Rimersburg Borough Municipal Authority
Engineer's Report
March 5, 2025

Wastewater Treatment Plant Upgrades

Low bidders are:

Hickes Associates (General)	$8,138,639
Wagner Electric (Electrical)	$ 814,800
Fred L. Burns (Mechanical)	$ 273,600
TOTAL	$9,227,039

Request for add'l $2,284,143 in loan funds submitted to PENNVEST on 2/18
PENNVEST Board Meeting will be held 4/23
Authority has 120 days (5/28) to award project (pending PENNVEST approval)
Letters of Intent to Award (pending PENNVEST approval) **Motion Requested**
DBE Compliance Statement for each contract **Motion Requested**
Engineering Amendment No. 1 (see attached) – $150,000 **Motion Requested**
Engineering Budget – 33% remaining (see attached summary)

Chestnut St. Waterline Replacement Project

Asphalt sealing partially complete – final planned for spring
Engineering Budget – 4% remaining (see attached summary)

Monterey Road Waterline Project

Design is ongoing – plan to complete by 3/31, with advertisement in April
Easements will be needed from Carmichael, Crick & Hosey

Wastewater Treatment Plant Operations

Plant has been running well with good settleability (no recent violations) – EADS visiting once every 2 weeks
Basin 2 valve inoperable – to be repaired by Olson Services this week
Chapter 94 Report (see attached draft) – submit to DEP by 3/31 **Motion Requested**

Grant Opportunities

2025 DCED Small Water & Sewer Program – Deadline 4/30
Eccles St. Waterline Replacement – 800' of 8" line (~$250,000)
Grant awards up to $500,000 – 15% local match required
Engineering costs not to exceed 10% of the grant award
$100 application fee; ~$1,000 for EADS to prepare application

Pending Grant Applications

2024 LSA App – SR 68 Waterline Carr St. to Cemetery submitted on 11/30
Construction estimate – $938,527.20 (no match required)

Wastewater Treatment Plant Upgrades – Engineering Budget Report as of 2/28/25

Phase	Phase Name	Budget	Work Completed	% Budget Used	Budget Remaining
10	Basic Services - Study	$60,000	$54,703.04	91%	$5,296.96
11	Basic Services - Engineering	$345,000	$326,501.94	95%	$26,072.47
20	Field Surveys & Mapping	$20,000	$19,246.77	96%	$753.23
30	Geotechnical	$30,000	$2,942.74	10%	$27,057.26
40	WQM Part II Permit	$30,000	$27,258.47	91%	$2,741.53
50	NPDES Permit (Stormwater)	$30,000	$28,261.21	94%	$1,738.79
60	General Permit	$15,000	$13,886.54	93%	$1,113.46
70	PENNDOT Driveway Permit	$10,000	$2,458.93	25%	$7,541.07
80	County & Local Permits	$10,000		0%	$10,000.00
90	Subdivision Prep Plan	$15,000	$14,909.59	99%	$90.41
100	Property Owner Negotiations	$5,000	$5,755.32	115%	-$755.32
110	Funding Administration	$50,000	$38,502.49	77%	$11,497.51
120	Startup Assistance	$10,000		0%	$10,000.00
130	Resident Project Representative	$170,000		0%	$170,000.00
	Totals	$800,000	$534,427.04	67%	$265,572.96

Chestnut St Water Line Replacement Project – Engineering Budget Report as of 2/28/25

Phase	Phase Name	Contract Budget	WIP	% Budget Used	Budget Remaining
10	Basic Services	$55,000	$55,000.00	100.0%	$0.00
20	Survey & Mapping	$5,000	$6,779.23	135.6%	-$1,779.23
30	DEP PWS App	$0			$0.00
40	E&S Plan	$0			$0.00
50	Right-Of-Way Sketches	$5,000	$2,054.83	41.1%	$2,945.17
60	Inspection	$10,000	$9,995.65	100.0%	$4.35
70	Full-Width Paving	$5,000	$3,197.28	63.9%	$1,802.72
	Totals	$80,000	$77,026.99	96.3%	$2,973.01

NOTICE OF INTENT TO AWARD

TO: Hickes Associates, Inc.
Contractor

8253 Old Route 22, Alexandria, PA 16611
Address

(This Notice is subject to completion of satisfactory financing through PENNVEST)

It appears that you are the low bidder on **The Rimersburg Wastewater Treatment Plant Upgrade Project** for the General Contract (2024-S-01) as specified herein and as shown on the Contract Documents.

Pursuant to the Specifications under which your Proposal was submitted, you are hereby notified that the OWNER represented by the undersigned intends to award a Contract to you for the aforesaid work. This notice is contingent on the approval of additional project funding requested from PENNVEST to be considered at their April 23, 2025 Board Meeting. Pending PENNVEST approval, the Contract Price is computed to be: Eight million, one hundred thirty eight thousand, six hundred thirty nine dollars ($8,138,639.00), on the basis of the acceptance of your Proposal.

Dated this 5th day of March, 2025.

Rimersburg Borough Municipal Authority
Owner

By: _____
Signature

Name: Daniel A. Burkett
Please Type

Title: Vice Chairman

ACCEPTANCE OF NOTICE

Receipt of the above Intent to Award is hereby acknowledged

By: _____
Contractor
_____ day of _____ 20___.

