTACT/SCHEDULE ALL SITE INSPECTIONS WITH THE TOWNSHIP AND APPROPRIATE UTILITY SERVICE PROVIDERS. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING IN ACCORDANCE WITH THE APPROPRIATE TOWNSHIP/UTILITY COMPANY REGULATIONS.
15. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD FOR INSTALLATION.
16. ALL UTILITIES SHALL BE INSTALLED UNDERGROUND BEFORE CONSTRUCTING PAVEMENT OR SIDEWALKS.
17. ALL STORM SEWER STRUCTURES GREATER THAN FIVE (5) FEET OF DEPTH SHALL BE FITTED WITH MANHOLE TYPE STEPS.
18. ALL PROPOSED STORM SEWER PIPING SHALL BE SMOOTH INTERIOR WITH GASKETED JOINTS FOR WATERTIGHT CONNECTIONS.
19. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR FLUSHING ALL DRAINAGE PIPES TO INSURE THEY ARE CLEAR OF ALL SEDIMENT AND DEBRIS AFTER PAVEMENT HAS BEEN INSTALLED AND THE SITE IS COMPLETELY STABILIZED.
20. ALL INLETS SHALL BE TYPE "C" UNLESS OTHERWISE NOTED ON THE PROFILES.
21. ALL INLETS AT LOW POINTS ALONG THE ROADWAY SHALL HAVE A TEN-INCH CURB REVEAL AND SHALL BE EQUIPPED WITH PAVEMENT BASE DRAIN EXTENDING 50 FEET IN EITHER DIRECTION, PARALLEL TO THE CENTER LINE OF THE ROADWAY.



KEY MAP
SCALE 1" = 500'

EXISTING LEGEND

- Boundary Line
- Legal Right-Of-Way Line
- Easement Line
- Building
- Edge Of Road
- Curbing
- Fence Line
- Existing Edge of Creek
- Wetlands
- Road Sign
- Bollard
- Tree Line
- Vegetation
- Light Post/Pole
- Existing 2' Contour
- Existing 10' Contour
- Storm Sewer Line
- Storm Sewer Inlet
- Storm Sewer Manhole
- Sanitary Sewer Line
- Sewer Manhole
- Water Line
- Fire Hydrant
- Water Meter
- Water Valve
- Gas Line
- Gas Valve
- Overhead Electric Line
- Electric & Telephone Line
- Electric, Telephone & Cable TV Line
- Underground Cable TV Line
- Utility Pole
- Guy Wire

PROPOSED LEGEND

- PROPOSED PROPERTY LINE
- PROPOSED RIGHT-OF-WAY LINE
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUILDING
- PROPOSED CURB
- PROPOSED EDGE OF PAVEMENT
- PROPOSED STREET SIGN / TYPE
- LIGHT POLE
- PROPOSED SIDEWALK
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- PROPOSED STORM SEWER LINE
- PROPOSED STORM SEWER INLET
- PROPOSED RIP-RAP
- PROPOSED MANHOLE
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY LATERAL
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE

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REVISIONS			
NO.	DATE	DESCRIPTION	CHECKED / DRAWN

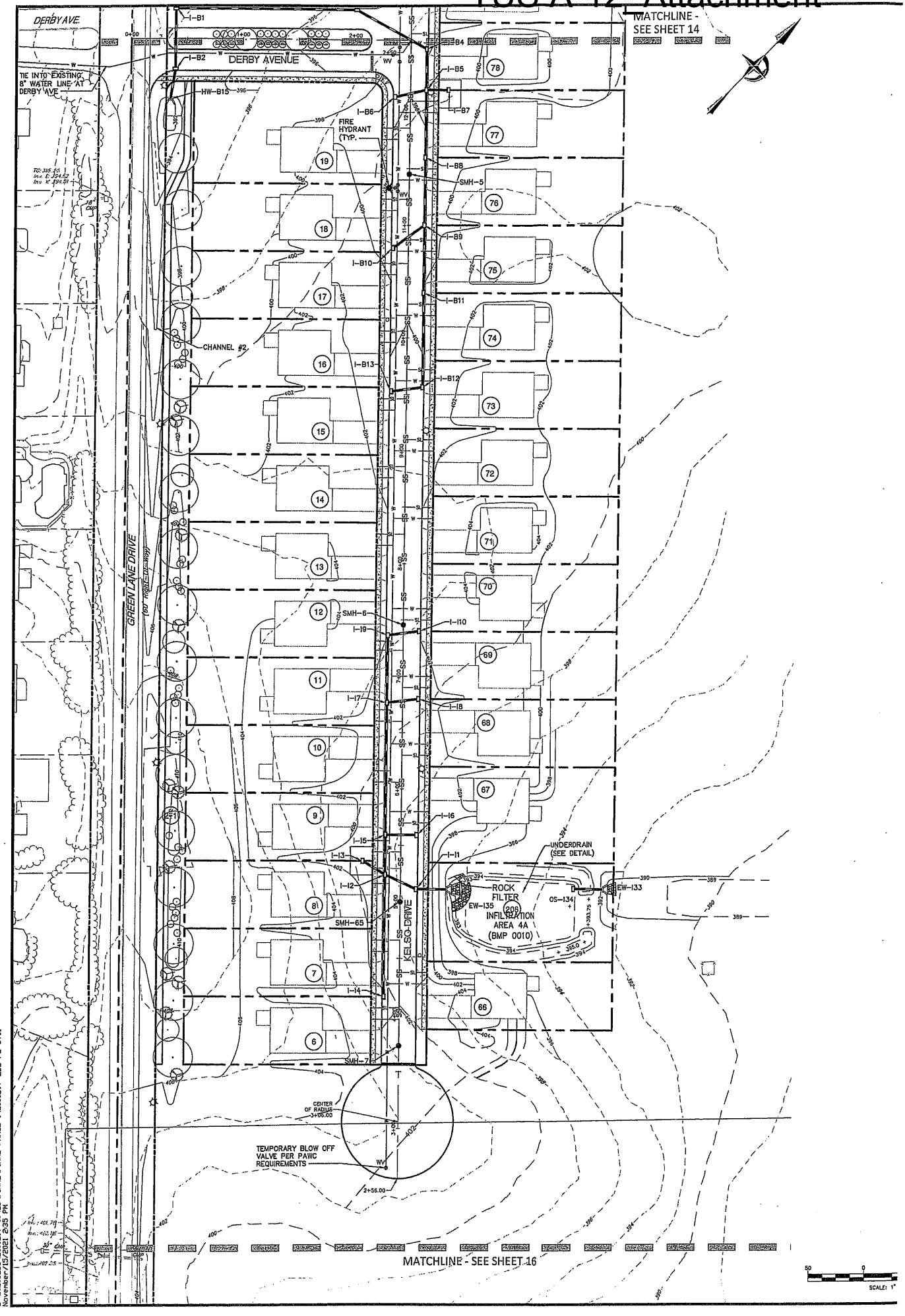
FINAL SUBDIVISION / LAND DEVELOPMENT PLAN FOR
GREEN LANE MEADOWS
FAIRVIEW TOWNSHIP YORK COUNTY PENNSYLVANIA

