



**Teresa K. Harrold**  
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October 8, 2024

**VIA ELECTRONIC FILING**

Ms. Rosemary Chiavetta, Secretary  
Commonwealth of Pennsylvania  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street  
Harrisburg, PA 17120

In re: Application of Pennsylvania-American Water Company for  
Approval of the Right to Offer, Render, Furnish or Supply  
Wastewater Service to the Public in an Additional Portion of  
Fairview Township, York County, Pennsylvania  
**Docket No. A-2024-3050785**

Dear Secretary Chiavetta:

On September 26, 2024, Pennsylvania-American Water Company's ("PAWC") filed its responses to Data Request Set I, regarding the above referenced proceeding. Please find attached PAWC's **Amended Response to A-15**. A copy of this response have been served on all parties on the attached Certificate of Service.

Should you have any questions, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Teresa Harrold", written over a horizontal line.

Teresa K. Harrold

cc: All Parties on the Attached Certificate of Service (*via electronic mail*)  
Clinton McKinley, Bureau of Technical Utility Service (*via electronic mail*)

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**In re: Application of Pennsylvania-American Water Company for Approval of the Right to Offer, Render, Furnish or Supply Wastewater Service to the Public in an Additional Portion of Fairview Township, York County, Pennsylvania** :  
: **Docket No. A-2024-3050785**  
:  
:  
:

**CERTIFICATE OF SERVICE**

I hereby certify that I am this day serving the above-referenced Response on the persons and in the manner indicated below, which service satisfies the requirements of 52 Pa. Code §1.54 (relating to service by a party).

**SERVICE VIA ELECTRONIC MAIL ON OCTOBER 8, 2024**

Patrick Cicero, Consumer Advocate  
Office of Consumer Advocate  
555 Walnut Street  
5th Floor, Forum Place  
Harrisburg, PA 17101-1923

NazAarah Sabree, Small Business Advocate  
Office of Small Business Advocate  
555 Walnut Street  
1st Floor, Forum Place  
Harrisburg, PA 17101

Alison Kaster, Director  
Pennsylvania Public Utility Commission  
Bureau of Investigation and Enforcement  
400 North Street  
PO Box 3265  
Harrisburg, PA 17105

Sincerely,



\_\_\_\_\_  
Teresa K. Harrold, Esquire (PA ID #311082)  
Pennsylvania-American Water Company  
852 Wesley Drive  
Mechanicsburg, PA 17055  
Phone: (717) 550-1562  
email: [teresa.harrold@amwater.com](mailto:teresa.harrold@amwater.com)

**Attorney for Pennsylvania-American  
Water Company**

**Application of Pennsylvania-American Water Company – Wastewater Division for Approval to Begin to Offer, Render, Furnish or Supply Wastewater Service to the Public in an Additional Portion of Fairview Township, York County, Pennsylvania**

**Docket No. A-2024-3050785**

**PAWC Responses to TUS Set I**

**Amended Response to A-15**

**A-15.** The 2022 Plot Map depicted a force main connection with PAWC-WD’s existing collection system within Pin Oak Drive. Considering this connection, please provide responses to the following:

- a. Identify PAWC-WD’s existing facilities, including the material type, size, and capacity, to be used to convey flow from the requested service territory to the Lower Allen WWTP;
- b. Provide evidence that PAWC-WD’s existing facilities have adequate capacity to provide wastewater service to the requested service territory; and
- c. Identify any required upgrades to PAWC-WD’s existing facilities to be used to provide wastewater service to the requested service territory and the estimated cost of these upgrades.

**Amended Response:**

- a. Please see attached **TUS-A-15.a\_Attachment**, which is the Sienna Sanitary Sewer Capacity Reserve Capacity Analysis – PAWC (Fairview Township) to Lower Allen Township WWTP, and the Sienna Sanitary Sewer Capacity Reserve Capacity Analysis – Sienna to PAWC (Fairview Township). These analyses include the pipe size, type, and carrying capacities.
- b. Please see attached **US-A-15.b\_Attachment**, which is the draft Act 537 Special Study for the Lower Allen Township WWTP, and the Fairview Township Service Area, identifying the required upgrades to PAWC’s collection system. All required upgrades will be completed and certified by the DEP before the Development is connected to PAWC’s collection system.
- c. Please see attached **TUS-A-15.b\_Attachment**, Attachment 10 “OPINION OF PROJECT COSTS”.

**Response Provided By:**

**Stephen DeFriece, Project Manager  
Pennsylvania-American Water Company**

**Dated:**

**October 8, 2024**

SIENNA - RESERVE CAPACITY ANALYSIS - FAIRVIEW TIE-IN TO LOWER ALLEN INTERCEPTOR  
DECEMBER 2023

ASSUMPTIONS

Persons/EDU	2.25
Existing GPCD	91

SIENNA CONVEYANCE CAPACITY, PIPE FULL CONDITION														EXISTING FLOW, PER CAPITA BASIS					RESERVE CAPACITY		
Manhole	RIM	Depth	Invert	Length (ft)	Size (in)	Material	Mannings n	Area (sqft)	Wet. Perim. (ft)	Hyd Rad (ft)	Slope (ft/ft)	Q (cfs)	Q (gpm)	Q (MGD)	V (fps)	EDUs Served	Population Served	ADF (gpd)	ADF (gpm)	Peak Hourly (gpm)	Reserve Capacity (gpm)
SC14	320.00	17.56	302.44	263.81	48	RCP	0.013	12.5600	12.5600	1.0000	0.0010	45.19	20.283	29.2071	3.6	983	2,212	0	0	404	19,879
SC13	316.40	14.22	302.18	440.31	48	RCP	0.013	12.5600	12.5600	1.0000	0.0010	45.51	20.424	29.4100	3.6	983	2,212	0	0	404	20,020
SC12	318.7	16.96	301.74	127.66	48	RCP	0.013	12.5600	12.5600	1.0000	0.0010	45.94	20.617	29.6888	3.7	983	2,212	0	0	404	20,213
SC11	317.5	15.89	301.61	270	42	RCP	0.013	9.6163	10.9900	0.8750	0.0041	64.36	28.884	41.5927	6.7	983	2,212	0	0	404	28,480
48R	315.2	14.69	300.51	163	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.59	14,178	20.4159	3.3	1,993	4,484	206,337	358	762	13,415
SC10	315.4	15.05	300.35	254	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	32.26	14,478	20.8484	3.4	1,993	4,484	0	0	762	13,716
SC9	316.1	16.01	300.09	178.83	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.99	14,357	20.6737	3.3	1,993	4,484	0	0	762	13,595
SC8	313.7	13.79	299.91	16.92	42	PVC	0.013	9.6163	10.9900	0.8750	0.0012	34.67	15,558	22.4036	3.6	1,993	4,484	0	0	762	14,796
SC7	313.7	13.81	299.89	428.23	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.95	14,340	20.6490	3.3	1,993	4,484	0	0	762	13,577
44R	314.9	15.44	299.46	185.5	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.41	14,096	20.2986	3.3	2,004	4,509	2,247	4	766	13,330
43R1	314.7	15.42	299.28	240.34	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.86	14,300	20.5918	3.3	2,004	4,509	0	0	766	13,534
43R	314.3	15.26	299.04	406.34	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	32.03	14,374	20.6990	3.3	2,090	4,703	17,569	31	797	13,578
42R	313.3	14.67	298.63	386.03	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.22	14,010	20.1740	3.2	2,090	4,703	0	0	797	13,213
41R	314.1	15.84	298.26	408.94	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	32.31	14,502	20.8832	3.4	2,090	4,703	0	0	797	13,706
SC6	314.7	16.86	297.84	92.12	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.52	14,144	20.3679	3.3	2,090	4,703	0	0	797	13,348
SC5	317.7	19.95	297.75	259.73	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.90	14,317	20.6171	3.3	2,090	4,703	0	0	797	13,521
38R	314.2	16.71	297.49	353.92	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.71	14,231	20.4920	3.3	2,155	4,849	13,279	23	820	13,411
37R	312.8	15.66	297.14	474.25	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.74	14,246	20.5139	3.3	2,155	4,849	0	0	820	13,426
36R	311.8	15.13	296.67	330.83	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.85	14,292	20.5806	3.3	2,165	4,871	2,043	4	823	13,469
35R	312.2	15.86	296.34	279.8	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.90	14,315	20.6138	3.3	2,165	4,871	0	0	823	13,492
34R	312.4	16.34	296.06	166.95	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	32.18	14,440	20.7938	3.3	2,165	4,871	0	0	823	13,617
33R1	312.6	16.71	295.89	180.42	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.85	14,293	20.5824	3.3	2,165	4,871	0	0	823	13,470
33R	313.6	17.89	295.71	350	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.89	14,310	20.6064	3.3	2,165	4,871	0	0	823	13,487
32R1	311.7	16.34	295.36	471.53	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.83	14,287	20.5730	3.3	2,195	4,939	6,129	11	834	13,453
32R	310.2	15.31	294.89	141.94	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.67	14,212	20.4651	3.3	2,195	4,939	0	0	834	13,378
31R	310.9	16.15	294.75	243.46	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.66	14,208	20.4595	3.3	2,195	4,939	0	0	834	13,374
30R	310.2	15.69	294.51	260.78	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.84	14,289	20.5756	3.3	2,259	5,083	13,075	23	857	13,432
SC4	310.7	16.45	294.25	20.76	42	RCP	0.013	9.6163	10.9900	0.8750	0.0014	38.33	17,202	24.7713	4.0	2,259	5,083	0	0	857	16,346
SC3	310.6	16.38	294.22	187.39	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.25	14,025	20.1960	3.2	2,259	5,083	0	0	857	13,168
SC2	310.4	16.36	294.04	166.11	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	32.26	14,477	20.8463	3.4	2,259	5,083	0	0	857	13,620
27R	310.7	16.83	293.87	315	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	32.14	14,423	20.7693	3.3	2,312	5,202	10,828	19	875	13,548
26R	311.1	17.55	293.55	307.41	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	32.02	14,370	20.6931	3.3	2,312	5,202	0	0	875	13,495
25R	309.5	16.26	293.24	462.23	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.81	14,275	20.5567	3.3	2,312	5,202	0	0	875	13,400
24R	309.3	16.52	292.78	213.95	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	31.59	14,177	20.4153	3.3	2,312	5,202	0	0	875	13,302
23R	308.8	16.23	292.57	406.34	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	32.03	14,374	20.6990	3.3	2,312	5,202	0	0	875	13,499
22R	308.5	16.34	292.16	309.48	42	RCP	0.013	9.6163	10.9900	0.8750	0.0010	32.03	14,374	20.6990	3.3	2,312	5,202	0	0	875	13,499

$$Q = VA = \left( \frac{1.49}{n} \right) AR^{\frac{2}{3}} \sqrt{S} \quad [U.S.]$$

$$Q = VA = \left( \frac{1.00}{n} \right) AR^{\frac{2}{3}} \sqrt{S} \quad [SI]$$

Where:

- Q = Flow Rate, (ft<sup>3</sup>/s)
- v = Velocity, (ft/s)
- A = Flow Area, (ft<sup>2</sup>)
- n = Manning's Roughness Coefficient
- R = Hydraulic Radius, (ft)
- S = Channel Slope, (ft/ft)