By: _____
Signature

Name: _____
Please Type

Title: _____

NOTICE OF INTENT TO AWARD

TO: Wagner Electric and Construction, LLC
Contractor

326 Cycle Drive, Portersville, PA 16051
Address

(This Notice is subject to completion of satisfactory financing through PENNVEST)

It appears that you are the low bidder on **The Rimersburg Wastewater Treatment Plant Upgrade Project** for the Electrical Contract (2024-S-02) as specified herein and as shown on the Contract Documents.

Pursuant to the Specifications under which your Proposal was submitted, you are hereby notified that the OWNER represented by the undersigned intends to award a Contract to you for the aforesaid work. This notice is contingent on the approval of additional project funding requested from PENNVEST to be considered at their April 23, 2025 Board Meeting. Pending PENNVEST approval, the Contract Price is computed to be: Eight hundred fourteen thousand, eight hundred dollars ($814,800.00), on the basis of the acceptance of your Proposal.

Dated this 5th day of March, 2025.

Rimersburg Borough Municipal Authority
Owner

By: _____
Signature

Name: Daniel A. Burkett
Please Type

Title: Vice Chairman

ACCEPTANCE OF NOTICE

Receipt of the above Intent to Award is hereby acknowledged

By: _____
Contractor
_____ day of _____ 20___.

By: _____
Signature

Name: _____
Please Type

Title: _____

NOTICE OF INTENT TO AWARD

TO: Fred L. Burns, Inc.
Contractor

269 McClain Watson Road, Shippenville, PA 16254
Address

(This Notice is subject to completion of satisfactory financing through PENNVEST)

It appears that you are the low bidder on **The Rimersburg Wastewater Treatment Plant Upgrade Project** for the Mechanical Contract (2024-S-03) as specified herein and as shown on the Contract Documents.

Pursuant to the Specifications under which your Proposal was submitted, you are hereby notified that the OWNER represented by the undersigned intends to award a Contract to you for the aforesaid work. This notice is contingent on the approval of additional project funding requested from PENNVEST to be considered at their April 23, 2025 Board Meeting. Pending PENNVEST approval, the Contract Price is computed to be: Two hundred seventy three thousand, six hundred dollars ($273,600.00), on the basis of the acceptance of your Proposal.

Dated this 5th day of March, 2025.

Rimersburg Borough Municipal Authority
Owner

By: _____
Signature

Name: Daniel A. Burkett
Please Type

Title: Vice Chairman

ACCEPTANCE OF NOTICE

Receipt of the above Intent to Award is hereby acknowledged

By: _____
Contractor
_____ day of _____ 20___.

By: _____
Signature

Name: _____
Please Type

Title: _____

This is **EXHIBIT K**, consisting of 3 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated February 3, 2021.

AMENDMENT TO OWNER-ENGINEER AGREEMENT
Amendment No. 1

The Effective Date of this Amendment is: March 5, 2025.

Background Data

Effective Date of Owner-Engineer Agreement: ***February 3, 2021.***

Owner: ***Rimersburg Borough Municipal Authority***

Engineer: ***The EADS Group, Inc.***

Project: ***Wastewater Treatment Plant Upgrade Project***

Nature of Amendment:

_X__ Additional Services to be performed by Engineer

_X__ Modifications to services of Engineer

____ Modifications to responsibilities of Owner

_X__ Modifications of payment to Engineer

_X__ Modifications to time(s) for rendering services

____ Modifications to other terms and conditions of the Agreement

Description of Modifications:

Refer page 3 for modifications included in this Amendment No. 1.

Agreement Summary:

Original agreement amount:	$800,000.00
Net change for prior amendments:	$0.00
This amendment amount:	$150,000.00
Adjusted Agreement amount:	$950,000.00

Change in time for services (days or date, as applicable): Basic design services duration has been increased from an estimated 180 days prior to the project starting to an estimated 730 days. Resident Project Representative services duration has been increased from 365 days to 548 days.

The foregoing Agreement Summary is for reference only and does not alter the terms of the Agreement, including those set forth in Exhibit C.

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. All provisions of the Agreement not modified by this or previous Amendments remain in effect.

OWNER:	ENGINEER:
By: _____	By: _____
Print name: Daniel Burkett	Print name: Thomas M. Reilly, P.E.
Title: Vice Chairmain	Title: President & CEO
Date Signed: _____	Date Signed: _____

The original Engineering Agreement dated February 3, 2021 is being modified as follows:

Additional Services to be performed by Engineer – Basic Design Services are modified to include design services necessary to comply with the National Fire Protection Act 820 requiring explosion-proof components in some areas of the plant as well as the longer duration of overall design required to complete the project.

Modifications of services to be performed by Engineer – Duration of Resident Project Representative services are being increased from an estimated construction period of 365 days to 548 days.

Modifications of payment to Engineer - Agreed upon Engineering Fees based on Original Engineering Agreement dated February 3, 2021, this Amendment No. 1 dated March 5, 2025 are summarized as follows:

Task	*Original AE Agreement*	*Amendment No. 1*	*Total Fee*	*Fee Type*
Basic Design Services	*$405,000.00*	*$60,000.00*	*$465,000.00*	*Lump Sum/Hourly**
Surveys and Mapping	*$20,000.00*		*$20,000.00*	*Hourly*
Geotechnical Invest.	*$30,000.00*		*$20,000.00*	*Hourly*
DEP Part II Permit	*$30,000.00*		*$30,000.00*	*Hourly*
NPDES Permit	*$30,000.00*		*$30,000.00*	*Hourly*
General Permits	*$15,000.00*		*$15,000.00*	*Hourly*
PennDOT Permit	*$10,000.00*		*$10,000.00*	*Hourly*
County & Local Permits	*$10,000.00*		*$10,000.00*	*Hourly*
Subdivision Plan	*$15,000.00*		*$15,000.00*	*Hourly*
Property Owner Neg.	*$5,000.00*		*$5,000.00*	*Hourly*
Startup Assistance	*$10,000.00*		*$10,000.00*	*Hourly*
Funding Admin.	*$50,000.00*		*$50,000.00*	*Hourly*
Resident Project Rep.	*$170,000*	*$90,000.00*	*$260,000.00*	*Hourly*
Totals	*$800,000.00*	*$150,000.00*	*$950,000.00*	

Original Basic Design Services were billed as lump sum fees. Basic Design Services as part of Amendment No. 1 will be billed hourly as outlined in Article 2.04 of Exhibit C (direct labor cost times a factor of three) as needed to complete the project.