DRAWING TITLE
UTILITY PLAN

DATE	NOVEMBER 5, 2021
JOB NO.	2000297.00
FILE NAME	LDE-FL-UT01
DRAWN BY	CZ/HAB
CHECKED BY	TLG
SHEET NO.	15 OF 40

100

TUS A-12 Attachment



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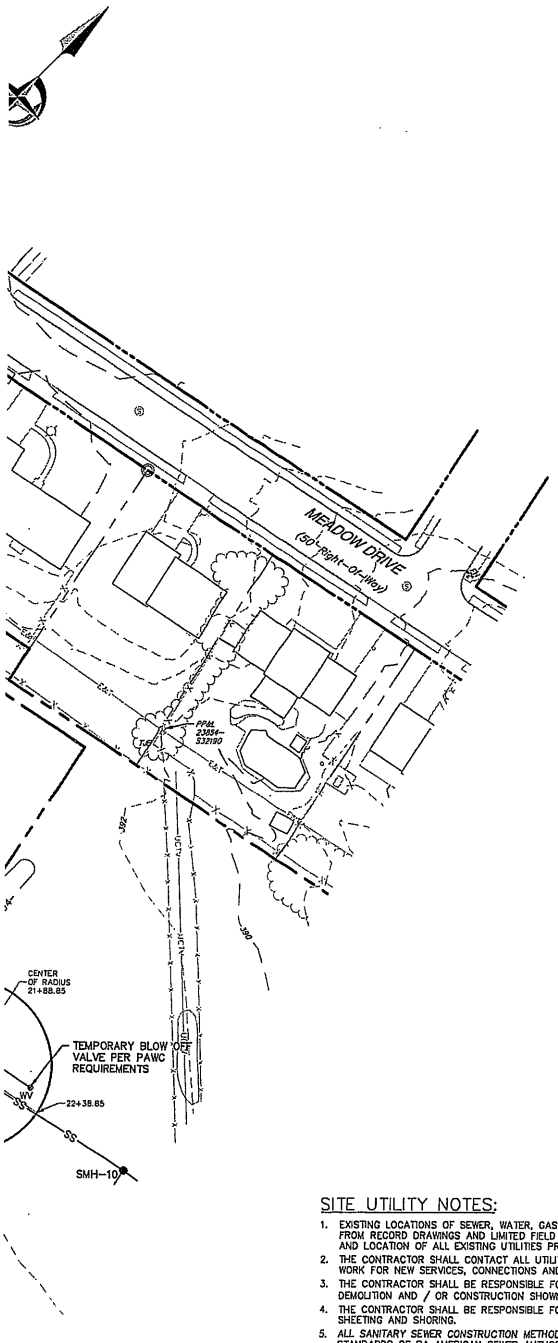
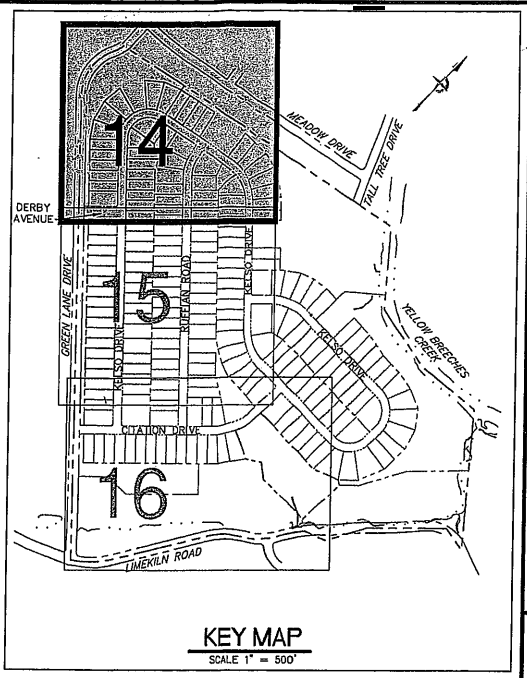




KEY MAP
SCALE 1" = 500'

EXISTING LEGEND

- Boundary Line
- Legal Right-Of-Way Line
- Easement Line
- Building
- Edge Of Road
- Curbing
- Fence Line
- Existing Edge of Creek
- Wetlands
- Road Sign
- Bollard
- Tree Line
- Vegetation
- Light Post/Pole
- Existing 2' Contour
- Existing 10' Contour
- Storm Sewer Line
- Storm Sewer Inlet
- Storm Sewer Manhole
- Sanitary Sewer Line
- Sewer Manhole
- Water Line
- Fire Hydrant
- Water Meter
- Water Valve
- Gas Line
- Gas Valve
- Overhead Electric Line
- Electric & Telephone Line
- Electric, Telephone & Cable TV Line
- Underground Cable TV Line
- Utility Pole
- Guy Wire

PROPOSED LEGEND

- PROPOSED PROPERTY LINE
- PROPOSED RIGHT-OF-WAY LINE
- PROPOSED EASEMENT
- PROPOSED CENTERLINE
- PROPOSED BUILDING
- PROPOSED CURB
- PROPOSED EDGE OF PAVEMENT
- PROPOSED STREET SIGN / TYPE
- LIGHT POLE
- PROPOSED SIDEWALK
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- PROPOSED STORM SEWER LINE
- PROPOSED STORM SEWER INLET
- PROPOSED RIP-RAP
- PROPOSED MANHOLE
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY LATERAL
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE

SITE UTILITY NOTES:

1. EXISTING LOCATIONS OF SEWER, WATER, GAS, DATA, CABLE, PHONE AND POWER ARE APPROXIMATED FROM RECORD DRAWINGS AND LIMITED FIELD LOCATES. THE CONTRACTOR SHALL VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING ANY WORK.
2. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO COORDINATE WORK FOR NEW SERVICES, CONNECTIONS AND EXTENSIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS RELATIVE TO THE DEMOLITION AND / OR CONSTRUCTION SHOWN ON THESE PLANS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL, TRENCH BARRICADING AND SHEETING AND SHORING.
5. *ALL SANITARY SEWER CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST* STANDARDS OF PA AMERICAN SEWER AUTHORITY AND SHALL BE SUBJECT TO APPROVAL BY THE TOWNSHIP ENGINEER.
6. THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH APPLICABLE TOWNSHIP CODES, UTILITY REGULATIONS AND CONSTRUCTION SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO TRENCHING, MATERIALS AND LINE SEPARATION REQUIREMENTS.
7. CONSTRUCTION OF ALL WORK WITHIN THE PUBLIC STREET RIGHT-OF-WAY AND WORK RELATED TO STORM DRAINAGE FACILITIES REQUIRES INSPECTION BY THE TOWNSHIP. PROVIDE A MINIMUM 48 HOURS NOTICE TO THE TOWNSHIP BEFORE STARTING WORK.
8. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE DONE DUE TO CONTRACTOR NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT EXPENSE OF THE CONTRACTOR.
9. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITIES BE UNCOVERED DURING EXCAVATION, CONSULT THE UTILITY OWNER OR ENGINEER IMMEDIATELY FOR DIRECTION BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ANY AND ALL EXISTING UNDERGROUND UTILITIES IN THE VICINITY OF THE CONTRACTOR'S WORK. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF SUPPORT AND PROTECTION DURING EXCAVATION OPERATIONS WHEN IT IS INDICATED THAT THESE UTILITIES ARE TO REMAIN IN PLACE.
11. ALL SITE WATER PIPING SHALL BE CEMENT LINED CLASS 52 DUCTILE IRON PIPE.
12. CONTRACTOR SHALL INSTALL BRIGHTLY COLORED WARNING TAPE WITH TRACE WIRE IN ALL UTILITY TRENCHES AT 12 INCHES BELOW FINISHED GRADE.
13. ALL WORK WITHIN THE EXISTING OR PROPOSED RIGHT OF WAY SHALL BE RESTORED TO TOWNSHIP STANDARDS.
14. IT SHALL BE THE SITE CONTRACTOR'S RESPONSIBILITY TO CONTACT/SCHEDULE ALL SITE INSPECTIONS WITH THE TOWNSHIP AND APPROPRIATE UTILITY SERVICE PROVIDERS. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING IN ACCORDANCE WITH THE APPROPRIATE TOWNSHIP/UTILITY COMPANY REGULATIONS.
15. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD FOR INSTALLATION.
16. ALL UTILITIES SHALL BE INSTALLED UNDERGROUND BEFORE CONSTRUCTING PAVEMENT OR SIDEWALKS.
17. ALL STORM SEWER STRUCTURES GREATER THAN FIVE (5) FEET OF DEPTH SHALL BE FITTED WITH MANHOLE TYPE STEPS.
18. ALL PROPOSED STORM SEWER PIPING SHALL BE SMOOTH INTERIOR WITH GASKETED JOINTS FOR WATERTIGHT CONNECTIONS.
19. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR FLUSHING ALL DRAINAGE PIPES TO INSURE THEY ARE CLEAR OF ALL SEDIMENT AND DEBRIS AFTER PAVEMENT HAS BEEN INSTALLED AND THE SITE IS COMPLETELY STABILIZED.
20. ALL INLETS SHALL BE TYPE "C" UNLESS OTHERWISE NOTED ON THE PROFILES.
21. ALL INLETS AT LOW POINTS ALONG THE ROADWAY SHALL HAVE A TEN-INCH CURB REVEAL AND SHALL BE EQUIPPED WITH PAVEMENT BASE DRAIN EXTENDING 50 FEET IN EITHER DIRECTION, PARALLEL TO THE CENTER LINE OF THE ROADWAY.