Manning's n for Channels and Pipes  
RCP

0.013

# TUS-A-15.a\_Attachment

## SIENNA - RESERVE CAPACITY ANALYSIS

### ASSUMPTIONS

Persons/EDU	2.25
Existing GPCD	91

Max Day Flows

SIENNA CONVEYANCE CAPACITY, PIPE FULL CONDITION														EXISTING FLOW, PER CAPITA BASIS					RESERVE CAPACITY	
Manhole	RIM	Depth	Invert	Length (ft)	Size (in)	Material	Mannings n	Area (sqft)	Wet. Perim. (ft)	Hyd Rad (ft)	Slope (ft/ft)	Q (cfs)	Q (gpm)	V (fps)	EDUs	Population	ADF	ADF	Peak	(gpm)
															Served	Served	(gpd)	(gpm)	Hourly (gpm)	
30	443.19	4.30	438.89	129	8	PVC	0.010	0.3489	2.0933	0.1667	0.0602	3.86	1,734	11.1	51	115	*Pump Station*		210	1,524
71	441.92	10.80	431.12	202	8	PVC	0.010	0.3489	2.0933	0.1667	0.0423	3.24	1,453	9.3	53	119	409	1	211	1,242
73	430.38	7.80	422.58	355	8	PVC	0.010	0.3489	2.0933	0.1667	0.0150	1.93	865	5.5	68	153	3,064	5	216	649
74	424.06	6.80	417.26	151	8	PVC	0.010	0.3489	2.0933	0.1667	0.0372	3.03	1,362	8.7	71	160	613	1	217	1,145
28	418.75	7.10	411.65	174	8	PVC	0.010	0.3489	2.0933	0.1667	0.0194	2.19	983	6.3	71	160	0	0	217	766
29	413.88	5.60	408.28	182	8	PVC	0.010	0.3489	2.0933	0.1667	0.0020	0.71	319	2.0	71	160	0	0	217	101
81	414.91	7.00	407.91	102	8	PVC	0.010	0.3489	2.0933	0.1667	0.0099	1.57	703	4.5	83	187	2,452	4	221	482
82	413	6.10	406.90	202	8	PVC	0.010	0.3489	2.0933	0.1667	0.0045	1.06	474	3.0	85	191	409	1	222	252
83	415.39	9.40	405.99	301	8	PVC	0.010	0.3489	2.0933	0.1667	0.0040	0.99	446	2.8	90	203	1,021	2	224	222
84	412.89	8.10	404.79	260	8	PVC	0.010	0.3489	2.0933	0.1667	0.0574	3.77	1,693	10.8	94	212	817	1	225	1,467
85	398.27	8.40	389.87	275	8	PVC	0.010	0.3489	2.0933	0.1667	0.0286	2.66	1,195	7.6	99	223	1,021	2	227	968
86	390.4	8.40	382.00	324	8	PVC	0.010	0.3489	2.0933	0.1667	0.0036	0.95	425	2.7	106	239	1,430	2	230	195
87	390.63	9.80	380.83	119	8	PVC	0.010	0.3489	2.0933	0.1667	0.0039	0.98	439	2.8	107	241	204	0	230	209
88	387.07	6.70	380.37	69	8	PVC	0.010	0.3489	2.0933	0.1667	0.0087	1.47	659	4.2	109	245	409	1	231	428
89	387.67	7.90	379.77	198	8	PVC	0.010	0.3489	2.0933	0.1667	0.0039	0.99	443	2.8	112	252	613	1	232	212
90	389.29	10.30	378.99	197	8	PVC	0.010	0.3489	2.0933	0.1667	0.0202	2.23	1,003	6.4	136	306	4,903	9	240	763
91	383.22	8.20	375.02	244	8	PVC	0.010	0.3489	2.0933	0.1667	0.0129	1.79	803	5.1	139	313	613	1	241	562
92	378.07	6.20	371.87	91	8	PVC	0.010	0.3489	2.0933	0.1667	0.0054	1.16	518	3.3	141	317	409	1	242	277
93	378.18	6.80	371.38	78	8	PVC	0.010	0.3489	2.0933	0.1667	0.0040	0.99	445	2.8	143	322	409	1	243	203
94	379.17	8.10	371.07	342	8	PVC	0.010	0.3489	2.0933	0.1667	0.0028	0.83	374	2.4	225	506	16,752	29	272	103
215	381.17	11.06	370.11	164	8	PVC	0.010	0.3489	2.0933	0.1667	0.0028	0.83	374	2.4	226	509	204	0	272	102
216	374.45	4.80	369.65	50	8	PVC	0.010	0.3489	2.0933	0.1667	0.0050	1.11	500	3.2	226	509	0	0	272	228
217	373.6	4.20	369.40	69	8	PVC	0.010	0.3489	2.0933	0.1667	0.0152	1.94	872	5.6	227	511	204	0	272	599
134	374.85	6.50	368.35	129	8	AC	0.011	0.3489	2.0933	0.1667	0.0126	1.60	720	4.6	258	581	6,333	11	283	436
17	373.23	6.50	366.73	392	8	AC	0.011	0.3489	2.0933	0.1667	0.1038	4.61	2,070	13.2	258	581	0	0	283	1,786
7	332.63	6.60	326.03	235	10	AC	0.011	0.5451	2.6167	0.2083	0.0228	3.92	1,759	7.2	258	581	0	0	283	1,475
6	327.17	6.50	320.67	234	10	AC	0.011	0.5451	2.6167	0.2083	0.0028	1.37	614	2.5	258	581	0	0	283	330
5	325.52	5.50	320.02	407	10	AC	0.011	0.5451	2.6167	0.2083	0.0033	1.49	668	2.7	258	581	0	0	283	385
4	323.68	5.00	318.68	399	8	AC	0.011	0.3489	2.0933	0.1667	0.0024	0.70	313	2.0	258	581	0	0	283	29
3	324.78	7.05	317.74	209	8	AC	0.011	0.3489	2.0933	0.1667	0.0024	0.70	313	2.0	258	581	0	0	283	29
2	325.74	8.50	317.24	322	10	AC	0.011	0.5451	2.6167	0.2083	0.0028	1.36	612	2.5	258	581	0	0	283	329
1	323.33	6.98	316.35	311	10	AC	0.011	0.5451	2.6167	0.2083	0.0028	1.36	612	2.5	258	581	0	0	283	329
8	332.49	17.00	315.49	310	10	AC	0.011	0.5451	2.6167	0.2083	0.0071	2.19	983	4.0	271	610	2,656	5	288	695
9	318.68	5.40	313.28	280	8	AC	0.011	0.3489	2.0933	0.1667	0.0047	0.98	439	2.8	271	610	0	0	288	151
10	316.57	4.60	311.97	317	10	VCP	0.013	0.5451	2.6167	0.2083	0.0057	1.66	745	3.0	271	610	0	0	288	457
11	317.16	7.00	310.16	216	10	DI	0.012	0.5451	2.6167	0.2083	0.0031	1.31	590	2.4	271	610	0	0	288	302
12	318.1	8.60	309.50	170	8	AC	0.011	0.3489	2.0933	0.1667	0.0096	1.40	629	4.0	271	610	0	0	288	341
13	316.87	9.00	307.87	260	8	AC	0.011	0.3489	2.0933	0.1667	0.0055	1.06	476	3.0	271	610	0	0	288	188
14	318.44	12.00	306.44	357	8	AC	0.011	0.3489	2.0933	0.1667	0.0058	1.09	488	3.1	271	610	0	0	288	200
15	318.08	13.70	304.38	87	8	AC	0.011	0.3489	2.0933	0.1667	0.0166	1.84	826	5.3	271	610	0	0	288	538
16	317.94	15.00	302.94	0	8	AC	0.011	0.3489												

$$Q = VA = \left( \frac{1.49}{n} \right) AR^{\frac{2}{3}} \sqrt{S} \quad [\text{U.S.}]$$

$$Q = VA = \left( \frac{1.00}{n} \right) AR^{\frac{2}{3}} \sqrt{S} \quad [\text{SI}]$$

Where:

Q = Flow Rate, (ft<sup>3</sup>/s)

v = Velocity, (ft/s)

A = Flow Area, (ft<sup>2</sup>)

n = Manning's Roughness Coefficient

R = Hydraulic Radius, (ft)

S = Channel Slope, (ft/ft)

	2020	2021
1	0.562	0.372
2	0.46	0.701
3	0.571	0.621
4	0.712	0.483
5	0.532	0.343
6	0.361	0.482
7	0.303	0.436
8	0.407	0.418
9	0.326	1.784
10	0.349	0.452
11	0.339	0.375
12	0.715	0.303
	0.715	1.784

[http://www.fsl.orst.edu/geowater/FX3/help/8\\_Hydraulic\\_Reference/Mannings\\_n\\_Tables.htm](http://www.fsl.orst.edu/geowater/FX3/help/8_Hydraulic_Reference/Mannings_n_Tables.htm)

### Manning's n for Channels (Chow, 1959).

Type of Channel and Description	Minimum	Normal	Maximum
Natural streams - minor streams (top width at floodstage < 100 ft)			
<b>1. Main Channels</b>			
a. clean, straight, full stage, no rifts or deep pools	0.025	0.030	0.033
b. same as above, but more stones and weeds	0.030	0.035	0.040
c. clean, winding, some pools and shoals	0.033	0.040	0.045
d. same as above, but some weeds and stones	0.035	0.045	0.050
e. same as above, lower stages, more ineffective slopes and sections	0.040	0.048	0.055
f. same as "d" with more stones	0.045	0.050	0.060
g. sluggish reaches, weedy, deep pools	0.050	0.070	0.080
h. very weedy reaches, deep pools, or floodways with heavy stand of timber and underbrush	0.075	0.100	0.150

9. Clay:			
Common drainage tile	0.011	0.013	0.017
Vitrified sewer	0.011	0.014	0.017
Vitrified sewer with manholes, inlet, etc.	0.013	0.015	0.017
Vitrified Subdrain with open joint	0.014	0.016	0.018



August 12, 2024

Fairview Township Planning Commission  
599 Lewisberry Road  
New Cumberland, PA 17070

*RE: Act 537 Special Study for the  
Lower Allen Township WWTP,  
Fairview Township Service Area*

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Dear Commissioners,

For your consideration, please find an Act 537 Special Study for the Lower Allen Township WWTP, Fairview Township Service Area to increase the pipe size of 5 manhole sections within the Green Lane Manor and Green Lane Farms developments in Fairview Township, as depicted in the map included with the Special Study. The reason for this increase in pipe size is to accommodate the additional flows from the Sienna Development. PA American already has easements where the pipes that need to be replaced are located. The effect on Fairview Township is minimal as the lines are all located off Township roads although the Township roads will be utilized to access the easements.

Included with the Act 537 Special Study is Component 4A and instructions on completing the form. We are requesting the Planning Commission complete and return this form, along with any additional comments, to our office within 60 days of receipt, as this is a minimal impact to the Township and its Comprehensive Plan and Zoning regulations.

Should you have any questions, do not hesitate to contact me (717) 303-4837 or email: [mstoner@jhacompanies.com](mailto:mstoner@jhacompanies.com)

Sincerely,

Max E. Stoner  
Senior Project Leader

PA American Water Company, Steve DeFriece  
Alpha Consulting Engineers, Inc., John Murphy, P.E.  
Burkentine Builders, Bryce Burkentine, President

# TUS A-15.b\_Attachment

3850-FM-BCW0362A 6/2016



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF CLEAN WATER

DEP Code #:  
A3-67919-484-3

## SEWAGE FACILITIES PLANNING MODULE COMPONENT 4A - MUNICIPAL PLANNING AGENCY REVIEW

**Note to Project Sponsor:** To expedite the review of your proposal, one copy of your completed planning module package and one copy of this *Planning Agency Review Component* should be sent to the local municipal planning agency for their comments.