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: 2024

☒ 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:	**Rimersburg Borough Municipal Authority**	Permit No.:	**PA0038156**
Mailing Address:	**27 Main Street**	Effective Date:	**03/01/2023**
City, State, Zip:	**Rimersburg PA,16254**	Expiration Date:	**02/29/2028**
Contact Person:	**Mike Graham**	Renewal Due Date:	**09/02/2027**
Title:	**Chairman**	Municipality:	**Rimersburg Borough**
Phone:	**814-473-6519**	County:	**Clarion**
Email:	**RimersburgBoro@comcast.net**	Consultant Name:	**The EADS Group Inc. Kyle Schwabenbauer**

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 2**)
   ☒ 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 3**)
   ☒ 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))

   DEP Spreadsheet was used. (Included in Attachment #1.)

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

   Check the appropriate boxes:

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

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

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

   Comments:

   Construction of a new treatment plant is scheduled to begin in the Spring of 2025 and take 1 full year to complete. The new plant will have a 0.4 MGD capacity and organic loading capacity of 767 lbs/day BODS.

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 for the Section 5 information.

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 – **2**)

☒ 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**)

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 6**)

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 7**)

RESPONSIBLE OFFICIAL CERTIFICATION

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

Name of Responsible Official	Signature
Telephone No.	Date

PREPARER CERTIFICATION

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

Beau Schettler	Beau Schettler
Name of Preparer	Signature
814-764-5050	03-05-2025
Telephone No.	Date

Attachment #1

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

PADEP Chapter 94 Spreadsheet
Sewage Treatment Plants

Reporting Year: 2024

Facility Name: Rimersburg Borough STP | **Permit No.:** PA0038156 | **Persons/EDU:** 2.37

Existing Hydraulic Design Capacity:	0.2	MGD		**Existing Organic Design Capacity:**	340	lbs BOD5/day
Upgrade Planned in Next 5 Years?	YES	**Year:**	2025	**Upgrade Planned in Next 5 Years?**	YES	**Year:** 2025
Future Hydraulic Design Capacity:	0.4	MGD		**Future Organic Design Capacity:**	767	lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2020	2021	2022	2023	2024
January	0.059	0.112	0.095	0.18	0.2
February	0.058	0.085	0.242	0.079	0.081
March	0.107	0.129	0.13	0.128	0.132
April	0.106	0.074	0.145	0.08	0.253
May	0.093	0.112	0.125	0.06	0.071
June	0.067	0.063	0.056	0.057	0.06
July	0.054	0.142	0.051	0.077	0.051
August	0.062	0.088	0.054	0.094	0.07
September	0.059	0.074	0.057	0.058	0.051
October	0.064	0.078	0.059	0.068	0.053
November	0.075	0.073	0.086	0.082	0.059
December	0.137	0.115	0.099	0.083	0.078
Annual Avg	0.078	0.095	0.1	0.087	0.097
Max 3-Mo Avg	0.102	0.111	0.172	0.129	0.155
Max : Avg Ratio	1.31	1.17	1.72	1.48	1.60
Existing EDUs	862.0	570.0	576.0	576.0	576.0
Flow/EDU (GPD)	90.5	166.7	173.6	151.0	168.4
Flow/Capita (GPD)	38.2	70.3	73.3	63.7	71.1
Exist. Overload?	NO	NO	NO	NO	NO

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

Month	2020	2021	2022	2023	2024
January	104	198	161	205	203
February	135	259	235	128	154
March	152	248	145	223	64
April	229	255	181	128	161
May	170	165	174	158	150
June	195	193	185	154	142
July	145	255	163	122	140
August	232	158	205	157	220
September	163	234	122	123	166
October	150	139	151	159	182
November	348	310	204	122	151
December	191	158	170	128	130
Annual Avg	185	214	175	151	155
Max Mo Avg	348	310	235	223	220
Max : Avg Ratio	1.89	1.45	1.35	1.48	1.42
Existing EDUs	862	570	576	576	576
Load/EDU	0.214	0.376	0.303	0.261	0.270
Load/Capita	0.090	0.159	0.128	0.110	0.114
Exist. Overload?	YES	NO	NO	NO	NO

Projected Flows for Next Five Years (MGD)

	2025	2026	2027	2028	2029
New EDUs	2.0	2.0	2.0	2.0	2.0
New EDU Flow	0.0003	0.0003	0.0003	0.0003	0.0003
Proj. Annual Avg	0.092	0.0923	0.0926	0.0929	0.0932
Proj. Max 3-Mo Avg	0.134	0.134	0.135	0.135	0.136
Proj. Overload?	NO	NO	NO	NO	NO