50 0 50 100
SCALE 1" = 50'

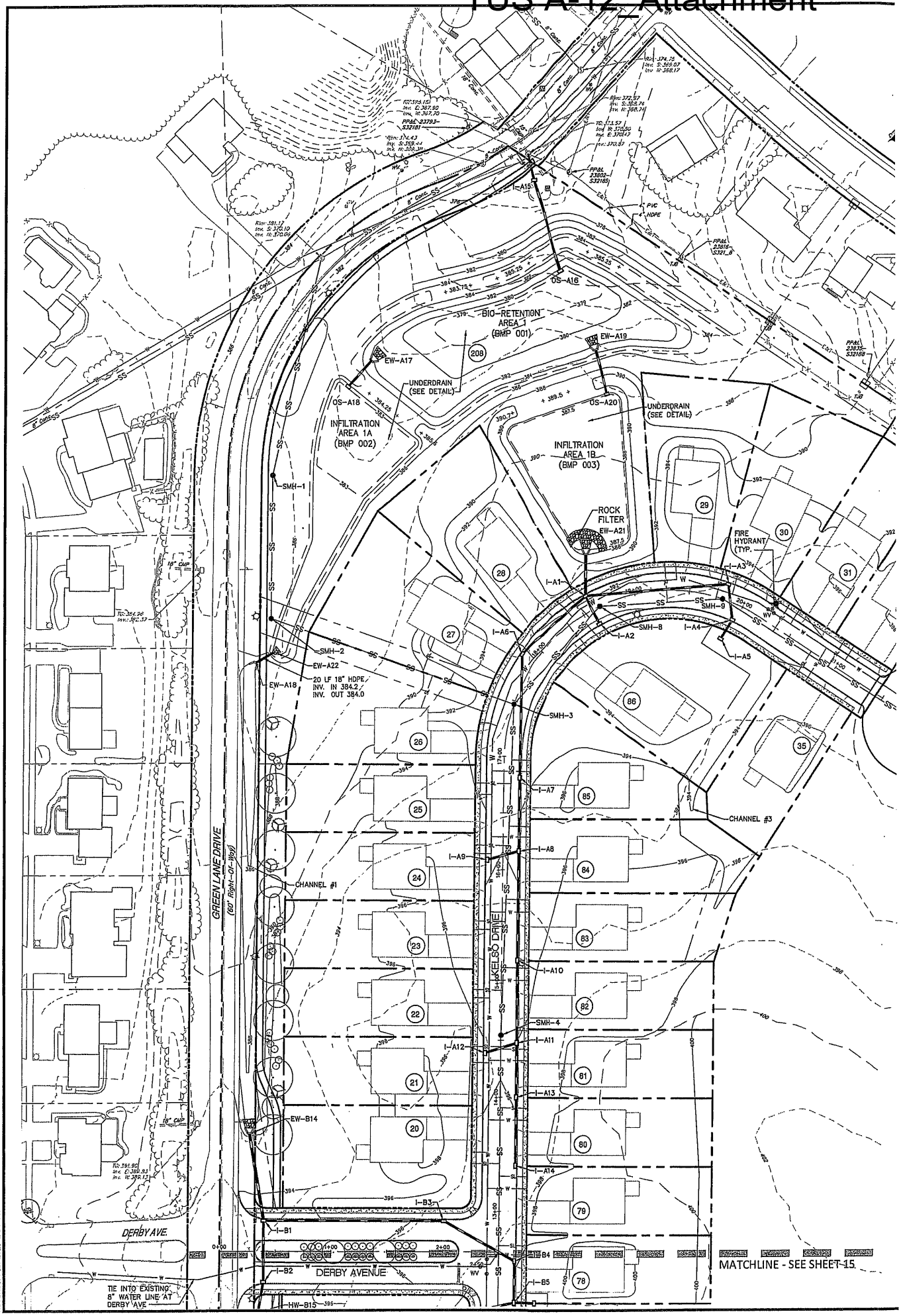
DAWOOD
4250 Crums Mill Road
Suite 301
Harrisburg, PA 17112
t: 888.432.9663
f: 717.732.8596

NO.	DATE	REVISIONS DESCRIPTION	CHECKED	DRAWN

FINAL SUBDIVISION / LAND DEVELOPMENT PLAN
FOR
GREEN LANE MEADOWS
FAIRVIEW TOWNSHIP
YORK COUNTY
PENNSYLVANIA

DRAWING TITLE
UTILITY PLAN

DATE	NOVEMBER 5, 2021
JOB NO.	2000297.00
FILE NAME	LDE-FL-UT01
DRAWN BY	CZ/HAB
CHECKED BY	TLG
SHEET NO.	14 OF 40



Wasteload Management Report Chapter 94 - 2023

Wastewater Collection and Conveyance System Tributary to Lower Allen Township Authority Wastewater Conveyance and Treatment System

Upper Allen Township

14 March 2024

GHD 380
225 Grandview Avenue, Suite 403
Camp Hill, PA 17011, United States
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Author	Emily Ellithorpe
Project manager	Nancy Adams
Client name	Upper Allen Township
Project name	Chapter 94 Report
Document title	Wasteload Management Report Chapter 94 - 2023 | Wastewater Collection and Conveyance System Tributary to Lower Allen Township Authority Wastewater Conveyance and Treatment System
Project number	12631652

Contents

Table index

Exhibits

1. Scope

The following Wasteload Management Report provides an analysis of the hydraulic loading to the Township's wastewater collection and conveyance system that is tributary to the Lower Allen Township Authority wastewater conveyance and treatment facilities. The information provided herein contains hydraulic and organic loading data for the past five years and projected loadings for the next five years. This report is prepared to meet the requirements of Chapter 94, Title 25, of the regulation of the Pennsylvania Department of Environmental Protection.