### SECTION A. PROJECT NAME (See Section A of instructions)

Project Name

Special Study for the Lower Allen Township Authority WWTP, Fairview Township Service Area

### SECTION B. REVIEW SCHEDULE (See Section B of instructions)

1. Date plan received by municipal planning agency \_\_\_\_\_
2. Date review completed by agency \_\_\_\_\_

### SECTION C. AGENCY REVIEW (See Section C of instructions)

- | Yes                                 | No                                  |   |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 1. Is there a municipal comprehensive plan adopted under the Municipalities Planning Code (53 P.S. 10101, <i>et seq.</i> )?               |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 2. Is this proposal consistent with the comprehensive plan for land use?<br>If no, describe the inconsistencies _____                     |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 3. Is this proposal consistent with the use, development, and protection of water resources?<br>If no, describe the inconsistencies _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 4. Is this proposal consistent with municipal land use planning relative to Prime Agricultural Land Preservation?                         |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 5. Does this project propose encroachments, obstructions, or dams that will affect wetlands?<br>If yes, describe impacts _____            |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 6. Will any known historical or archaeological resources be impacted by this project?<br>If yes, describe impacts _____                   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 7. Will any known endangered or threatened species of plant or animal be impacted by this project?<br>If yes, describe impacts _____      |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 8. Is there a municipal zoning ordinance?   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 9. Is this proposal consistent with the ordinance?<br>If no, describe the inconsistencies _____   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 10. Does the proposal require a change or variance to an existing comprehensive plan or zoning ordinance?                                 |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 11. Have all applicable zoning approvals been obtained?   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 12. Is there a municipal subdivision and land development ordinance?  |

# TUS A-15.b\_Attachment

3850-FM-BCW0362A 6/2016

## SECTION C. AGENCY REVIEW (continued)

Yes

No

13. Is this proposal consistent with the ordinance?

If no, describe the inconsistencies \_\_\_\_\_

14. Is this plan consistent with the municipal Official Sewage Facilities Plan?

If no, describe the inconsistencies \_\_\_\_\_

15. Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality?

If yes, describe \_\_\_\_\_

16. Has a waiver of the sewage facilities planning requirements been requested for the residual tract of this subdivision?

If yes, is the proposed waiver consistent with applicable ordinances?

If no, describe the inconsistencies \_\_\_\_\_

17. Name, title and signature of planning agency staff member completing this section:

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Name of Municipal Planning Agency: \_\_\_\_\_

Address \_\_\_\_\_

Telephone Number: \_\_\_\_\_

## SECTION D. ADDITIONAL COMMENTS (See Section D of instructions)

This component does not limit municipal planning agencies from making additional comments concerning the relevancy of the proposed plan to other plans or ordinances. If additional comments are needed, attach additional sheets.

The planning agency must complete this component within 60 days.

This component and any additional comments are to be returned to the applicant.



**REPORT FOR ACT 537  
FOR THE LOWER ALLEN  
TOWNSHIP AUTHORITY WWTP,  
FAIRVIEW TOWNSHIP SERVICE  
AREA ALTERNATIVES**

**August 2024**

Prepared for:

PA American Water  
852 Wesley Drive  
Mechanicsburg, PA 17055

On behalf of:

Burkentine Builders  
1454 Baltimore Street, Suite A  
Hanover, PA 17331

# TUS A-15.b\_Attachment

1. Table of Contents

2. Plan Summary

- A. Identify the proposed service area and major problems evaluated in the plan, (Reference - 25 Pa. Code §71.21(a)(7)(i)).

The proposed service area covered by this special study are the Green Lane Manor and Green Lane Farms developments in Fairview Township. In particular, several sections of 8" gravity pipe were identified as being undersized once a new pump station to serve the Sienna Development is placed online.

- B. Identify the alternative(s) chosen to solve the problems and serve the areas of need identified in the plan. Also, include any institutional arrangements necessary to implement the chosen alternative(s), (Reference - 25 Pa. Code §71.21(a)(7)(ii)).

The alternative selected was to replace 5 manhole sections of 8" pipe with 10" SDR-35 PVC pipe as identified in the map provided by PA American Water, the owner/operator of the existing Fairview Service Area to the Lower Allen Township Authority WWTP. Approximately 1,300 linear feet of pipe are to be replaced in these areas. PA American Water has entered into a developer's agreement to allow the developer to remove and replace the identified undersized pipe. Fairview Township sold their wastewater system to PA American Water in 2016. Therefore, Fairview Township's involvement in this replacement project is limited to approving the DEP planning for this Special Study as well as restoration of any Township streets that are affected by the replacement project. Minimal restoration of Township streets is anticipated as the lines are primarily located in off-street easements.

- C. Present the estimated cost of implementing the proposed alternative (including the user fees) and the proposed fund method to be used. (Reference - 25 Pa. Code §71.21(a)(7)(ii)).

1. The estimated cost of implementing the alternative including construction, legal, engineering and administrative costs is \$162,500 with the pipe construction being estimated at \$100 per linear foot and adding 25% for project related costs such as design, permits, legal and administration.
2. The user fees will not be impacted as the owner/operator of the collection system will not be contributing any money towards the project as the project is to be wholly funded by the developer of the Sienna development. Also, PA American Water's rates are established under the

# TUS A-15.b\_Attachment

purview of the PA Public Utilities Commission; and if PA American does not contribute any money to the project costs, the improvements will not affect their rates.

3. The funding of this replacement project will be fully covered by the developer and the user rates of the new and existing customers will not be adversely affected by the proposed project.

- D. Identify the municipal commitments necessary to implement the Plan. (Reference - 25 Pa. Code §71.21(a)(7)(iii)).

Fairview Township will need to advertise the proposed Special Study and place it on the Township's agenda. After a 30-day comment period after the meeting notice is published in a local newspaper, the Fairview Township Board of Supervisors would hold a public hearing; and if there are no objections to the proposed project, they can adopt the resolution to approve the Special Study and forward it to PA DEP. The Township will not have to make any commitments to make sure this work is done as Fairview Township does not own or operate the system. There are no motivating reasons for Fairview Township to have this pipe replacement work done. The developer is the primary party that has motivation to complete this work.

- E. Provide a schedule of implementation for the project that identifies the major milestones with dates necessary to accomplish the project to the point of operational status. (Reference - 25 Pa. Code §71.21(a)(7)(iv)).

The developer's schedule after approval of this Special Study is as follows:

Milestone	Time	Date
Submit Permit	7 Days	10/7/24
Receive Permit	60 Days	12/6/24
Start Construction	7 Days	12/13/24
Complete Construction	42 Days	1/24/25

3. Municipal Adoption, Original - Attached
4. Planning Commission Comments
  - a. See Fairview Township Commission Comments
  - b. See York County Planning Commission Comments

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5. Publication

A notarized copy of the Proof of Publication of the meeting is attached.

6. Comments and Responses

See attached.

7. Implementation Schedule

See page 7 of Special Study

8. Consistency Documentation

See pages 2 – 5 of Special Study

# TUS A-15.b\_Attachment

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF CLEAN WATER

## RESOLUTION FOR PLAN REVISION FOR SPECIAL STUDY AREA

RESOLUTION OF THE SUPERVISORS OF FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA (hereinafter “the municipality”).

**WHEREAS** Section 5 of the Act of January 24, 1966, P.L. 1535, No. 537, known as the Pennsylvania Sewage Facilities Act, as Amended, and the rules and Regulations of the Pennsylvania Department of Environmental Protection (DEP) adopted thereunder, Chapter 71 of Title 25 of the Pennsylvania Code, require the municipality to adopt an Official Sewage Facilities Plan providing for sewage services adequate to prevent contamination of waters of the Commonwealth and/or environmental health hazards from sewage wastes, and to revise said plan whenever it is necessary to determine whether a proposed method of sewage disposal for a new land development conforms to a comprehensive program of pollution control and water quality management, and

**WHEREAS** Fairview Township has proposed updating the Township’s Act 537 Plan for the Lower Allen Township Authority Wastewater Treatment Plant, Fairview Township Service Area, as described in the attached Special Study and proposes that identified undersized pipes in the Green Lane Manor and Green Lane Farms developments be increased in size to accommodate the flows from the new Sienna Development through its pump station and common force main with the Pin Oak (Buttonwood) Pumping Station. The Special Study area will continue to use public services for its sewer needs.

**WHEREAS** Fairview Township finds that the Fairview Service Area described in the attached Special Study conforms to applicable sewage related zoning and other sewage related municipal ordinances and plans, and to a comprehensive program of pollution control and water quality management.

**NOW, THEREFORE, BE IT RESOLVED** that the Supervisors of the Township of Fairview hereby adopt and submit to DEP for its approval as a revision to the “Official Sewage Facilities Plan” of the municipality the above referenced Special Study which is attached hereto.

I, \_\_\_\_\_, \_\_\_\_\_ of Fairview Township, York County, Township Board of Supervisors, hereby certify that the foregoing is a true copy of the Township Resolution No. \_\_\_\_\_ adopted, \_\_\_\_\_, 2024.

Municipal Address:

599 Lewisberry Road

New Cumberland, PA 17070

Phone (717) 901-5200

# TUS A-15.b\_Attachment

## PUBLIC NOTIFICATION

“Sienna” is a proposed 694-unit, mixed dwelling residential subdivision and land development project to be situated on 135 +/- acres located west of Spangler’s Mill Road and north of Limekiln Road in Fairview Township, York County, PA. As a result of the flows generated by the new development, it is necessary to upsize 5 manhole sections of sewer main in the Green Lane Manor and Green Lane Farm developments in Fairview Township to accommodate the additional flows. DEP Planning is requiring the developer and owner to address this revision to the Township’s Act 537 Official Wastewater Facility Plan. This project requires public notification because it increases the collection capacity in the Fairview Township Service Area through the Green Lane Manor and Green Lane Farms developments tributary to the Lower Allen Township Authority Wastewater Treatment Plant. The Special Study can be seen by appointment only at the Fairview Township municipal office at 599 Lewisberry Road, New Cumberland, PA 17070. Any comments must be submitted in writing within 30 days of this notice, to Stephen M. Waller, Codes Administration Director, at the Fairview Township office address listed above.

# TUS A-15.b\_Attachment

FAIRVIEW TOWNSHIP, YORK COUNTY, PA  
ACT 537 WASTEWATER FACILITIES SPECIAL STUDY  
FOR THE LOWER ALLEN TOWNSHIP AUTHORITY WWTP  
FAIRVIEW TOWNSHIP SERVICE AREA  
AUGUST 2024

## **INTRODUCTION/BACKGROUND**

JHA Companies, Inc., formerly Glace Associates, Inc. was authorized to prepare a Special Study to serve as an update to Fairview Township's Official Wastewater Facilities Plan (known as an Act 537 Plan) for an area identified as the Fairview Service Area of the Lower Allen Township Authority WWTP. See attached location map and Special Study Area Map (Attachments 1 and 2, respectively) for the collection system upgrades.

On May 8, 2024, DEP approved the Part 2 Water Quality Management permit. Two special conditions of that Permit (Items 28 and 29) require that the permittee provide planning and a subsequent WQMP Part 2 amendment to the existing Green Lane Manor and Green Lane Farms gravity collection systems in the Fairview Service Area of the Lower Allen Township Authority WWTP. See Attachment 3. Taking this requirement into account, this Special Study addresses the need for the developer and permittee, PA American Water, to evaluate and upgrade several sections of the existing gravity collection system in the Fairview Township Service Area.

During the evaluation of the WQMP Part 2 application for the Sienna Development, certain sections of gravity main were determined to be undersized. This was due to the requirement that the jointly shared force from the new Sienna Pump Station and the existing Buttonwood (Pin Oak) pump station had to be designed to operate at the same time rather than operate independently through an integrated automatic control system.

## **DISCUSSION**

The areas with future undersized pipes were identified in the Sienna pump station and collection system application. A plan of the Fairview Service area that receives the wastewater discharge from the Sienna and Buttonwood Pump Station common force main is shown in Attachment 2.

The existing sewer capacity analysis with the new flows depicts the manhole sections that need to be upgraded to a larger size pipe. This is shown in Attachments 4.

The proposed sewer capacity analysis which includes the new flows depicts that the proposed larger diameter PVC sewer mains are sufficiently sized to accommodate the new flows, thus not causing any surcharges or overflows in the PA American Water collection system in Fairview Township. See Attachment 5.

# TUS A-15.b\_Attachment

## Alternatives To Provide New Or Improved Wastewater Collection Facilities

There are a limited number of alternatives to convey the wastewater from the Sienna Pump Station to the Lower Allen Township Authority (LATA) interceptor. Most of the alternatives were eliminated in the planning options for the Sienna Development. This Special Study concentrates on how to most effectively upgrade the collection system in the identified portions of the Green Lane Manor and Green Lane developments in Fairview Township, York County to accommodate the increase in wastewater flows as a result of the addition of a pump station and force main that will service the Sienna Development. The flows from this Fairview Township Lot 7A service area does cross the Yellow Breeches into Cumberland County and ties into the LATA interceptor that flows by gravity into the LATA WWTP located in Fairview Township, York County.