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

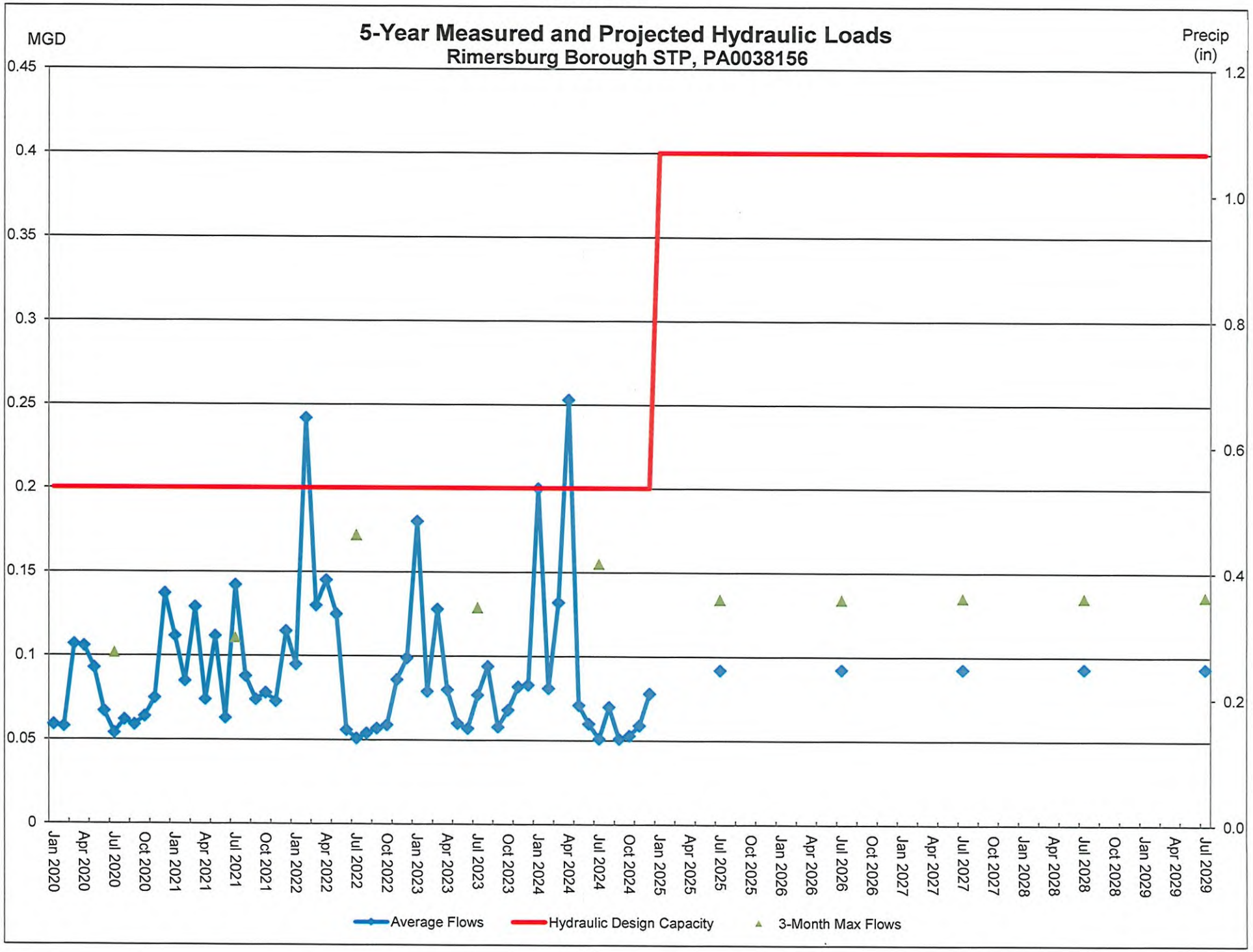
	2025	2026	2027	2028	2029
New EDUs	2	2	2	2	2
New EDU Load	0.570	0.570	0.570	0.570	0.570
Proj. Annual Avg	176	177	178	178	179
Proj. Max Avg	267	268	269	270	271
Proj. Overload?	NO	NO	NO	NO	NO

Show Precipitation Data on Hydraulic Graph?