2. Hydraulic Loading

The Lower Allen Township Authority (LATA) received its final Water Quality Management (WQM) and National Pollutant Discharge Elimination System (NPDES) Permits from the Pennsylvania Department of Environmental Protection (DEP), with an effective date of June 1, 2017, increasing Upper Allen Township's (UAT) total allocated capacity to 2.383 MGD annual average daily flow, 3.336 MGD maximum monthly daily flow, and 6.339 MGD peak instantaneous flow at the Lower Allen Township Authority Wastewater Treatment Plant (WWTP). UAT has 3.205 MGD allocated capacity in the Lower Allen Township portion of the Cedar Run interceptor sewer, and 50,000 GPD allocated capacity in portions of the Rossmoyne Industrial Park sewer system discharging to Lower Allen Township.

The total number of new EDU connections to the UAT sewer system tributary to Lower Allen Township during 2023 was 84. One (1) onlot system was retired and two (2) onlot systems were added within the drainage basin that is tributary to Lower Allen in 2023. The 2023 average daily flow for UAT into the Lower Allen Township wastewater system was 1.226 MGD.

Flows to Lower Allen Township are monitored at three locations; Rossmoyne Industrial Park (RIP), and the Cedar Run and Rossmoyne Road metering chambers. The average daily wastewater flow from the UAT portion of the RIP was 21,352GPD based on water consumption information provided by the Pennsylvania American Water Company. The average daily flow measured at the Cedar Run and Rossmoyne Road metering chambers were 448,301GPD and 731,436GPD (after subtracting out 59,895 GPD from the LATA Raven Hill pumping station), respectively. In addition, average infiltration/inflow (I/I), measured twice annually, in RIP totaled 11,775 GPD, and estimated flow in the amount of 300 GPD for each residential EDU in the Fair Oaks Manor at Fair Oaks and Lisburn developments (not flowing through a meter) totaled 11,100 GPD for 37 existing homes. The total average daily flow as determined above was 1.226 MGD.

3. Projected Hydraulic Loading

The projected hydraulic loading to the LATA wastewater conveyance and treatment system for the next five years is based on anticipated growth from approved and planned developments and is shown in Table 1 below. Anticipated flow is based on 250 GPD per EDU.

Table 1 ***Projected Flow to the LATA Wastewater Conveyance and Treatment System***

Year	Projected EDU Connections	Projected Flow Increase (250 gpd/EDU)	Projected Avg. Daily Flow (MGD)	Projected Max. Month Avg. Daily Flow (MGD)
2024	91	22,750	1.233	1.74
2025	80	20,000	1.253	1.77
2026	52	13,000	1.266	1.78
2027	47	11,750	1.278	1.80
2028	41	10,250	1.288	1.81

The average daily flow for the preceding five years (1.210 MGD) is used as the base starting flow for the projections. The projected average daily flow for 2024 through 2028 is the projected average annual daily flow for the preceding year plus the projected flow increase for the year. The projected maximum month average daily flow is the projected average daily flow times the 5-year historic average ratio of the maximum month average daily flow to the annual average daily flow (1.41). The 5-year historic flow and associated ratio of average to maximum flows are summarized in Exhibit D.

4. Industrial Users

There are no major industrial users connected to the Upper Allen Township Sewer System draining to Lower Allen Township. There are no proposed connections that will significantly change the existing wastewater characteristics.

5. Sewer Extensions

A table with planned and approved developments and a map showing sewer extensions constructed in 2023 are provided in Exhibit B.

6. Sewer System Maintenance

Monitoring, maintenance, and repair of the sanitary sewer system tributary to Lower Allen Township Authority's sewer system and treatment plant is carried out by five full-time Upper Allen Township wastewater treatment plant staff. The Lower Allen drainage basin has one pumping station that is checked and maintained three times per week as part of a preventive maintenance program.

The sewer collection system is reasonably well maintained and in generally good condition. A Vactor truck is used for routine sewer main cleaning as well as for cutting roots, removing grease and clearing blockages as they are identified. These materials are safely disposed of at a concrete grit/grease pad at the Grantham WWTP. In conjunction with an aggressive I/I program, the Township also utilizes its televising truck on a routine basis to continually help identify problems within its sanitary sewer mains and laterals. Once identified these problems are corrected. Repairs and maintenance of the collection system is budgeted for annually in the Lower Allen drainage basin.

Present and projected daily flows to the pumping station in the UAT sewer system tributary to Lower Allen Township are shown in Table 2. The actual average monthly daily flow (gallons) for the pumping station is shown in Exhibit C.

Table 2 ***UAT Pumping Station Existing and Projected Flows (All Flows are in MGD)***

Pump Station	No. of Pumps	Pump Station Capacity[1]	Existing Avg. Daily Flow	2023 Max. Daily Flow	2-Year Projected Flow Increase[2]	2-Year Projected Max. Daily Flow
3	4	7.11	0.647	1.637	0.056	1.3

Pumping Station No. 3 (Arcona Road) was originally constructed in 1974 and serves the southern portion of the Lower Allen Basin. The 2023 average daily flow was 647,023 GPD. There are 141 projected connections to this pumping station in the next two years.

Pumping Station No. 3 is equipped with a Diesel-powered generator for emergency power.

[1] Based on 2023 drawdown tests with two pumps running.
[2] Based on 2-year projected new connections tributary to the pumping station as shown in Exhibit B times 400 gpd.

7. Summary of I/I Related Work for 2023

Upper Allen Township continues to aggressively pursue the goal of identifying and correcting sources of I/I throughout the collection system's various mini-basins. This work is generally focused on previously identified priority mini-basins or wherever excessive I/I is suspected. Township staff routinely conduct sanitary sewer mainline and lateral televising and perform manhole field inspections to identify problems within the system. These efforts are followed by repairs and rehabilitation of the sanitary sewer system. When necessary, home inspections are also performed to identify and remove private sources of I/I.

7.1 Flow Monitoring

Flow monitoring for the majority of the Lower Allen basin sewer collection system is provided by continuous flow recording meters located at two separate locations where flow enters the Lower Allen Township Authority collection system. In addition, a previously completed flow metering program, utilizing portable flow meters installed at key manholes located throughout the basin, accomplished its main goal of prioritizing mini-basins based on the magnitude of infiltration and inflow in each mini-basin. This information allows Sewer Department staff to choose where to focus investigative efforts and ultimately repairs. Future metering will be completed in efforts to show the affect completed repairs may have had on the amount of infiltration and inflow entering the collection system.

7.2 Televising of Sanitary Sewer Mainlines

A total of 19,794 lineal feet (LF) of sanitary sewer mainline piping was televised within the Lower Allen Basin in 2023 to identify existing conditions and any pipeline leaks or defects. While the overall goal is to televise every sewer main in the Township within an eight to nine-year cycle, emphasis is placed first on televising lines in streets scheduled for paving, followed by televising of lines in high and medium priority mini-basins. Sewers located in low priority or unmetered basins are televised as the need arises or as time permits. A breakdown of footages televised in each mini-basin is shown in Table 3.

Table 3 ***Lineal Feet Televised Per Mini-Basin***

Drainage Basin	L.F.	Drainage Basin	L.F.
LN-03	1,714	LS-05	135
LN-04	3,806	LS-08	4,411
LN-05	1,144	LS-09	4,646
LN-06	320	LS-10	1,172
LS-03	464	LS-11	1,982

7.3 Televising of Sanitary Sewer Laterals

Televising of sanitary sewer laterals is completed as time and staffing permits. A total of 107 laterals were televised within the Lower Allen Basin in 2023 to identify existing conditions and any pipeline leaks or defects. A breakdown for each mini-basin is shown in Table 4.