### Summary of Identified Alternatives:

The following alternatives reviewed were as follows:

Alternative 1 – Replace 5 undersized manhole sections in Green Lane Manor and Green Lane Farm with larger 10” SDR-35 PVC gravity pipe as identified on the plans and spreadsheets in the Special Study. This was the selected alternative.

Alternative 2 – Extend the common force main from its current terminus in Limekiln Road to a manhole downstream of the last section of the identified undersized pipe in Green Lane Manor.

Alternative 3 – Reduce the number of units in the Sienna Development to a number which would be under the flow limit requiring the upsizing of the identified undersized pipe sections.

Alternative 4 – No action.

Other alternatives such as constructing a new package plant with discharge to the Yellow Breeches Creek, pumping to the Fairview North WWTP collection system and pumping into the Buttonwood (Pin Oak) pump station and upgrading that pump station were essentially eliminated in the planning process for the Sienna Development.

There are a limited number of alternatives to convey the wastewater from the Sienna Development through a new Pump Station to the Lower Allen Township Authority interceptor.

#### *A. Individual Sewage Disposal Systems (On-Lot Systems)*

The use of individual on-lot systems is not technically feasible for the proposed development and is not being considered as an alternative.

Fairview Township currently has an On-Lot Sewage Management Ordinance to ensure continued and long-term sewage disposal for parcels outside the Special Study Area. The Township has had mandatory inspection and pumping of individual OLDS treatment tanks for many years.

# TUS A-15.b\_Attachment

For those properties currently served by OLDS, OLDS will remain the selected technical alternative until public sewer is provided to adjacent properties.

## *B. Sewage Management Plan*

Sewage facilities planning should be concerned with establishing the legal, administrative and financial mechanisms for the long-term operation and maintenance for on-lot sewage disposal systems or privately-owned treatment facilities. Since individual on-lot disposal systems will not be evaluated for the Special Study Planning Area, the long-term operation and maintenance of these systems does not need to be discussed any further in this Special Study.

## *C. No-Action*

The No-Action alternative would require a reduction in the number of new units in the Sienna Development, which would necessitate new planning and a Part 2 WQMP. If the number of units were not reduced, the Sienna Development would not be able to proceed as designed.

## *Evaluation of Technical Alternatives*

### *A. Consistency Analysis*

The alternative to upgrade portions of the wastewater collection system was evaluated in relation to the goals and objectives of planning, environmental, and natural resource laws, and policies of the Commonwealth of Pennsylvania. The following sections demonstrate the consistency of the selected alternative with the required laws and policies listed in the approved Fairview Township Act 537 Plan Content and Environmental Checklist.

#### 1. Comprehensive Water Quality Management Plan

Comprehensive Water Quality Management Plan (COWAMP) have been developed under Sections 4 and 5 of the Clean Streams Law and 2018 of the Clean Water Act for all areas of Pennsylvania. These plans are a viable planning resource which can serve as a basis for the incorporation of the Commonwealth's water quality goals and objectives in Act 537 Plans.

Sections 4 and 5 of the Clean Streams Law require that consideration be given to water quality management and pollution control in a watershed as a whole. Section 208 of the Clean Water Act calls for the development of wastewater plans that identify the facilities necessary to meet anticipated wastewater treatment needs for the future.

The Susquehanna River drains the Special Study Planning Area. The Yellow Breeches Creek runs near the Sienna Development and the LATA interceptor crosses that waterway twice. However, the Yellow Breeches Creek is a much higher quality waterway than this segment of the Susquehanna River. Therefore, the LATA WWTP discharge line flows directly into the Susquehanna River. This avoids more stringent treatment of the wastewater discharge.

# TUS A-15.b\_Attachment

This Special Study is consistent with the Clean Streams Law since it addresses the ability of the new flows from the Planning area to reliably meet future effluent limitations. Alternative 1 would be consistent with the Clean Streams Law in that sewage from the Special Study Planning Area would be treated at the NPDES-permitted LATA WWTP. Other alternatives are not viable for long term consistency with the Clean Streams Law and potential future NPDES-permitted effluent limits to the Yellow Breeches Creek.

2. Municipal Wasteload Management Plans  
According to the Lower Allen Township Authority's (LATA) 2023 Chapter 94 Municipal Wasteload Management Report, the wastewater treatment facility is not hydraulically or organically overloaded and is not anticipated to be overloaded in the next five years. The collection and conveyance system has few issues and generally does not experience sanitary sewer overflows. The alternative selected in this Special Study is consistent with the most recent Chapter 94 Municipal Wasteload Management Annual Report for LATA in that the additional flows generated by this alternative (92,050 GPD) would not cause an overload condition at the 7.5 MGD facility.
3. Title II of the Clean Water Act  
Title II of the Clean Water Act requires the development and implementation of wastewater treatment management plans and practices which provide the application of the best practical waste treatment technology before discharging into receiving water. The alternative is consistent with this requirement as the existing LATA WWTP consists of modern wastewater treatment technology processes.
4. Comprehensive Plans  
Applicable sections of comprehensive plans developed under the Pennsylvania Municipalities Planning Code were described previously in this Special Study. As mentioned previously, Alternative 1 will require the replacement of the undersized sections of sewer main identified in this Special Study in areas of Fairview Township that are already served by a public sewer system owned and operated by PAWC with conveyance and treatment provided by LATA.
5. Antidegradation Requirements  
Chapter 93 and 95 under Pennsylvania's Clean Stream Law classifies all surface waters according to uses to be protected and establishes water quality criteria, which need to be maintained in the surface waters. The Susquehanna River in this segment has a Chapter 93 designation use of WWF-MF (Warm Water Fishes, Migratory Fishes).  
Alternative 1 is consistent with these requirements as Alternative 1 does not propose a new discharge to any waterway.

Chapter 95 identifies standards for wastewater treatment requirements that are implemented through the Clean Streams Law and the National Pollutant

# TUS A-15.b\_Attachment

Discharge Elimination System (NPDES) permitting process. Alternative 1 will be consistent with the existing standards imposed on the LATA WWTP.

Chapter 102 requires a Soil Erosion and Sediment Pollution Control Plan to be prepared and followed for any construction activity impacting greater than 5,000 square feet. An NPDES Permit for Stormwater Discharges Associated with Construction Activities is required for any disturbances greater than one acre. Alternative 1 will not require a Chapter 102 NPDESA Permit to be submitted and issued. The disturbed area will be less than one acre (0.8 acres max). Prior to when construction begins for the selected alternative, an erosion and sedimentation control plan will be approved by the appropriate agencies.

Chapter 105 requires a permit for any crossing of waters of the Commonwealth. The replacement of the identified sewer mains will not cross at any streams nor any identified wetland per the National Wetlands Inventory.

6. State Water Plans

The Pennsylvania Water Resources Planning Act (Act 220 of 2002) requires water plans to be prepared for all major watersheds within Pennsylvania. The Planning Area is within the Yellow Breeches Creek subbasin of the Susquehanna River Basin. This segment of the Yellow Breeches Creek's water quality criteria must be considered for any alternative. Alternative 1 is consistent with the Water Plan for Yellow Breeches Creek as the effluent discharge from the LATA WWTP is to the Susquehanna River with a WWF, MF designation.

7. Pennsylvania Prime Agricultural Land Policy

The Prime Agricultural Land Policy was established to protect prime agricultural land from irreversible conversions to uses that result in the loss of the land as an environmental or essential food source. All of the Planning Area is within a residential development and, therefore, is not classified as prime farm land. The areas where the sewer main replacement is being undertaken have already been disturbed when the original sewer mains were installed.

All of the construction will take place through local roads and easements, through previously disturbed soils; and the proposed sewer main replacement project is therefore consistent with the PA Prime Agricultural Land Policy.

8. County Stormwater Management Plans

The York County Board of Commissioners has adopted an integrated Water Resources Plan for York County (Act 247 and 167). The Plan provides a Model Stormwater Ordinance and addresses stormwater management for all new development. Fairview Township adopted their own Stormwater Management Ordinance using the York County model. Stormwater Management will be a component of the selected alternative. Alternative 1 will result in no increase in impervious area. The restoration will be a surface trench restoration with no Best Management Practices required such as infiltration trenches or basins.

# TUS A-15.b\_Attachment

9. Wetland Protection

Mapped wetlands as identified by the National Wetlands Inventory are shown on Attachment 6 along with delineated floodways and floodplains in Attachment 7.

Alternative 1 does not include any wetland or stream crossings.

10. Protection of Rare, Endangered or Threatened Plant and Animal Species

The completed PNDI Environmental Review Receipt is included in Attachment 8. No potential impacts were identified.

11. Historical and Archeological Resource Protection

A cultural desktop review has been completed and no areas were identified as potential concerns. A copy of the cultural desktop review is included in Attachment 9.

*B. Resolution Of Inconsistencies*

Based on the above analysis, there are no identified inconsistencies between the selected wastewater collection alternative (Alternative 1) and the policies of the Commonwealth of Pennsylvania.

*C. Applicable Water Quality Standards*

The selected alternative will be designed to ensure that water quality standards and effluent limitations will be met. Alternative 1 will comply with legislative or legal requirements set forth by the Commonwealth of Pennsylvania and will require a WQMP, Part 2 environmental permit and has minimal potential for inadvertent impacts to soil erosion, waterways, threatened or endangered species, and stormwater associated with construction activities.

*D. Cost Estimates*

The opinion of probable project costs (OPPC) for Alternative 1 is included in Attachment 10.

Monthly user rates will not be affected as all the construction and project related costs will be paid for by the Developer of the Sienna Development. Therefore, no O&M costs or present worth analysis were evaluated on this or the other potential alternatives.

*E. Funding Methods*

An initial preliminary cost estimate has been provided for Alternative 1 above. Funding will be provided by the Developer of the Sienna Development. They will contract directly with the Contractors.

# TUS A-15.b\_Attachment

## *F. Immediate or Phased Implementation*

Within 2 weeks of the approval of this 537 Special Study, PAWC will submit engineering design and permit application for the replacement of the undersized pipes identified. As stated in Section D and E (above), initial cost estimates have been pulled together for the planning level costs of the installation. The funding needs of the selected alternative will be evaluated during the design process to implement replacement of a portion of the sewer mains. A preliminary opinion of probable cost has been included in Attachment 10 of this report.

## *G. Administrative Organizations and Legal Authority*

The Fairview Township Board of Supervisors will be the administrative organization to ensure implementation of the planning portion of the public sewer system, and continued administration of its On-lot Sewage Disposal Management Program.

PA American Water will be the permittee and future owner of the upgraded sewer main installed by the contractor at the Developer's full cost.

## *Institutional Evaluation*

### *A. Existing Wastewater Treatment Authority*

PA American Water (PAWC) currently operates water and wastewater facilities in Fairview Township and has responsibility to ensure the sewage disposal needs of the municipality are met. The PAWC is in good financial standing and has available staff and administrative resources to ensure implementation of the public sewer system. Fairview Township will continue administration of its On-lot Sewage Disposal Management Program in the rest of the Township. PAWC has legal authority to implement wastewater planning recommendations, implement Township-wide activities, set user fees, take purchasing actions, take enforcement actions against ordinance violators, negotiate agreements with other parties, and raise capital for construction and O&M of any facilities.

### *B. Institutional Alternatives*

The proposed technical alternative selected for implementation is Alternative 1: Public Sewer. PAWC has the full authority to implement this alternative. While the Township does not need to establish a new municipal department or municipal authority, the Township will continue to recognize that PAWC owns, operates and maintains all public sewer systems in Fairview Township.