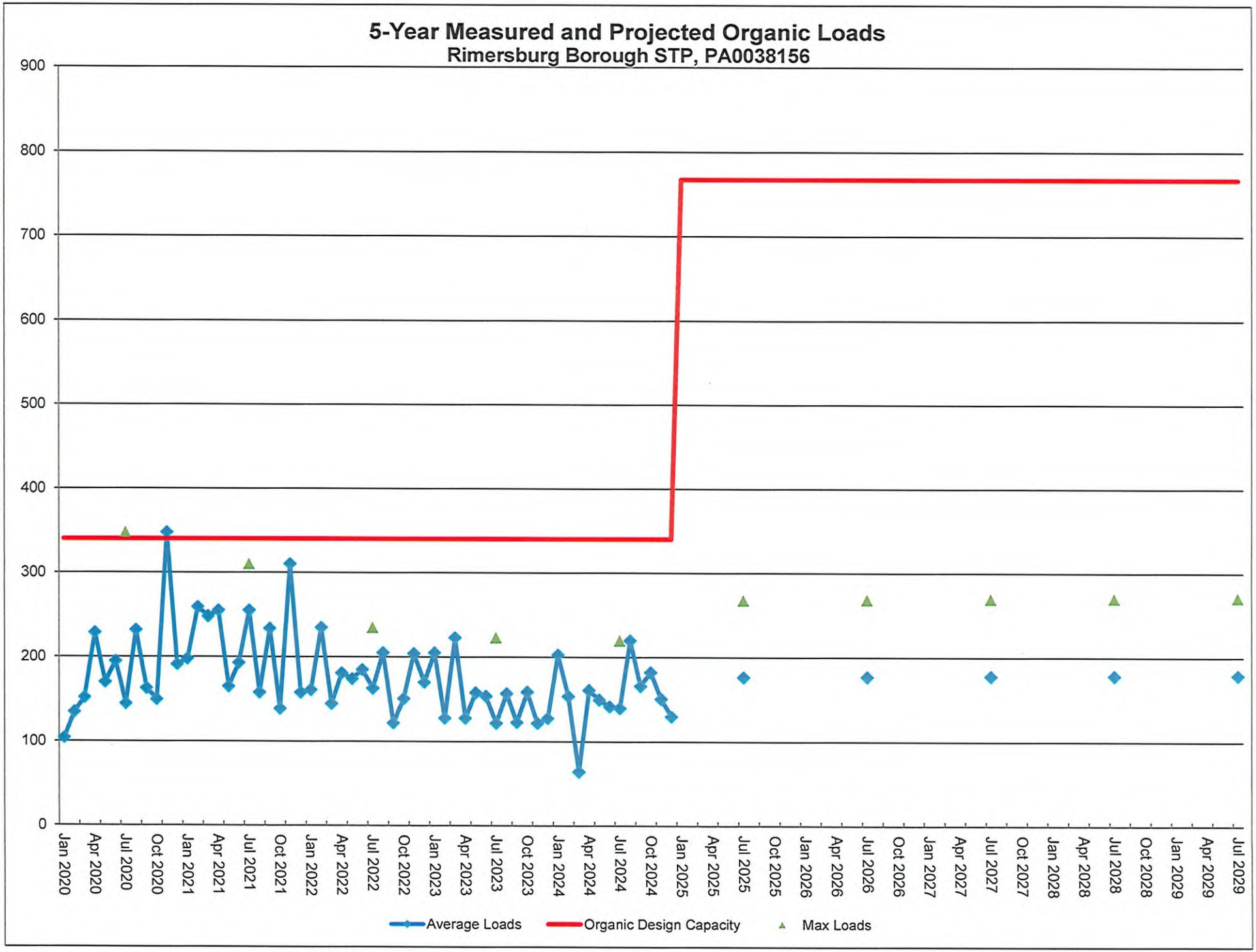
Total Monthly Precipitation for Past Five Years (Inches)

Month	2020	2021	2022	2023	2024
January	3.23	1.9	3.57	4.77	5.51
February	4.94	2.49	4.77	2.32	2.15
March	5.53	1.62	4.18	3.85	3.06
April	3.93	1.9	4.25	2.68	8.86
May	3.92	4.32	5.55	2.65	4.72
June	3.73	2.56	2.9	3.4	2.36
July	2.75	5.98	2.09	6.48	2.36
August	3.93	7.64	5.05	4.85	5.22
September	2.51	1.99	5.53	1.1	2.73
October	2.38	4.52	3.1	3.49	1.25
November	2.81	2.39	4.91	2.22	4.0
December	4.05	3.07	2.82	2.44	3.05

Attachment #2



Attachment #3



Attachment #4

Section 5 Sewer System Program

Monitoring:

1,455.1 linear feet of sewer line was inspected in 2023 by Insight Pipe Contracting on 05/18/2023. Collection system monitoring is limited to a reactive basis since the complete closed-circuit television (CCTV) inspection was conducted within the system in 2015. Approximately 26,000 linear feet of sewer lines were inspected.

In 2024, no sewage lines were cleaned, inspected, or repaired.

The RBMA maintains two pumping stations, one at Carwick Road and the other at Route 68. The Carwick Road station contains two pumps (3/60/230 power, 2 HP, 3450 RPM), and the Route 68 station also contains two pumps (3/60/230 power, 15 HP, 3450 RPM). Flow is not monitored at either station, but daily run times are recorded.

Maintenance:.
This work is submitted monthly to the RBMA by the Operator.

Weekly:

1. **Check comminutor operation, clean as required.**
2. **Remove refuse from facility.**
3. **Grease/oil equipment as recommended or as required.**
4. **Snow removal, grass cutting, grounds maintenance.**
5. **Take effluent-influent wastewater samples as required by permit.**
6. **Waste sludge to digester.**
7. **Pump sludge to waste hauler for disposal.**
8. **Check discharge point headwalls.**
9. **Check drainage to point of stream entry. Keep channel clean and remove any obstructions.**

Monthly:

1. **Grease/oil equipment as required or recommended by the manufacturer.**
2. **Check integrity of fencing and other security devices.**
3. **Submit reports to PA Department of Environmental Protection (DEP).**
4. **Clean comminutor pit and flush passageways.**
5. **Remove sludge and transport to approved treatment facility.**
6. **Reorder chlorine and chemicals as necessary.**

Annually:

1. **Review Annual Chapter 94 Report prepared for DEP.**
2. **Grease/oil equipment as required or recommended by the manufacturer.**

3. Inventory equipment and supplies. Reorder depleted or necessary items.
4. Recalibrate flow monitoring equipment.
5. Sludge removal as needed. Sludge removal data is provided in Attachment #6

Repair/Rehabilitation:

The RBMA completed a sanitary sewer lining and point repair project in 2015. The RBMA televised approximately 26,000 linear feet of sewer line and found dozens of locations that allowed inflow through crushed and/or open joints. There was approximately 20' of sewer main televised and cleaned on Craig St, due to a clog, in 2022. There were no repairs/replacements of any manholes in the system in 2024.