Table 4 ***Laterals Televised Per Mini-Basin***

Drainage Basin	Laterals
LN-04	22
LS-08	3
LS-09	2
LS-10	2
LS-11	78

7.4 External Repairs to Sanitary Sewers and Manholes

A total of one (1) I/I related external repair was completed within the Lower Allen drainage basin:

1. LS-08: Install 6-inch cleanout due to blockage/infiltration at 6" x 4" transition in lateral piping.

In addition to the above pipeline repair, the Township replaced nine (9) manhole frames/covers experiencing moderate inflow with new self-sealing, watertight frames/covers within the Lower Allen Basin. Manhole frames/covers were replaced in the following mini-basins:

a. LN-01: 3 frames/covers
b. LS-03: 1 frame/cover
c. LS-04: 1 frame/cover
d. LS-05: 4 frames/covers

7.5 Full Mainline Replacement

There were no full mainline replacements in 2023.

7.6 Messiah Village Collection System – Tributary to Lower Allen Basin

Also tributary to the Lower Allen basin is the private sanitary sewer collection system serving the Messiah Village campus in mini-basin LS-07, which is owned and maintained by Messiah Lifeways. An infiltration and inflow program began in 2015 with the staff of Messiah Village along with their consulting engineer taking the lead on the program with Township assistance. Messiah Lifeways subsequently completed televisual and manhole inspections and repairs along with mapping of the entire collection system.

All of which is Respectfully Submitted,

GHD

Emily Ellithorpe

Exhibits

Exhibit A

2023 DEP Chapter 94 Form

3800-FM-BPNPSM0507 4/2014
Chapter 94 Report

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: 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:	**Upper Allen Township**	Permit No.:	**PA**
Mailing Address:	**100 Gettysburg Pike**	Effective Date:	
City, State, Zip:	**Mechanicsburg, PA 17055-5698**	Expiration Date:	
Contact Person:	**Barry Cupp**	Renewal Due Date:	
Title:	**Sewer Department Manager**	Municipality:	
Phone:	**717-766-0756**	County:	**Cumberland**
Email:	**bcupp@uatwp.org**	Consultant Name:	**GHD**

CHAPTER 94 REPORT COMPONENTS

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

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

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

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

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

   N/A

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 (**Exhibit B**)

☒ List summarizing each extension or project attached (**Exhibit B**)

☒ Schedules describing how each project will be completed over time and effects attached (**Exhibit B**)

Comments:

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

See sections 6 and 7 of the report.

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

Check the appropriate boxes:

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

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

Comments:

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

Check the appropriate boxes:

☐ The collection system does not contain pump stations
☒ The collection system does contain pump stations (Number – 1)
☒ Discussion of condition of each pump station attached (Section 6 of report)

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**)
*** There are no major industrial users connected to the Upper Allen Township sewer system draining to Lower Allen Township.**

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**)
*No projected overloads

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**)
*** N/A**

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 (**Appendix D**)

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).

Barry A. Cupp, Sewer Dept. Manager	Barry A Cupp
Name of Responsible Official	Signature
717-766-0756	3/15/2024
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).

Emily Ellithorpe, EIT (GHD)	Emily Ellithorpe
Name of Preparer	Signature
315-082-0298	3/8/24
Telephone No.	Date

Exhibit B

Current and Projected Connections and Sewer Extensions 2023

UPPER ALLEN TOWNSHIP

SEWER CONNECTION PROJECTIONS

YEARS 2024 THROUGH 2028

APPROVED AND PLANNED DEVELOPMENT CONNECTIONS - EDUS

LOWER ALLEN BASIN

SUBDIVISION / LAND DEVELOPMENT	TOTAL EDUs	REMAINING EDUs JANUARY 1, 2023	EDUs CONNECTED DURING 2023	REMAINING EDUs JANUARY 1, 2024	PROJECTED NEW CONNECTIONS					PROJECTED NEW CONNECTIONS TRIBUTARY TO	
					2024	2025	2026	2027	2028	TATTERSALL P.S.[2]	ARCONA ROAD P.S. NO. 3[1]
APPROVED DEVELOPMENT											
ALLEN GLEN	22	7	0	7	0	1	0	1	0		1
AUTUMN CHASE PRD, PHASE I (2021)	39	8	4	4	4	0	0	0	0		4
AUTUMN CHASE PRD, PHASE II (2023)	56	56	12	44	7	8	7	5	8		15
AUTUMN CHASE PRD, PHASE III (2022)	39	39	13	26	5	6	5	5	5		11
AUTUMN CHASE PRD, PHASE IV (2023)	28	28	0	28	5	6	5	2	3		11
AUTUMN CHASE PRD, PHASE VI (2025)	36	36	0	36	0	0	3	3	4		
CUMBERLAND BUSINESS PARK	705										
CUMB. BUSI. PARK, PREVIOUSLY DEVELOPED LOTS	590	0	0	0	0	0	0	0	0		
CUMBERLAND BUSI. PARK, LOT 1, CLASSIC COMMUN.	48	5	0	5	0	5	0	0	0		
CUMBERLAND BUSINESS LOT 2, WILSON	1	0	0	0	0	0	0	0	0		
CUMBERLAND BUSINESS PARK, LOT 6B (ARBY'S), 6C (STARBUCKS) & 6D (DOLLAR TREE & SUBWAY)	11	0	0	0	0	0	0	0	0		
CUMB. BUSI. PARK, FUTURE DEVELOPMENT	55	55	0	55	0	0	0	0	0		
FORD FARM DEVELOPMENT	13	1	0	1	0	0	0	1	0		
GENERATIONS PARK	10	10	0	10	0	10	0	0	0		10
GEORGETOWN	62	2	1	1	0	1	0	0	0		
151 GETTSBURG PK. - 7 ELEVEN	5	5	0	5	5	0	0	0	0		5
HART ENTERPRISES SUBDIVISION	4	1	0	1	0	0	0	0	0		
KLINEDINST FARM	4	1	0	1	0	0	1	0	0		
LINDENWOOD	63	2	0	2	0	0	1	0	0		
LOT #4-GETTSBURG PK. & S. MRKT. ST. - 2 OFFICE BLDGS. (34,888 s.f. @ 55.6 gal./1,000 s.f)	9	4	0	4	0	0	4	0	0		
LOUDOUN CENTRE	21										
LOUDOUN CENTRE, CVS	1	0	0	0	0	0	0	0	0		
PAUL B HARDWARE	1	0	0	0	0	0	0	0	0		
LOUDOUN CENTRE (ADDITIONS)- BANK (66.67 GPD); ~~HOTEL (4,361 GPD); OFFICE BLDG. (2,500 GPD)~~	1	18	0	18	0	0	1	0	0		
MISCELLANEOUS	10	8	1	7	1	0	1	0	1		
MODWASH CARWASH	8	8	0	8	8	0	0	0	0		8
ORCHARD GLEN (FAILOR FARM)	363										
ORCHARD GLEN, PHASE 1	41	0	0	0	0	0	0	0	0		
ORCHARD GLEN, PHASE 2	74	0	0	0	0	0	0	0	0		
ORCHARD GLEN, PHASE 3	16	0	0	0	0	0	0	0	0		
ORCHARD GLEN, PHASE 4	22	0	0	0	0	0	0	0	0		
ORCHARD GLEN, PHASE 5	25	0	0	0	0	0	0	0	0		