### *C. Administrative and Legal Activities to Be Completed*

The proposed technical alternative selected for implementation is Alternative 1. The actions required for PAWC to implement this alternative are as follows, along with the estimated timeframe needed:

# TUS A-15.b\_Attachment

<b>Implementation Schedule</b>	
<b>Milestones</b>	<b>Timeframe</b>
Start Design and Prepare Permit Application	Survey already underway
Submission of Applications for Water Quality Management Permit (Part II) authorizing construction of sanitary sewer extension	7 days following PA DEP approval of this Special Study
Issuance of WQMP Part II	60 days after submission of Application
Complete Construction replacement of undersized pipe sections	60 days after Issuance of WQM Part II Permit Application

## Implementation Schedule And Justification For Selected Alternatives

### *A. Selected Alternatives Which Best Meet Wastewater Treatment Needs*

The selected alternative is to upgrade existing public sewers in the Special Study area to address the additional sewage flows generated by the Sienna Development.

## **CONCLUSION**

Based on the evaluation of potential alternatives, Alternative 1 is by far the least disruptive and most cost-effective means of addressing the undersized pipe segments identified on the map of the Special Study. All other alternatives would involve more infrastructure upgrades and cost more. Since PA American Water has easements for the existing pipe to be replaced, it makes Alternative 1 the optimum option to proceed. There should also be minimal opposition to this alternate as any disturbance will be temporary and construction completed in less than 45 days.

### Attachments

Attachment 1 –Location Map

Attachment 2 – Special Study Area Map

Attachment 3 – Special Conditions from Sienna Part 2 WQMP Permit

Attachment 4 – Reserve Capacity Analysis – Existing Conditions

Attachment 5 - Reserve Capacity Analysis – Post Conditions

Attachment 6 - National Wetlands Inventory

Attachment 7 – Flood Plain Map

Attachment 8 – PNDI

Attachment 9 - Historical and Archeological Resource Protection

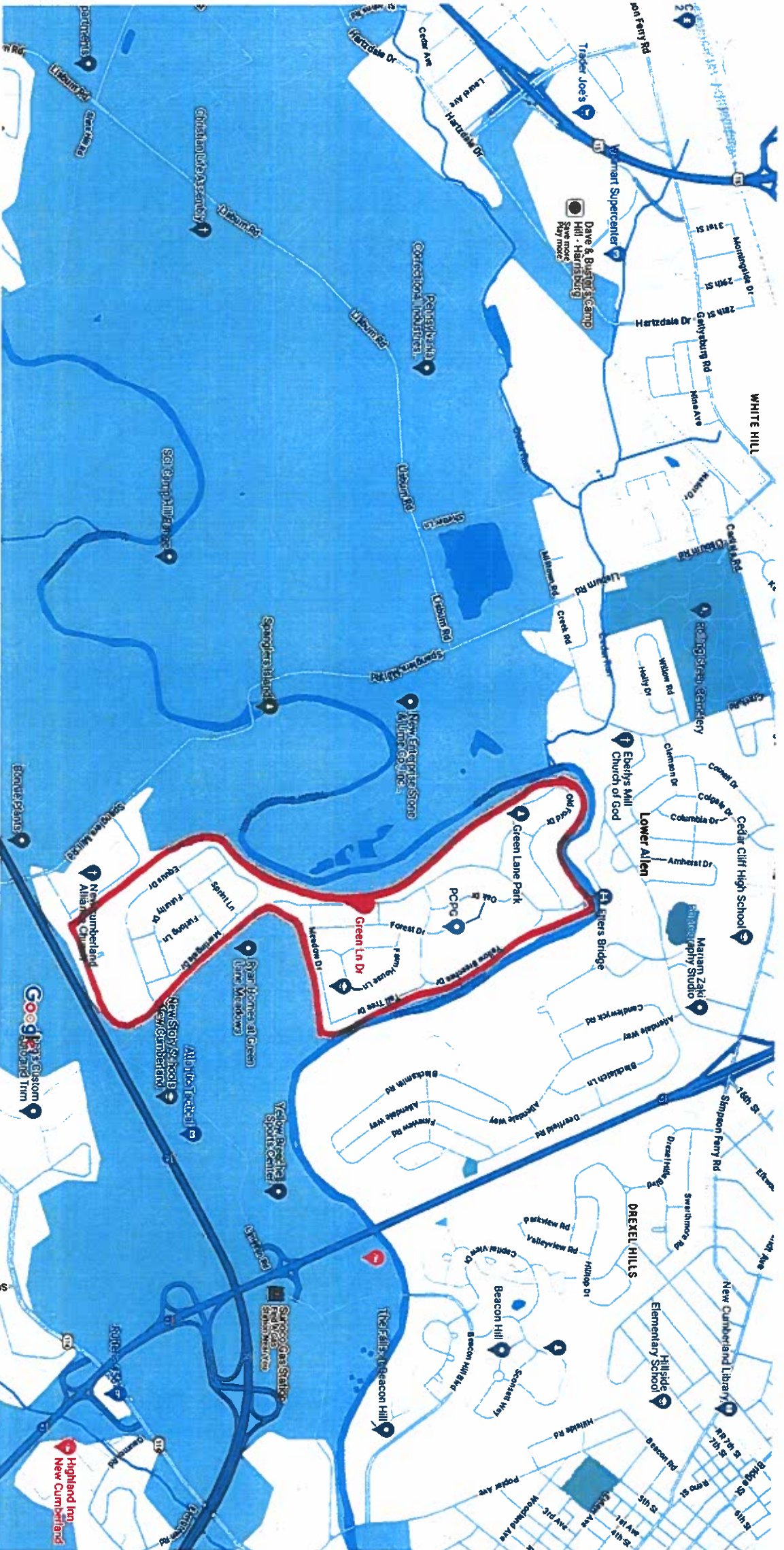
Attachment 10 - Opinion of Probable Project Costs



Green Ln Dr

Location Plan of Special Study Area of Fairview Township Service Area Tributary to the Lower Allen Township Authority Wastewater Treatment Plant

# Attachment I



Special Study Area

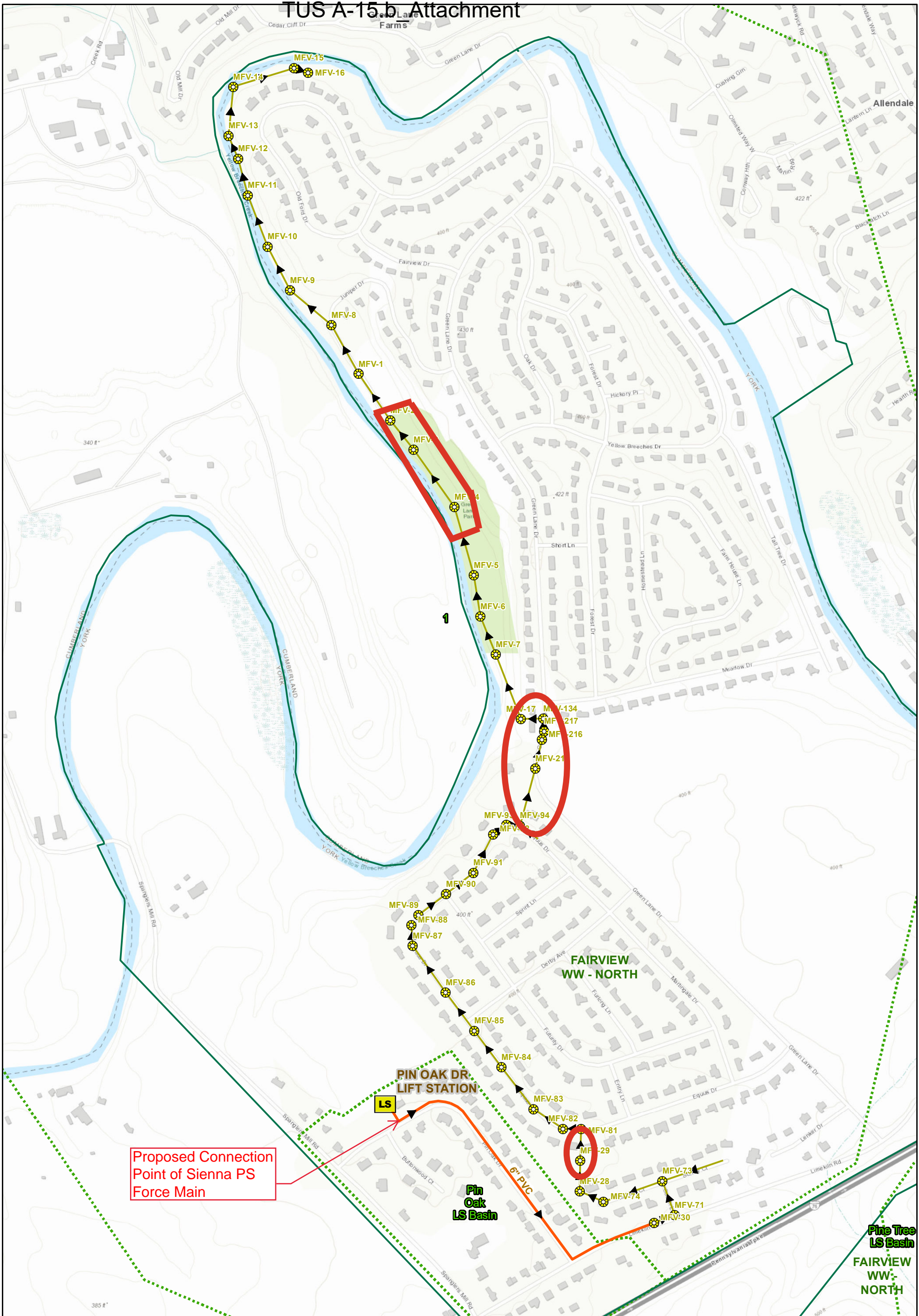
Map data ©2024 Google

1000 ft

Location Map



# ATTACHMENT 2 TUS A-15.b Attachment

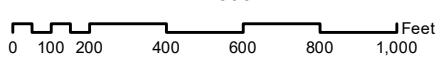


Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet - Projection: Lambert Conformal Conic

Date: 1/4/2023



1 inch = 500 feet



**Legend**

- Manhole
- ForceMain
- Gravity Main
- Sewer Service Area
- Basin

TO BE USED FOR REFERENCE ONLY  
Although every effort has been made to ensure the accuracy of the information, errors and conditions originating from physical sources to develop the information may be reflected in the data supplied.