The Department approved the RBMA's Official Act 537 Planning Update on August 14, 2019. Construction will begin on a new STP in the Spring of 2025. The new plant will have a .4 MGD hydraulic design capacity, and 767 lbs BOD5/day organic design capacity. It is anticipated that the new plant will be in operation in 2026.

Personnel and Equipment:

The STP is currently operated by The EADS Group Inc. through a Circuit Rider Agreement which began in May of 2024. Certified Operator Beau Schettler, class C, E, 1, 4, is the primary operator. Day-to-day operations and sampling is performed by Dylan Shirey, Frank McNaughton, and assisted by additional Authority / Borough employees as necessary. Prior to May of 2024, the plant was operated by certified operators employed by CWM Environmental

The RBMA has an agreement in place with the Rimersburg Borough for Borough personnel to complete collection system maintenance. Emergency and daily operations and maintenance of the collection system are primarily performed by the Borough Foreman and two (2) staff, with additional labor hired on an as-needed basis. Local contractors are used when necessary. Preventative and routine maintenance activities and work completed are recorded by the RBMA for future reference. The Borough staff has the typical tools available to a Borough, including a dump truck, backhoe, and other miscellaneous equipment.

Sampling Frequency:

There is no sampling completed within the collection system.

Periodic STP sampling includes the following parameters as described in the NPDES permit: flow, pH, dissolved oxygen, total residual chlorine, CBOD5, BOD5, total suspended solids (raw influent), total suspended solids, fecal coliform (May 1-Sep 30), fecal coliform (Oct 1-Apr 30), total nitrogen, ammonia-nitrogen, total phosphorus, total aluminum, total iron, and total manganese. Pace Laboratory in Dubois PA is the Chapter

252 Accredited Lab that was used for all analysis requiring accredited methods during January 2021 through the present.

Influent sampling performed at the STP includes grab samples taken from the headworks. The grabs are taken at different intervals during the day to create an 8-hr. composite sample. Sampling is performed at a time when the plant is not recirculating in order to avoid recirculated water from being included in the influent sampling.

Effluent sampling is completed in a similar fashion but conducted at the stilling well where the effluent flow meter is located. Given the nature of an SBR, samples are taken during the decant process to get a true effluent reading.
Organic loadings for 8-hr. composite samples are calculated using the average daily flow recorded from the 8-hr. period that the effluent sampler draws the samples (the day prior to the lab pick-up date). Organic loadings for grab samples are calculated using the average daily flow from the day the sample is manually collected by the Operator (the day the lab is to pick the samples up). The Operator inputs the flow data and the lab analysis results into DEP's Supplemental Report Daily Effluent to calculate the loadings in pounds per day (PPD).

Samples were collected by STP staff. Samples were then analyzed by Pace Analytical Laboratories. Pace is an accredited laboratory:

Pace Analytical
40 Hoover Ave,
DuBois, PA 15801
(814) 371-6030
EPA Lab# PA001555

The effluent flow meter is an ISCO Teledyne, Signature Series permanent meter. The meter consists of an ultrasonic sensor mounted behind an 18" rectangular weir. The data is logged in one (1) minute intervals.

The water elevation readings were verified by Beau Schettler of the EADS Group on October 28th, 2024. The calibration verification is provided in Attachment #7.

Inflow/Infiltration ("I/I") Monitoring:
The RBMA did not conduct any I/I monitoring activities during 2024. All future connections will be inspected by Borough personnel to enforce the existing sewer ordinance and RBMA Rules and Regulations.

Attachment #5

Section 7 Pumping Stations §94.12(a)7

The RBMA maintains a pump station at Carwick Road and another on State Route 68. Flow is not monitored at either station, but daily run times are recorded. The Carwick Station averaged approximately 17.5 hours/month of run time in 2023, with Pump #1 averaging 8.2 hours/month and Pump #2 averaging 9.4 hours/month. The Route 68 Station averaged approximately 72.2 hours/month of run time in 2023, with Pump #1 averaging 34.7 hours/month and Pump #2 averaging 37.5 hours/month.

Pump Station Name	Max Pump Rate	Pump #1 Average Run Time (hrs/month)	Pump #2 Average Run Time (hrs/month)
Carwick Road Station	20 GPM @ 70' TDH	8.2	9.4
Route 68 Station	95 GPM @ 219' TDH	34.7	37.5

Attachment #6

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: **Rimersburg Borough STP** Permit No.: **PA0038156**

Evaluation Period: (Enter Date) **1/1/2024** to (Enter Date) **12/31/2024**

Design Flow: **0.2** MGD Actual Annual Average Flow: **0.097** MGD

Type of Biological Treatment Process: **Sequencing Batch Reactor** Treatment Factor: **0.65**

Type of Digestion Process: **Aerobic Digestion, HDT = 20** Digestion Factor: **0.7**

Total Population Served by Treatment Plant: **1,365**

Average Annual Influent BOD5 Load (per Ch. 94 Report): **155.0** lbs/day

Average Annual Influent BOD5 Load (Expected based on Population): **232.1** lbs/day *(Population x 0.17)*

% of Influent BOD5 Load per Ch. 94 Report / Influent Load Expected: **66.8%** *(Influent Load per Ch. 94 Report / Influent Load based on Population)*