TUS A-12_Attachment

APPROVED AND PLANNED DEVELOPMENT CONNECTIONS - EDUS
LOWER ALLEN BASIN

SUBDIVISION / LAND DEVELOPMENT	TOTAL EDUs	REMAINING EDUs JANUARY 1, 2023	EDUs CONNECTED DURING 2023	REMAINING EDUs JANUARY 1, 2024	PROJECTED NEW CONNECTIONS					PROJECTED NEW CONNECTIONS TRIBUTARY TO	
					2024	2025	2026	2027	2028	TATTERSALL P.S.[2]	ARCONA ROAD P.S. NO. 3[1]
ORCHARD GLEN, PHASE 6	17	1	0	1	1	0	0	0	0		1
ORCHARD GLEN, PHASE 7A	15	0	0	0	0	0	0	0	0		
ORCHARD GLEN, PHASE 7B	39	0	0	0	0	0	0	0	0		
ORCHARD GLEN, PHASE 8 (2016)	35	0	0	0	0	0	0	0	0		
ORCHARD GLEN, PHASE 9 (2017)	26	0	0	0	0	0	0	0	0		
ORCHARD GLEN, PHASE 10A (2018)	29	0	0	0	0	0	0	0	0		
ORCHARD GLEN, PHASE 10B (2018)	24	0	0	0	0	0	0	0	0		
DAVID & HOLLY RITCHEY	2	2	0	2	0	0	1	0	0		
ROSSMOYNE BUSINESS PARK	168										
ROSSMOYNE BUSI. PARK, PREVIOUSLY DEVEL. LOTS	19	0	0	0	0	0	0	0	0		
ROSSMOYNE BUSI. PK., LOT E1-3-A, CLARK ST	1	0	0	0	0	0	0	0	0		
ROSSMOYNE BUSINESS PARK, LOT 10B	23	0	0	0	0	0	0	0	0		
ROSSMOYNE BUSINESS PARK, LOT D4-B, HOTEL	41	0	0	0	0	0	0	0	0		
ROSSMOYNE BUSINESS PARK, TRACT 11, LOT D-12A, AMERICAN MINT	5	0	0	0	0	0	0	0	0		
ROSSMOYNE BUSINESS PARK, FUTURE DEVELOPMENT	9	9	0	9	0	0	0	0	0		
MICHAEL A. SURLUCO	3	3	0	3	0	0	3	0	0		
TATTERSALL (WEST WINDING) - 159 RESIDENTIAL LOTS	169										
TATTERSALL, PHASE 1 (2020-2022)	71	29	20	9	9	0	0	0	0	9	
TATTERSALL, FUTURE PHASES	98	98	0	98	0	0	20	20	20		
THE MILLS AT SHEPHERDSTOWN CROSSING	70										
LOT 1 - 27 APTS./9,650 S.F. RETAIL	29	29	0	29	29	0	0	0	0		29
LOT 2 - 27 APTS./9,960 S.F. RETAIL	29	29	0	29	0	29	0	0	0		29
LOTS 3 & 4 - CHICK-FIL-A	5	5	5	0	0	0	0	0	0		
LOT 5 - BURGER KING (PLAN WITHDRAWN)	4	4	0	4	0	4	0	0	0		
UNION HOTEL	4	3	0	3	0	0	0	0	0		
UPPER ALLEN BUSINESS PARK	96										
UPPER ALLEN BUSINESS PARK, PREVIOUS DEVEL.	53	0	0	0	0	0	0	0	0		
U. ALLEN BUSINESS PARK, LOT 7, EQUITERRA	6	6	0	6	0	0	0	0	0		
U. ALLEN BUSINESS PARK, LOT 10 C	3	0	0	0	0	0	0	0	0		
U. ALLEN BUSINESS PK., LOT 11, VALLEY SUPPLY	3	3	0	3	0	0	0	0	0		
UABP, LOT 11, SUBLOT 1 - VALLEY SUPPLY	1	0	0	0	0	0	0	0	0		
UABP, LOT 11, SUBLOT 2 - FRANK M. BINGMAN REV. TRUST (FORMERLY DEBLIN)	2	2	0	2	0	0	0	0	0		
UABP, LOT 11, SUBLOT 3, MOUNTAINEER PROPERTIES	0	0	0	0	0	0	0	0	0		
UABP, LOT 11, SUBLOT 4, WM. R. GRACE	1	1	0	1	0	0	0	0	0		
UPPER ALLEN BUSINESS PARK, FUTURE DEVEL.	27	27	0	27	0	0	0	0	0		