**Sewer Flow Path  
Sienna Pumping Station  
Fairview North WW System**

4/18/24

Drawn By: gruber      Checked By: JC

See attached spreadsheets  
**PIPE SECTION TO BE REPLACED**

# ATTACHMENT 3 TUS A-15.b Attachment

3850-PM-BCW0015d 3/2016  
Permit

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF CLEAN WATER

PERMIT NO. 6723407

AMENDMENT NO. \_\_\_\_\_

APS ID. 1086569

AUTH. ID. 1455735



## WATER QUALITY MANAGEMENT PERMIT

<p>A. PERMITTEE (Name and Address): <b>PA American Water Co.</b> <b>852 Wesley Drive</b> <b>Mechanicsburg, PA 17055-4436</b></p>	<p>CLIENT ID#: <b>87712</b></p>	<p>B. PROJECT/FACILITY (Name): <b>Sienna Pumping Station</b></p>
<p>C. LOCATION (Municipality, County): <b>Fairview Township, York County</b></p>		<p>SITE ID#: <b>864166</b></p>
<p>D. This permit approves the construction and modification of sewage facilities consisting of:</p> <ul style="list-style-type: none"> <li>• A collection system to serve the proposed Sienna Development</li> <li>• Construction of the Sienna Pumping Station (SPS) and forcemain as described in the application. The SPS is proposed to be rated for 210 gpm at 132 ft TDH when it is the only energized pumping station tributary to the shared forcemain and 155 gpm at 134 ft. TDH when there is simultaneous energizing of both the SPS and Buttonwood Pumping Station (BPS). The existing BPS will continue to be rated for 210 gpm at 77 ft TDH when it is the only energized pumping station tributary to the shared forcemain and 155 gpm at 82 ft. TDH when there is simultaneous energizing of both the BPS and SPS.</li> <li>• Modification of the existing forcemain for the BPS to convert the facility into joint use with the SPS and forcemain.</li> </ul>		
<p>Pump Stations: <b>Sienna PS</b> Design Capacity: <u>Variable - See Fact Sheet</u></p>	<p>Manure Storage: Volume: <b>N/A</b> MG Freeboard: <b>N/A</b> inches</p>	<p>Sewage Treatment Facility: Annual Average Flow: <b>N/A</b> MGD Design Hydraulic Capacity: <b>N/A</b> MGD Design Organic Capacity: <b>N/A</b> lb/day</p>
<p>E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING:</p> <ol style="list-style-type: none"> <li>1. <b>New Permits:</b> All construction, operations and procedures shall be in accordance with the Water Quality Management Permit application dated <b>April 3, 2023</b>, its supporting documentation and addendums dated <b>April 3, 2023; September 15, 2023; January 3, 2024; March 11, 2024 and April 23, 2024</b>, which are hereby made a part of this permit.</li> <li>2. Permit Conditions Relating to Sewerage are attached and made part of this permit.</li> <li>3. Special Conditions <b>28 and 29</b> are attached and made part of this permit.</li> </ol>		
<p>F. THE AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING FURTHER QUALIFICATIONS:</p> <ol style="list-style-type: none"> <li>1. If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply.</li> <li>2. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit.</li> <li>3. This permit is issued pursuant to the Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. §691.1 <i>et seq.</i> Issuance of this permit shall not relieve the permittee of any responsibility under any other law.</li> </ol>		
<p>PERMIT ISSUED:  <u>May 8, 2024</u></p>	<p>BY: <u>Maria D. Bebenek</u>  Maria D. Bebenek, P.E. TITLE: <b>Clean Water Program Manager Southcentral Regional Office</b></p>	

- 13. The facilities shall be constructed under the supervision of a Pennsylvania licensed Professional Engineer in accordance with the approved reports, plans and specifications.
- 14. A Pennsylvania licensed Professional Engineer shall certify that construction of the permitted facilities was completed in accordance with the application and design plans submitted to DEP, using the "Post Construction Certification" form (3800-PM-WSFR0179a). It is the permittee's responsibility to ensure that a Professional Engineer is on-site to provide the necessary oversight and/or inspections to certify the facilities. The certification must be submitted to DEP before the facility is placed in operation. As-built drawings, photographs (if available) and a description of all deviations from the application and design plans must be submitted to DEP within 30 days of certification.
- 15. Manhole inverts shall be formed to facilitate the flow of the sewage and to prevent the stranding of sewage solids. The manhole structure shall be built to prevent undue infiltration, entrance of street wash or grit and provide safe access to facilitate manhole maintenance activities.
- 16. The local Waterways Conservation Officer of the Pennsylvania Fish and Boat Commission (PFBC) shall be notified when the construction of any stream crossing and/or outfall is started and completed. A written permit must be secured from the PFBC if the use of explosives in any waterways is required and the permittee shall notify the local Waterways Conservation Officer when explosives are to be used.

**Operation and Maintenance**

- 17. The permittee shall maintain records of "as-built" plans showing all the treatment facilities as actually constructed together with facility operation and maintenance (O&M) manuals and any other relevant information that may be required. Upon request, the "as-built" plans and O&M manuals shall be filed with DEP.
- 18. The sewers shall have adequate foundation support as soil conditions require. Trenches shall be back-filled to ensure that sewers will have proper structural stability, with minimum settling and adequate protection against breakage. Concrete used in connection with these sewers shall be protected from damage by water, freezing, drying or other harmful conditions until cured.
- 19. Stormwater from roofs, foundation drains, basement drains or other sources shall not be admitted directly to the sanitary sewers.
- 20. The approved sewers shall be maintained in good condition, kept free of deposits by flushing or other cleaning methods and repaired when necessary.
- 21. The sewerage facilities shall be properly operated and maintained to perform as designed.
- 22. The attention of the permittee is called to the highly explosive nature of certain gases generated by the digestion of sewage solids when these gases are mixed in proper proportions with air and to the highly toxic character of certain gases arising from such digestion or from sewage in poorly ventilated compartments or sewers. Therefore, at all places throughout the sewerage facilities where hazard of fire, explosion or danger from toxic gases may occur, the permittee shall post conspicuous permanent and legible warnings. The permittee shall instruct all employees concerning the aforesaid hazards, first aid and emergency methods of meeting such hazards and shall make all necessary equipment and material accessible.
- 23. An operator certified in accordance with the Water and Wastewater Systems Operator Certification Act of February 21, 2002, 63 P.S. §§1001, *et seq.* shall operate the sewage treatment plant.
- 24. The permittee shall properly control any industrial waste discharged into its sewerage system by regulating the rate and quality of such discharge, requiring necessary pretreatment and excluding industrial waste, if necessary, to protect the integrity or operation of the permittee's sewerage system.
- 25. There shall be no physical connection between a public water supply system and a sewer or appurtenance to it which would permit the passage of any sewage or polluted water into the potable water supply. No water pipe shall pass through or come in contact with any part of a sewer manhole.
- 26. All connections to the approved sanitary sewers must be in accordance with the official Act 537 Plan and, if applicable, a corrective action plan as contained in the approved Title 25 Pa. Code Chapter 94 Municipal Wasteload Management Annual Report.
- 27. Collected screenings, slurries, sludge and other solids shall be handled and disposed of in compliance with Title 25 Pa. Code Chapters 271, 273, 275, 283 and 285 (related to permits and requirements for land filling, land application, incineration and storage of sewage sludge), Federal Regulations 40 CFR 257 and the Federal Clean Water Act and its amendments.

- 13. The facilities shall be constructed under the supervision of a Pennsylvania licensed Professional Engineer in accordance with the approved reports, plans and specifications.
- 14. A Pennsylvania licensed Professional Engineer shall certify that construction of the permitted facilities was completed in accordance with the application and design plans submitted to DEP, using the "Post Construction Certification" form (3800-PM-WSFR0179a). It is the permittee's responsibility to ensure that a Professional Engineer is on-site to provide the necessary oversight and/or inspections to certify the facilities. The certification must be submitted to DEP before the facility is placed in operation. As-built drawings, photographs (if available) and a description of all deviations from the application and design plans must be submitted to DEP within 30 days of certification.
- 15. Manhole inverts shall be formed to facilitate the flow of the sewage and to prevent the stranding of sewage solids. The manhole structure shall be built to prevent undue infiltration, entrance of street wash or grit and provide safe access to facilitate manhole maintenance activities.
- 16. The local Waterways Conservation Officer of the Pennsylvania Fish and Boat Commission (PFBC) shall be notified when the construction of any stream crossing and/or outfall is started and completed. A written permit must be secured from the PFBC if the use of explosives in any waterways is required and the permittee shall notify the local Waterways Conservation Officer when explosives are to be used.

### Operation and Maintenance

- 17. The permittee shall maintain records of "as-built" plans showing all the treatment facilities as actually constructed together with facility operation and maintenance (O&M) manuals and any other relevant information that may be required. Upon request, the "as-built" plans and O&M manuals shall be filed with DEP.
- 18. The sewers shall have adequate foundation support as soil conditions require. Trenches shall be back-filled to ensure that sewers will have proper structural stability, with minimum settling and adequate protection against breakage. Concrete used in connection with these sewers shall be protected from damage by water, freezing, drying or other harmful conditions until cured.
- 19. Stormwater from roofs, foundation drains, basement drains or other sources shall not be admitted directly to the sanitary sewers.
- 20. The approved sewers shall be maintained in good condition, kept free of deposits by flushing or other cleaning methods and repaired when necessary.
- 21. The sewerage facilities shall be properly operated and maintained to perform as designed.
- 22. The attention of the permittee is called to the highly explosive nature of certain gases generated by the digestion of sewage solids when these gases are mixed in proper proportions with air and to the highly toxic character of certain gases arising from such digestion or from sewage in poorly ventilated compartments or sewers. Therefore, at all places throughout the sewerage facilities where hazard of fire, explosion or danger from toxic gases may occur, the permittee shall post conspicuous permanent and legible warnings. The permittee shall instruct all employees concerning the aforesaid hazards, first aid and emergency methods of meeting such hazards and shall make all necessary equipment and material accessible.
- 23. An operator certified in accordance with the Water and Wastewater Systems Operator Certification Act of February 21, 2002, 63 P.S. §§1001, *et seq.* shall operate the sewage treatment plant.
- 24. The permittee shall properly control any industrial waste discharged into its sewerage system by regulating the rate and quality of such discharge, requiring necessary pretreatment and excluding industrial waste, if necessary, to protect the integrity or operation of the permittee's sewerage system.
- 25. There shall be no physical connection between a public water supply system and a sewer or appurtenance to it which would permit the passage of any sewage or polluted water into the potable water supply. No water pipe shall pass through or come in contact with any part of a sewer manhole.
- 26. All connections to the approved sanitary sewers must be in accordance with the official Act 537 Plan and, if applicable, a corrective action plan as contained in the approved Title 25 Pa. Code Chapter 94 Municipal Wasteload Management Annual Report.
- 27. Collected screenings, slurries, sludge and other solids shall be handled and disposed of in compliance with Title 25 Pa. Code Chapters 271, 273, 275, 283 and 285 (related to permits and requirements for land filling, land application, incineration and storage of sewage sludge), Federal Regulations 40 CFR 257 and the Federal Clean Water Act and its amendments.

ATTACHMENT 4

SIENNA - RESERVE CAPACITY ANALYSIS - UNDESIGNED MANHOLE SECTIONS AFTER THE IN OF SIENNA PUMP STATION (EXTREME CONDITIONS)

REVISED DECEMBER 2015

ASSESSMENT  
Permit/IDU 23  
Existing gPCD 91

Manhole	GDS	Depth	Invert	Length (ft)	Size (in)	Material	Manhole to Area Length	Weir	Pipes	Flow (MGD)	Q (cfs)	Q (MGD)	V (ft/s)	EOL	Population	ASD	ASD	ASD	Peak	Capacity
20	443.79	4.10	438.49	129	8	PVC	0.010	0.3489	2.0933	0.1667	0.0067	1.74	1.653	9.3	719	1.681	409	1	2.21	1.112
21	441.92	10.20	431.12	201	8	PVC	0.010	0.3489	2.0933	0.1667	0.0150	1.91	1.855	5.5	716	1.724	423	6	2.27	5.38
22	430.18	7.20	422.98	555	8	PVC	0.010	0.3489	2.0933	0.1667	0.0177	1.93	1.852	8.7	715	1.762	327	6	2.13	1.079
23	424.06	6.80	417.16	151	8	PVC	0.010	0.3489	2.0933	0.1667	0.0194	1.91	1.833	6.3	714	1.764	204	0	2.11	6.50
24	418.75	7.10	411.65	124	8	PVC	0.010	0.3489	2.0933	0.1667	0.0200	1.71	1.619	2.0	713	1.782	204	0	2.11	6.50
25	413.44	5.40	408.04	282	8	PVC	0.010	0.3489	2.0933	0.1667	0.0209	1.57	1.513	4.5	712	1.799	252	4	2.12	3.66
26	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
27	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
28	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
29	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
30	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
31	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
32	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
33	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
34	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
35	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
36	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
37	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
38	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
39	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
40	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
41	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
42	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
43	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
44	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
45	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
46	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
47	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
48	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
49	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
50	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
51	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
52	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
53	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
54	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
55	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
56	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
57	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
58	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
59	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
60	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
61	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
62	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
63	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
64	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
65	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
66	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
67	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
68	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
69	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
70	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
71	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
72	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
73	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
74	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
75	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
76	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
77	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
78	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
79	411.91	7.00	404.91	107	8	PVC	0.010	0.3489	2.0933	0.1667	0.0214	1.57	1.513	4.5	711	1.799	252	4	2.12	3.66
80	411.91	7.00	404.91	107	8	PVC	0.010	0.3489												