Average Annual Effluent Concentration of **CBOD5** : **13.6** mg/L ***Assume 16.32 mg/L BOD5***

Average Annual Pounds (lbs) of BOD5 Discharged: **13.20** lbs/day *(Actual Flow x Effluent BOD5 Concentration x 8.34)*

Influent BOD5 Load per Person per Day (based on Ch. 94): **0.114** *(Influent BOD5 Load per Ch. 94 Report / Population - 0.17 to 0.22 is typical)*

Pounds of BOD5 Removed (based on Ch. 94): **141.8** lbs/day *(Influent BOD5 Load per Ch. 94 Report - BOD5 Discharged)*

Pounds of BOD5 Removed (based on Population): **218.8** lbs/day *(Influent BOD5 Load Expected based on Population - BOD5*

Sludge Removed from Treatment Plant (Previous Year): **8.4** Dry Tons = **16,724** Dry lbs

Sludge Production and Wasting Calculations

Based on Chapter 94 Report		*Based on Population*	
141.8	BOD5 Removed / Day (lbs)	218.8	BOD5 Removed / Day (lbs)
X 0.65	Treatment Factor	X 0.65	Treatment Factor
92.17	Daily Solids Production (lbs)	142.25	Daily Solids Production (lbs)
X 0.7	Digestion Factor	X 0.7	Digestion Factor
64.52	Daily Digested Solids (lbs)	99.58	Daily Digested Solids (lbs)
X 365	Days per Year	X 365	Days per Year
23,549	Solids Generated / Year (lbs)	36,345	Solids Generated / Year (lbs)
- 16,724	Solids Actually Wasted / Year (lbs)	16,724	Solids Actually Wasted / Year (lbs)
6,825	Difference (lbs)	*19,621*	Difference (lbs)
71%	% of Expected Volume Wasted *(85 - 115% is generally acceptable)*	46%	% of Expected Volume Wasted *(85 - 115% is generally acceptable)*
1.3%	Percent Solids of Wasted Solids	1.3%	Percent Solids of Removed Solids
224,097	Volume of Solids to Remove Annually (gallons)	348,634	Volume of Solids to Remove Annually (gallons)
- 159,149	Volume of Solids Actually Removed Annually (gallons)	- 160,422	Volume of Solids Actually Removed Annually (gallons)
64,948	Difference (gallons)	*188,212*	Difference (gallons)

Attachment #6

SOLIDS MANAGEMENT INVENTORY						
Month	Flow	Mo. Avg. Influent BOD5	Mo. Avg. Effluent CBOD5		Mo. Avg. Effluent BOD5	
	MGD	mg/L	mg/L		mg/L	
Jan-24	0.200	209.0		16.0		19.2
Feb-24	0.081	255.0		30.0		36.0
Mar-24	0.132	154.0		13.0		15.6
Apr-24	0.253	217.0		12.0		14.4
May-24	0.071	245.0		18.0		21.6
Jun-24	0.060	275.0		7.0		8.4
Jul-24	0.051	279.0		12.0		14.4
Aug-24	0.070	424.0		33.0		39.6
Sep-24	0.051	336.0		7.0		8.4
Oct-24	0.053	322.0		4.0		4.8
Nov-24	0.059	358.0		7.0		8.4
Dec-24	0.078	200.0		4.0		4.8
Avg.	0.097	272.8		13.6		16.3
Total	1.159	3274.0		163.0		195.6

1) Effluent BOD is estimated by multiplying CBOD by a factor of 1.2, as defined in NPDES Application for Permit to Discharge Sewage (long form), 3800-PM-WSFR0009b, rev. 9/2005.
2) Dry tons are as reported by STP Operator on the DEP form Supplemental Report for Sewage Sludge/Biosolids Production and Disposal, 38-FM-BPNPSM0438.

Attachment #6

SEWAGE SLUDGE PRODUCTION & DISPOSAL					
Date	Gallons	% Solids	Monthly Avg. % Solids	Dry Tons	Monthly Total Dry Tons
1/8/2024	5,500	1.26	1.24	0.289	0.856
1/8/2024	5,500	1.26		0.289	
1/22/2024	5,500	1.21		0.278	
2/5/2024	5,500	1.16	1.21	0.266	0.289
2/19/2024	5,500	1.26		0.289	
3/4/2024	5,300	0.96	1.12	0.212	0.752
3/18/2024	5,300	1.20		0.265	
3/25/2024	5,500	1.20		0.275	
4/1/2024	5,500	0.81	1.24	0.186	1.115
4/8/2024	5,500	1.33		0.305	
4/22/2024	5,200	1.52		0.330	
4/29/2024	5,500	1.28		0.294	
5/15/2024	5,500	1.10	1.07	0.252	0.488
5/28/2024	5,500	1.03		0.236	
6/10/2024	5,500	1.01	1.09	0.232	0.498
6/28/2024	5,500	1.16		0.266	
7/1/2024	5,500	0.95	1.16	0.218	0.530
7/22/2024	5,500	1.36		0.312	
8/12/2024	5,500	1.88	1.88	0.431	0.431
9/3/2024	5,500	1.75	1.53	0.401	1.052
9/16/2024	5,500	1.40		0.321	
9/23/2024	5,500	1.44		0.330	
10/7/2024	5,500	1.04	1.34	0.239	0.615
10/21/2024	5,500	1.64		0.376	
11/4/2024	5,500	1.10	1.28	0.252	0.881
11/11/2024	5,500	1.49		0.342	
11/18/2024	5,500	1.25		0.287	
12/9/2024	5,500	1.37	1.24	0.314	0.855
12/23/2024	5,500	1.26		0.289	
12/30/2024	5,500	1.10		0.252	
Average	5,477	1.26	1.28	0.288	0.697
Total	164,300	37.78	15.39	8.628	8.362