TUS A-12_Attachment

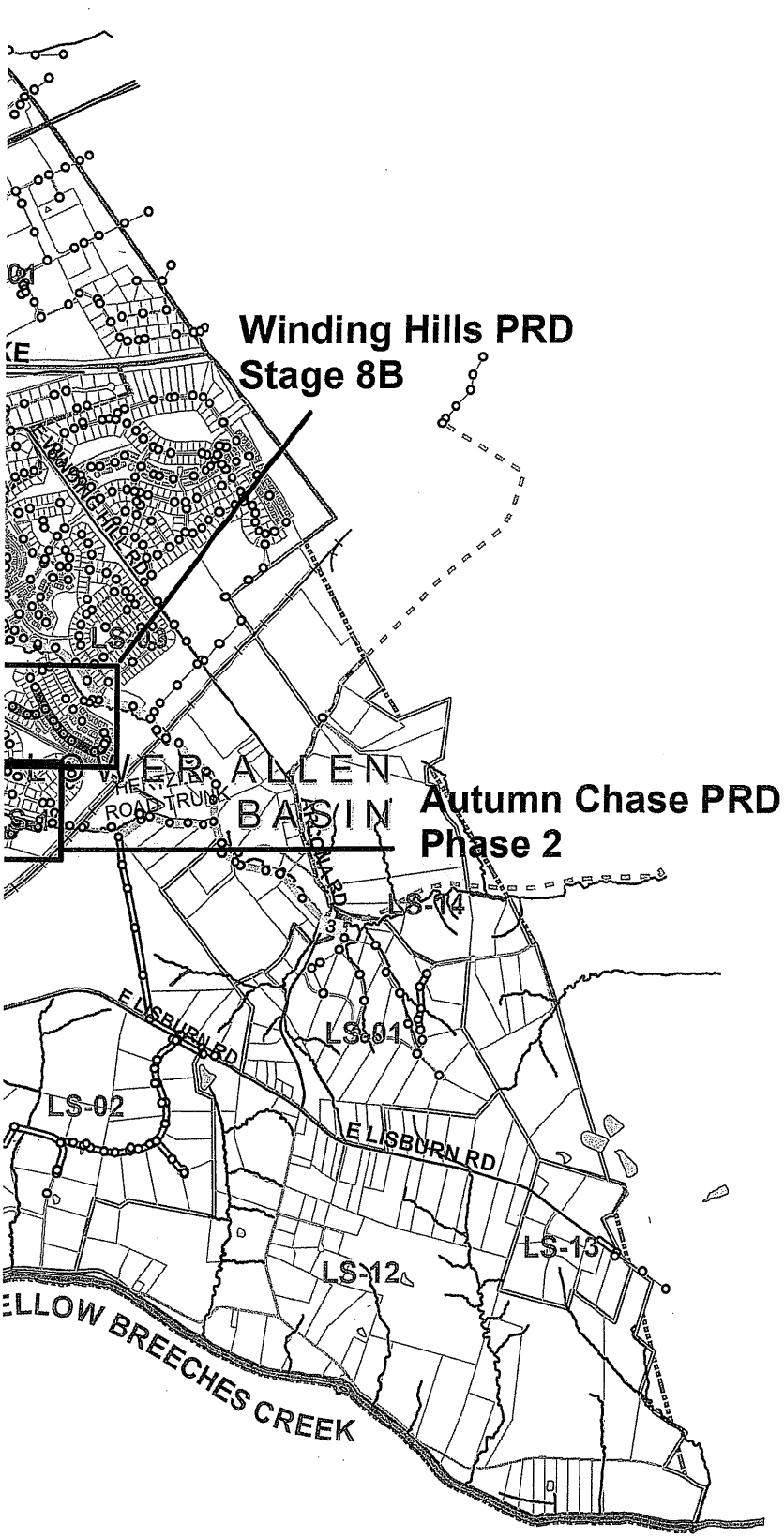
APPROVED AND PLANNED DEVELOPMENT CONNECTIONS - EDUS
LOWER ALLEN BASIN

SUBDIVISION / LAND DEVELOPMENT	TOTAL EDUs	REMAINING EDUs JANUARY 1, 2023	EDUs CONNECTED DURING 2023	REMAINING EDUs JANUARY 1, 2024	PROJECTED NEW CONNECTIONS 2024	2025	2026	2027	2028	PROJECTED NEW CONNECTIONS TRIBUTARY TO TATTERSALL P.S.[2]	ARCONA ROAD P.S. NO. 3[1]
RICHARD S. & MARGARET M. WILDER	2	2	0	2	0	0	0	0	0		
WINDING HILL CORPORATE CENTER	21	6	0	6	0	0	0	0	0		
GLAIZE ORCHARD PRD (WINDING HILLS STAGE 1)	175	0	0	0	0	0	0	0	0		
WINDING HILLS PRD, STAGE 2	214	0	0	0	0	0	0	0	0		
WINDING HILLS PRD, STAGE 3	56	0	0	0	0	0	0	0	0		
WINDING HILLS PRD, STAGE 4 (2013-2017)	109	0	0	0	0	0	0	0	0		
WINDING HILLS PRD, STAGE 5 (2015-2018)	93										
WINDING HILLS PRD, STAGE 5 - LOTS 198-215 (A)	22	2	0	2	2	0	0	0	0		2
WINDING HILLS PRD, STAGE 5 - LOTS 325-360 (B)	36	0	0	0	0	0	0	0	0		
WINDING HILLS PRD, STAGE 5 - LOTS 361-395 (C)	35	14	10	4	4	0	0	0	0		4
WINDING HILLS PRD, STAGE 6 (2017-2019)	47										
WINDING HILLS PRD, STAGE 6 - LOTS 278-290, LOTS 310, 311, AND 324 (A)	16	0	0	0	0	0	0	0	0		
WINDING HILLS PRD, STAGE 6 - LOTS 291-309, 312-323 (B)	31	0	0	0	0	0	0	0	0		
WINDING HILLS PRD, STAGE 7 (2018-2020)	78										
STAGE 7, SECTION 1	59	0	0	0	0	0	0	0	0		
STAGE 7, SECTION 2	19	0	0	0	0	0	0	0	0		
WINDING HILLS PRD, STAGE 8 (2019-2021)	117										
WINDING HILLS PRD, STAGE 8 (A) - LOTS 420-436, 465-471, J and K	50	1	1	0	0	0	0	0	0		
WINDING HILLS PRD, STAGE 8 (B) - LOTS 439-464, LOT L	68	28	17	11	11	0	0	0	0		11
Total Approved	**2,831**	**598**	**84**	**514**	**91**	**70**	**52**	**37**	**41**	**9**	**141**
PLANNED DEVELOPMENT											
GRAHAM HILL APARTMENTS (ADDITION)	24	24	0	24	0	0	0	0	0		
FUTURE ANTICIPATED	100	100	0	100	0	10	0	10	0		
Total Planned	**124**	**124**	**0**	**124**	**0**	**10**	**0**	**10**	**0**	**0**	**0**
TOTAL APPROVED AND PLANNED	**2,955**	**722**	**84**	**638**	**91**	**80**	**52**	**47**	**41**	**9**	**141**

[1]Projected connections to pumping stations are only 2-year projections for DEP Chapter 94 Wasteload Management reporting.
[2]Tattersall pumping station is privately owned and operated by Tattersall HOA.

TUS A-12_Attachment

Upper Allen Township



2023 Sanitary Sewer Extensions

Legend

- Pump Stations
- Grantham WWTP
- 2023
- Existing Manholes
- 2023 Sewers
- Parcels

Mini Drainage Basins

- Grantham
- Lower Allen North
- Lower Allen South
- Mechanicsburg
- Collector
- Trunk / Interceptor
- Force Main
- Low Pressure
- Basin Divide
- Railroad
- Parcels
- Township Boundary