ATTACHMENT 5

SIENNA - RESERVE CAPACITY ANALYSIS - MANHOLE SECTIONS TO BE REPLACED

POST CONDITIONS

ASSUMPTIONS  
 Penetration: 2.75  
 Calling GPCD: 44

REVISED DECEMBER 2011

SEWER CAPACITY ANALYSIS - PPE FINAL CONDITION

Manhole	SHA	Depth	Invert	Length (ft)	Size (in)	Material	Manhole n	Area (sq ft)	Wet. Area (sq ft)	Wet. Perim. (ft)	Hyd. Rad. (ft)	Stagn. (ft)	Q (cfs)	Q (gpm)	V (ft/s)	EDU	Population Served	ABR Served	ABR (gpm)	ABR (ft)	Peak Security	Reserve Capacity
20	443 19	4.00	418.89	179	4	PVC	0.010	0.1489	2.0933	0.1667	0.0402	3.16	1.318	31.1	34	1481	1481	409	1	30.1	1.11	
71	441.92	10.00	411.12	202	4	PVC	0.010	0.1489	2.0933	0.1667	0.0402	3.16	1.451	34.8	76	1565	1481	409	1	30.1	1.11	
73	430.38	2.00	422.34	355	4	PVC	0.010	0.1489	2.0933	0.1667	0.0150	1.91	865	55	264	1724	1473	6	17	5.28	1.079	
74	428.06	6.00	417.76	151	4	PVC	0.010	0.1489	2.0933	0.1667	0.0372	3.01	1.367	8.7	783	1782	1473	6	17	5.28	1.079	
76	418.75	7.10	411.65	174	4	PVC	0.010	0.1489	2.0933	0.1667	0.0194	2.19	963	6.3	784	1784	204	0	153	6.50	0.50	
28	413.88	5.60	408.28	182	10	PVC	0.011	0.4451	2.6167	0.2083	0.0090	1.57	701	4.5	783	1782	204	0	153	249	0.48	
81	414.91	7.00	407.91	107	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
82	415.39	6.10	406.90	202	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
83	415.39	9.40	405.99	401	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
84	412.89	8.10	404.79	260	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
85	398.27	8.40	389.87	275	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
86	390.4	8.40	382.00	324	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
87	390.63	9.80	380.83	119	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
88	387.07	6.70	380.37	69	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
89	387.67	7.90	379.77	198	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
90	389.29	10.30	378.99	197	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
91	383.22	8.20	375.02	244	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
92	378.07	6.20	371.87	91	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
93	378.18	6.80	371.38	78	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
94	378.17	8.10	371.07	342	10	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
215	381.17	11.06	370.11	164	10	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
216	372.45	4.20	369.65	50	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
217	373.6	4.20	369.40	69	8	PVC	0.010	0.1489	2.0933	0.1667	0.0099	1.57	701	4.5	783	1782	204	0	153	249	0.48	
114	372.45	6.50	368.35	129	8	PVC	0.011	0.3489	2.0933	0.1667	0.0126	1.60	270	4.6	930	2183	6.111	11	199	1.673	1.21	
117	373.6	6.50	368.35	139	8	PVC	0.011	0.3489	2.0933	0.1667	0.0126	1.60	270	4.6	930	2183	6.111	11	199	1.673	1.21	
17	373.6	6.50	368.35	139	8	PVC	0.011	0.3489	2.0933	0.1667	0.0126	1.60	270	4.6	930	2183	6.111	11	199	1.673	1.21	
7	373.6	6.50	368.35	139	8	PVC	0.011	0.3489	2.0933	0.1667	0.0126	1.60	270	4.6	930	2183	6.111	11	199	1.673	1.21	
6	327.17	6.50	370.67	214	10	PVC	0.011	0.5451	2.6167	0.2083	0.0033	1.49	648	2.7	970	2183	0	0	199	2.15	2.5	
5	325.52	5.50	370.02	407	10	PVC	0.011	0.5451	2.6167	0.2083	0.0033	1.49	648	2.7	970	2183	0	0	199	2.15	2.5	
4	323.68	5.00	371.68	399	8	PVC	0.011	0.5451	2.6167	0.2083	0.0033	1.49	648	2.7	970	2183	0	0	199	2.15	2.5	
3	326.78	7.00	372.74	209	10	PVC	0.010	0.5451	2.6167	0.2083	0.0033	1.49	648	2.7	970	2183	0	0	199	2.15	2.5	
2	325.24	8.50	372.74	222	10	PVC	0.011	0.5451	2.6167	0.2083	0.0033	1.49	648	2.7	970	2183	0	0	199	2.15	2.5	
1	322.33	6.90	376.85	311	10	PVC	0.011	0.5451	2.6167	0.2083	0.0033	1.49	648	2.7	970	2183	0	0	199	2.15	2.5	
8	322.49	17.00	375.49	310	10	PVC	0.011	0.5451	2.6167	0.2083	0.0033	1.49	648	2.7	970	2183	0	0	199	2.15	2.5	
9	318.68	5.40	373.28	280	8	PVC	0.013	0.3489	2.0933	0.1667	0.0047	0.96	479	2.0	983	2212	0	0	404	3.6	3.6	
10	316.52	4.60	371.92	317	10	PVC	0.013	0.3489	2.0933	0.1667	0.0047	0.96	479	2.0	983	2212	0	0	404	3.6	3.6	
11	317.16	7.00	370.16	216	10	PVC	0.012	0.5451	2.6167	0.2083	0.0033	1.49	648	2.7	970	2183	0	0	404	3.6	3.6	
12	318.1	8.50	369.50	260	8	PVC	0.013	0.3489	2.0933	0.1667	0.0036	1.40	629	4.0	983	2212	0	0	404	3.6	3.6	
13	318.44	9.00	367.44	260	8	PVC	0.011	0.3489	2.0933	0.1667	0.0036	1.40	629	4.0	983	2212	0	0	404	3.6	3.6	
14	318.08	12.00	366.08	357	8	PVC	0.011	0.3489	2.0933	0.1667	0.0036	1.40	629	4.0	983	2212	0	0	404	3.6	3.6	
15	318.08	13.70	364.38	87	8	PVC	0.011	0.3489	2.0933	0.1667	0.0036	1.40	629	4.0	983	2212	0	0	404	3.6	3.6	
16	317.94	15.00	362.94	8	8	PVC	0.011	0.3489	2.0933	0.1667	0.0036	1.40	629	4.0	983	2212	0	0	404	3.6	3.6	

Manhole Sections to be Replaced

$$Q = VA = \left( \frac{1.49}{D} \right) AR^2 \sqrt{S} \quad [cfs]$$

$$Q = VA = \left( \frac{1.00}{D} \right) AR^2 \sqrt{S} \quad [cfs]$$

- 1 - Invert
- 2 - Velocity (ft/s)
- 3 - Flow Area (ft<sup>2</sup>)
- 4 - Manning's Roughness Coefficient
- 5 - Hydraulic Radius (ft)
- 6 - Channel Slope (ft/ft)

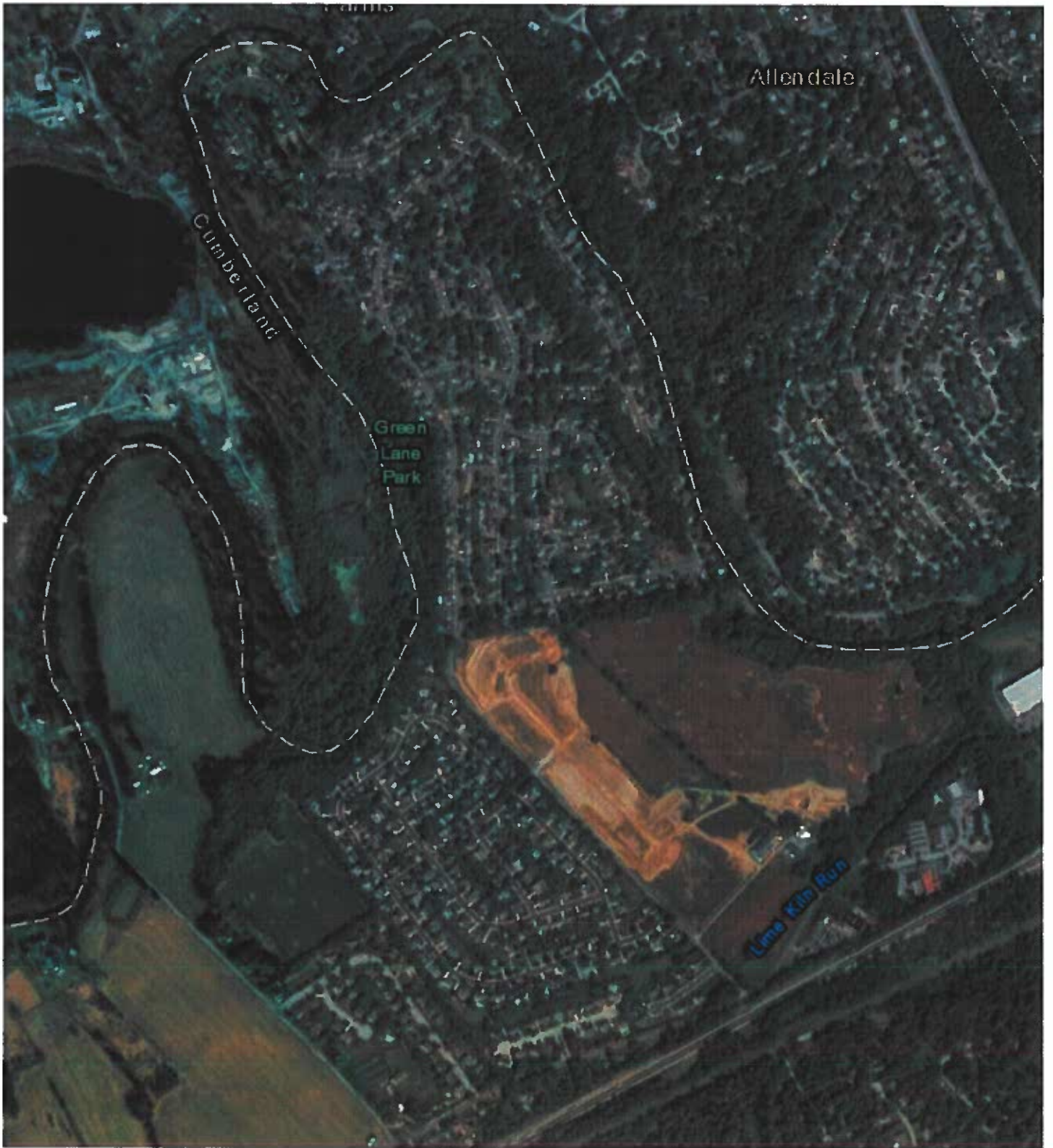
- 1 - Invert
- 2 - Velocity (ft/s)
- 3 - Flow Area (ft<sup>2</sup>)
- 4 - Manning's Roughness Coefficient
- 5 - Hydraulic Radius (ft)
- 6 - Channel Slope (ft/ft)

Man Day Items

2010	2011
0.567	0.372
0.46	0.701
0.51	0.621
0.717	0.483
0.312	0.343
0.361	0.442
0.303	0.418
0.407	1.784
0.326	0.432
0.339	0.335
0.375	0.303
1.284	