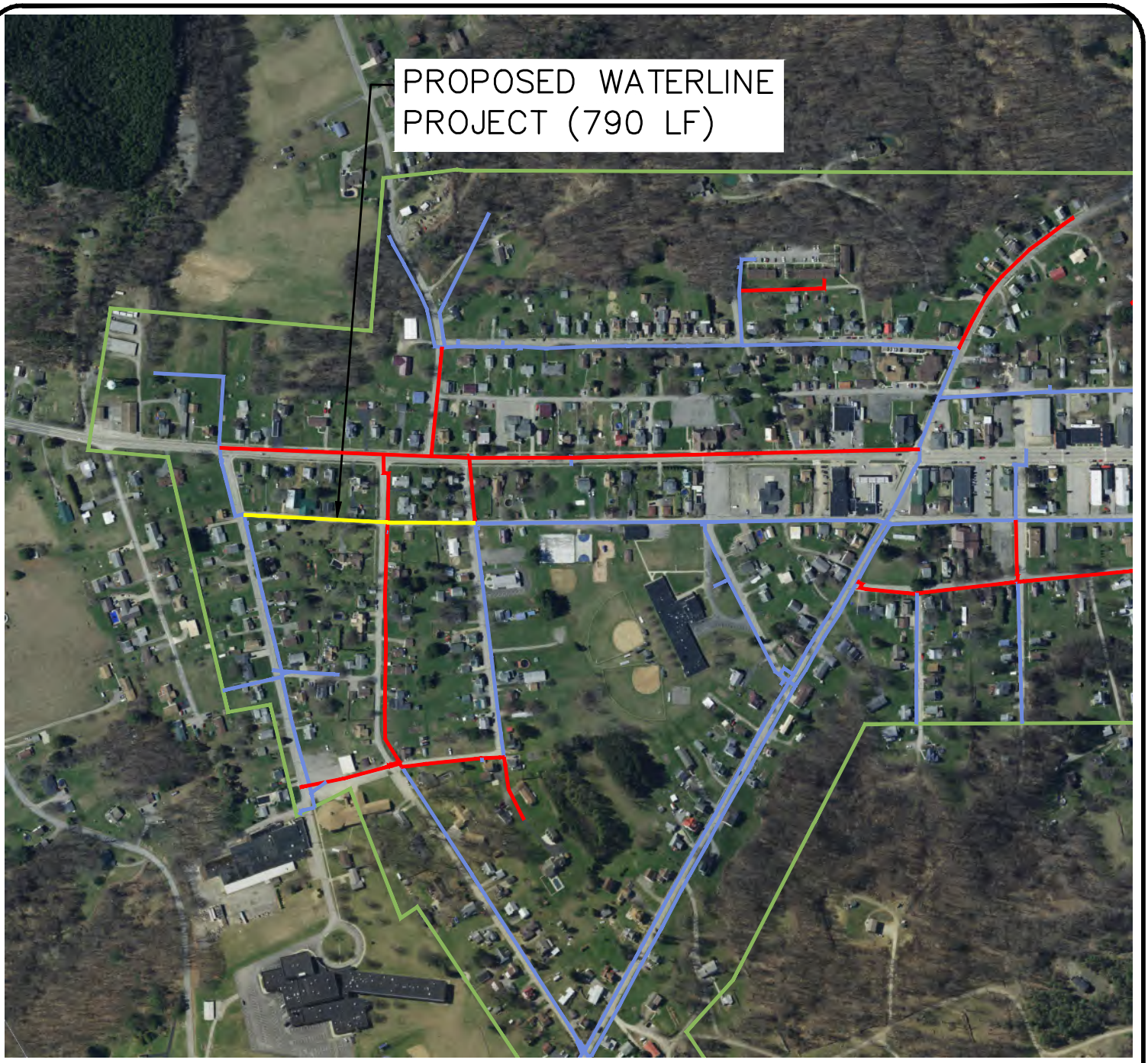
THE EADS GROUP
ENGINEERING ARCHITECTURE AND DESIGN SERVICES

Flow Meter Calibration 2024
RBMA Sewage Treatment Plant

On 10-28-2024, I was on site with Dylan Shirey from Rimersburg Borough to calibrate/check the flow meter for the year. After checking the water flow depth on the 18" wide rectangular weir with a flow measuring stick directly beneath the ultrasonic beam, we verified that the flow meter screen inside of the flow meter room was reading the same flow as what is measured on the stick. The level in inches on the measuring stick was 2.50", and the level on the meter in inches was 2.49" during a decant. The water depth was measured on the weir crest. The flow meter is reading accurately and was not reset or zeroed today. Also, it should be noted that once the decant cycle was completed while on site, there was no water flowing over the weir, and the meter screen read 0 GPM respectively.

Beau Schettler

Beau Schettler
Engineering Technician
The EADS Group, Inc.



GRAPHIC SCALE

500 250 0 250 500

NORTH

PROPOSED 8" WATERLINE
BOROUGH BOUNDARY
UPGRADED PLASTIC WATERLINE
CAST IRON WATERLINE

RIMERSBURG BOROUGH MUNICIPAL AUTHORITY

RIMERSBURG, CLARION COUNTY, PA
ECCLES STREET WATER LINE

LOCATION MAP

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