24 Manholes installed in 2023
2 Developments:
- **Winding Hills PRD Stage 8B**
- **Autumn Chase PRD Phase 2**

N W E S

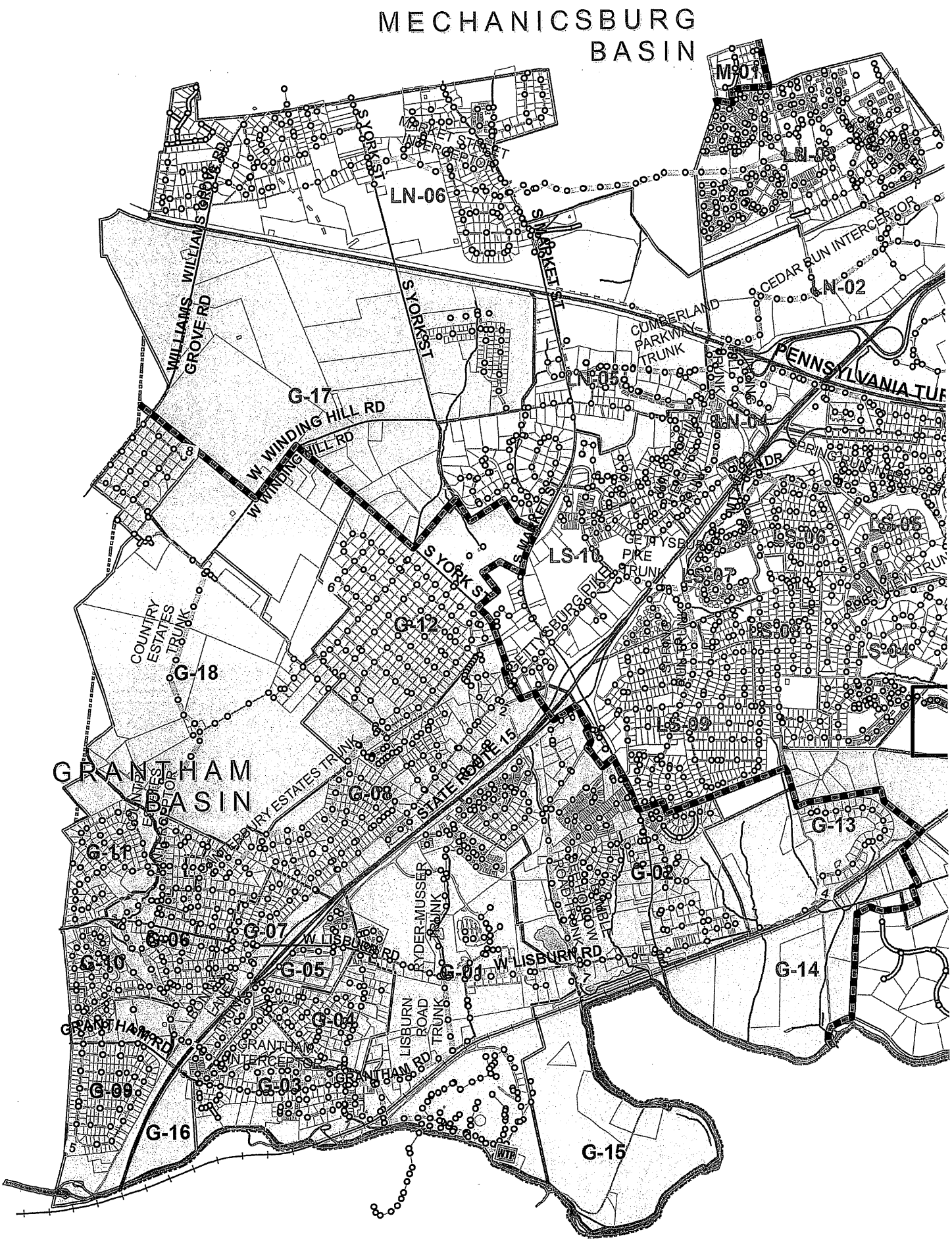

MECHANICSBURG
BASIN
GRANTHAM
BASIN
M-01
LN-06
LN-03
LN-02
LN-05
LN-04
LS-10
LS-06
LS-05
LS-07
LS-08
LS-04
LS-09
G-17
G-12
G-18
G-08
G-11
G-07
G-06
G-10
G-05
G-04
G-09
G-03
G-16
G-01
G-02
G-13
G-14
G-15
S YORK ST
S MARKET ST
WILLIAMS GROVE RD
W WINDING HILL RD
CUMBERLAND PARKWAY TRUNK
CEDAR RUN INTERCEPTOR
PENNSYLVANIA TUR
GETTYSBURG PIKE TRUNK
GETTYSBURG PIKE
COUNTRY ESTATES TRUNK
STATE ROUTE 15
W LISBURN RD
RYDER-MUSSER RUN TRUNK
LISBURN ROAD TRUNK
GRANTHAM RD
GRANTHAM INTERCEPTOR
HTR

Exhibit C

Pumping Station No. 3 Flow Data

EXHIBIT C

UPPER ALLEN TOWNSHIP
ARCONA ROAD PUMPING STATION NO. 3
LOWER ALLEN TOWNSHIP DRAINAGE BASIN

YEAR 2023	PUMP RUN HOURS[1]				GALLONS PUMPED						PUMP CAPACITY (GPM)[2]			
MONTH	PUMP NO. 1	PUMP NO. 2	PUMP NO. 3	PUMP No. 4	PUMP NO. 1	PUMP NO. 2	PUMP NO. 3	PUMP NO. 4	TOTAL MONTHLY GALLONS PUMPED	AVERAGE MONTHLY DAILY FLOW (GPD)	PUMP NO. 1	PUMP NO. 2	PUMP NO. 3	PUMP NO. 4
JANUARY	30.6	27.6	28.8	133.0	5,239,944	4,671,576	4,442,688	8,530,620	22,884,828	738,220	2,854	2,821	2,571	1,069
FEBRUARY	21.8	19.5	20.1	125.0	3,733,032	3,300,570	3,100,626	8,017,500	18,151,728	648,276				
MARCH	21.3	19.3	20.1	183.0	3,647,412	3,266,718	3,100,626	11,737,620	21,752,376	701,690		Pumps 1 and 2 Running Simultaneously = 4,937 GPM		
APRIL	20.1	18.0	18.7	126.0	3,441,924	3,046,680	2,884,662	8,081,640	17,454,906	581,830				
MAY	54.8	49.2	52.6	12.0	9,383,952	8,327,592	8,114,076	769,680	26,595,300	857,913				
JUNE	28.6	25.4	26.7	87.0	4,897,464	4,299,204	4,118,742	5,580,180	18,895,590	629,853				
JULY	26.2	23.7	25.1	124.0	4,486,488	4,011,462	3,871,926	7,953,360	20,323,236	655,588				
AUGUST	15.8	14.3	15.0	142.0	2,705,592	2,420,418	2,313,900	9,107,880	16,547,790	533,800				
SEPTEMBER	21.5	19.7	20.7	111.0	3,681,660	3,334,422	3,193,182	7,119,540	17,328,804	577,627				
OCTOBER	19.0	19.2	20.9	123.0	3,253,560	3,249,792	3,224,034	7,889,220	17,616,606	568,278				
NOVEMBER	18.2	20.8	19.3	135.0	3,116,568	3,520,608	2,977,218	8,658,900	18,273,294	609,110				
DECEMBER	25.2	27.4	27.2	115.0	4,315,248	4,637,724	4,195,872	7,376,100	20,524,944	662,095				
TOTAL	**303.1**	**284.1**	**295.2**	**1416.0**	**51,902,844**	**48,086,766**	**45,537,552**	**90,822,240**	**236,349,402**					
MONTHLY MINIMUM FLOW (GAL.)					**2,705,592**	**2,420,418**	**2,313,900**	**769,680**	**16,547,790**					
MONTHLY AVERAGE FLOW (GAL.					**4,325,237**	**4,007,231**	**3,794,796**	**7,568,520**	**19,695,784**					
MONTHLY MAXIMUM FLOW (GAL.					**9,383,952**	**8,327,592**	**8,114,076**	**11,737,620**	**26,595,300**					
MAXIMUM DAILY FLOW (GAL.)[3]					**1,637,000**									
ANNUAL AVERAGE DAILY FLOW (GAL.)					**647,023**									

[1] Data from manual pump run times.
[2] Determined through manual pump drawdown tests.
[3] Data from flowmeter located at UAT/LATA Rossmoyne metering vault.

TUS A-12_Attachment

Exhibit D

Hydraulic Loading Data

EXHIBIT D
UAT Flows to LATA WWTP
Flow Table

Flows - MGD

Month	Monthly Average Daily Flows, MGD					
	2019	2020	2021	2022	2023	5-Year Average
January	2.021	1.148	1.090	1.079631	1.379254	
February	1.816	1.156	1.135	1.217525	1.089576	
March	2.183	1.199	1.229	1.114946	1.195256	
April	1.816	1.260	1.180	1.388553	1.182396	
May	1.860	1.302	1.063	1.736614	1.225125	
June	1.258	1.155	1.049	1.151783	1.976883	
July	1.104	0.995	1.109	1.041644	1.283653	
August	0.956	0.964	1.006	1.006529	1.002603	
September	0.915	0.918	1.397	0.988253	1.035016	
October	0.992	0.937	1.126	0.968067	1.033753	
November	1.055	0.952	1.108	1.013992	1.04337	
December	1.114	1.107	1.041	1.490045	1.266413	
Annual Average	1.424	1.091	1.128	1.183	1.226	1.210
Max. Month	2.183	1.302	1.397	1.737	1.977	1.719
Max/Average Ratio	1.53	1.19	1.24	1.47	1.61	1.41
2-Month Max.	2.102	1.281	1.313	1.613	1.678	1.597
2-Month Max./Average Ratio	1.48	1.17	1.16	1.36	1.37	1.31
3-Month Max.	1.994	1.247	1.241	1.497	1.447	1.485
3-Month Max./Average Ratio	1.40	1.14	1.10	1.27	1.18	1.22

Flow Projections

Year	Previous Flow +	(Additional EDUs)	Increased Flow =	Projected Flow x	Projected Factor =	Projected Max. Month
2024	1.210	91	0.02275	1.233	1.41	1.74
2025	1.233	80	0.02000	1.253	1.41	1.77
2026	1.253	52	0.01300	1.266	1.41	1.78
2027	1.266	47	0.01175	1.278	1.41	1.80
2028	1.278	41	0.01025	1.288	1.41	1.81


GHD