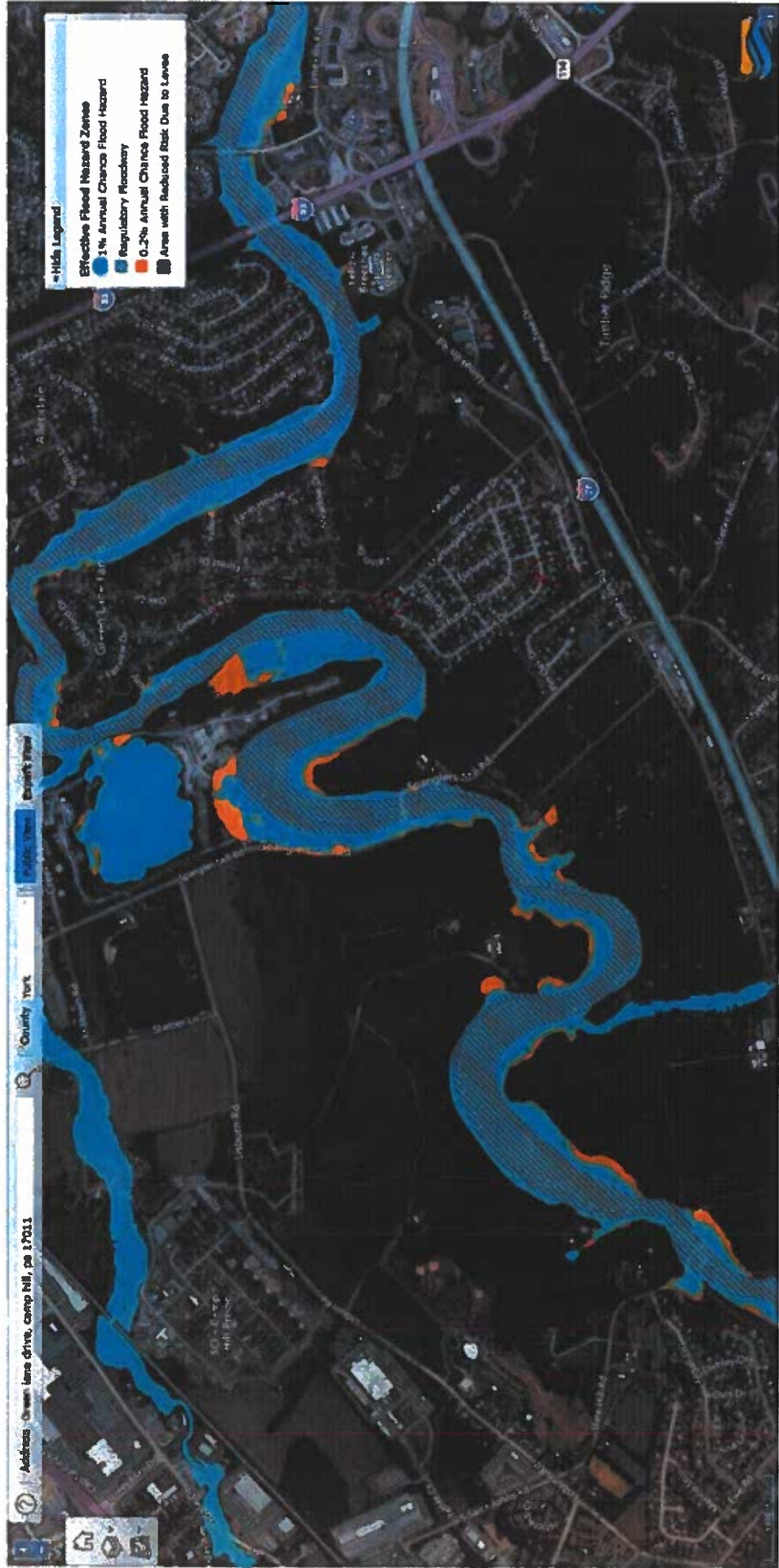
# TUS A-15.b\_Attachment

## ATTACHMENT 6



National Wetlands Inventory

ATTACHMENT 7



FEMA FLOOD PLAIN MAPPING

## 1. PROJECT INFORMATION

Project Name: **Upsizing of Sanitary Sewer Mains in Fairview Township Service Area to LATA WWTP**

Date of Review: **7/29/2024 10:09:19 AM**

Project Category: **Development, Additions/maintenance to existing development facilities**

Project Area: **66.78 acres**

County(s): **Cumberland; York**

Township/Municipality(s): **FAIRVIEW TOWNSHIP; LOWER ALLEN TOWNSHIP**

ZIP Code:

Quadrangle Name(s): **LEMOYNE**

Watersheds HUC 8: **Lower Susquehanna-Swatara**

Watersheds HUC 12: **Lower Yellow Breeches Creek**

Decimal Degrees: **40.213390, -76.898705**

Degrees Minutes Seconds: **40° 12' 48.2027" N, 76° 53' 55.3376" W**



## 2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

# Upsizing of Sanitary Sewer Mains in Fairview Township Service Area to LATA WWTP

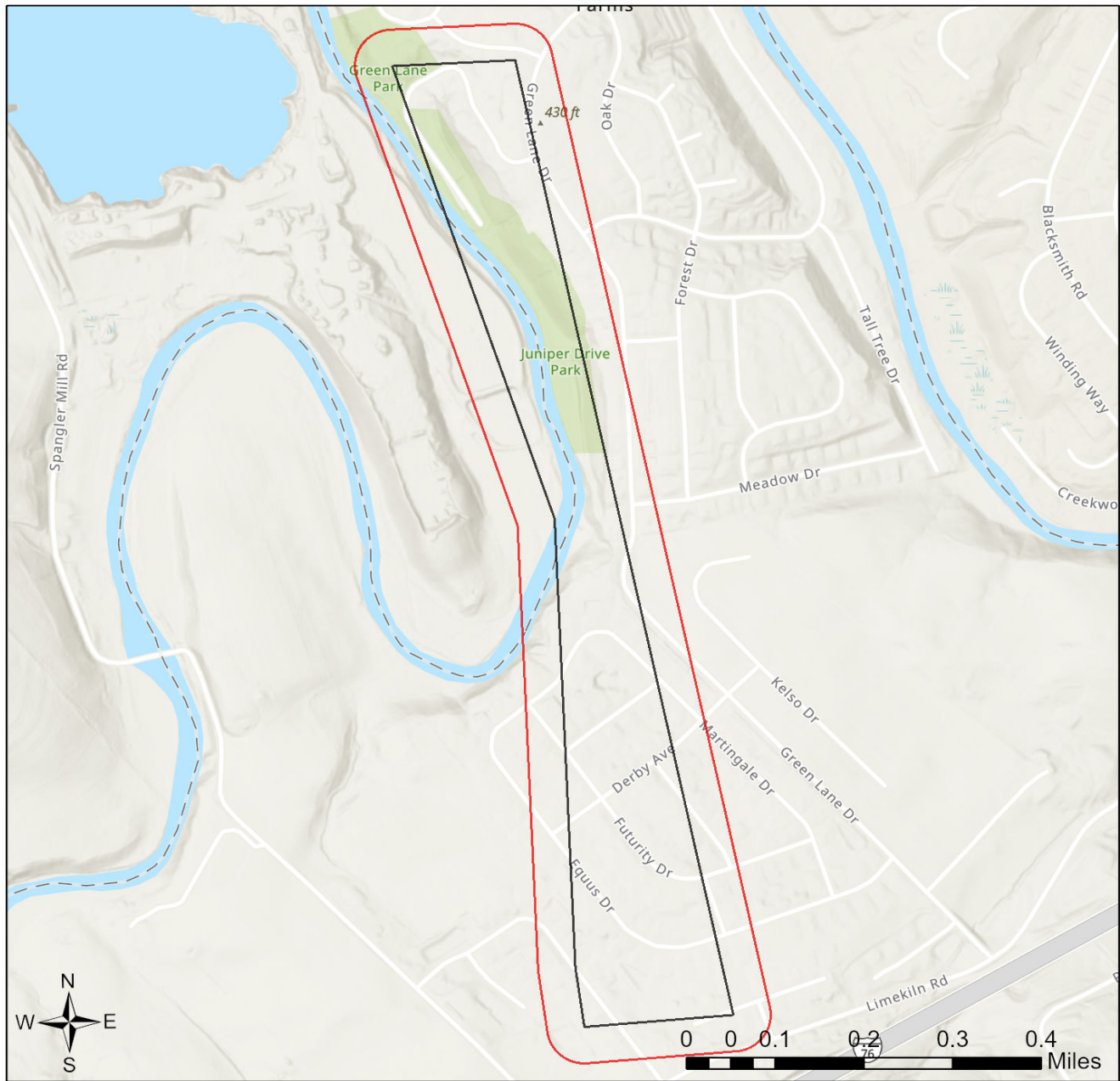




-  Buffered Project Boundary
-  Project Boundary

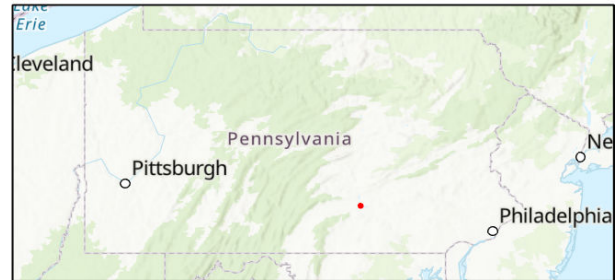


Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

# Upsizing of Sanitary Sewer Mains in Fairview Township Service Area to LATA WWTP



-  Buffered Project Boundary
-  Project Boundary



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

## RESPONSE TO QUESTION(S) ASKED

**Q1:** Is tree removal, tree cutting or forest clearing necessary to implement all aspects of this project?

**Your answer is:** No

**Q2:** How many acres of woodland, forest, forested fencerows and trees will be cut, cleared, removed, disturbed or flooded (inundated) as a result of carrying out all aspects or phases of this project? [Round acreages UP to the nearest acre (e.g., 0.2 acres = 1 acre).]

**Your answer is:** zero acres

### 3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

#### PA Game Commission

##### RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

#### PA Department of Conservation and Natural Resources

##### RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

#### PA Fish and Boat Commission

##### RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

#### U.S. Fish and Wildlife Service

##### RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

#### 4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.



## 5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page ([www.naturalheritage.state.pa.us](http://www.naturalheritage.state.pa.us)). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

## 6. AGENCY CONTACT INFORMATION

### PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section  
400 Market Street, PO Box 8552  
Harrisburg, PA 17105-8552  
Email: [RA-HeritageReview@pa.gov](mailto:RA-HeritageReview@pa.gov)

### PA Fish and Boat Commission

Division of Environmental Services  
595 E. Rolling Ridge Dr., Bellefonte, PA 16823  
Email: [RA-FBPACENOTIFY@pa.gov](mailto:RA-FBPACENOTIFY@pa.gov)

### U.S. Fish and Wildlife Service

Pennsylvania Field Office  
Endangered Species Section  
110 Radnor Rd; Suite 101  
State College, PA 16801  
Email: [IR1\\_ESPenn@fws.gov](mailto:IR1_ESPenn@fws.gov)  
NO Faxes Please

### PA Game Commission

Bureau of Wildlife Management  
Division of Environmental Review  
2001 Elmerton Avenue, Harrisburg, PA 17110-9797  
Email: [RA-PGC\\_PNDI@pa.gov](mailto:RA-PGC_PNDI@pa.gov)  
NO Faxes Please

## 7. PROJECT CONTACT INFORMATION

Name: Max E. Stoner, P.E.  
Company/Business Name: JHA Companies  
Address: 3705 Trindle Road  
City, State, Zip: Camp Hill, PA 17011  
Phone: ( 844 ) 542-4757 Fax: ( )  
Email: mstoner@jhacompanies.com

## 8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

*Max E. Stoner*  
applicant/project proponent signature

July 29, 2024  
date

TUS A-15.b Attachment  
ATTACHMENT 9



 PIPE REPLACEMENT AREAS

# TUS A-15.b\_Attachment

## ATTACHMENT 10

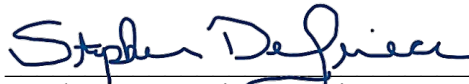
LOWER ALLEN TOWNSHIP AUTHORITY, FAIRVIEW TOWNSHIP SERVICE AREA  
FAIRVIEW TOWNSHIP, YORK COUNTY  
SPECIAL STUDY

### OPINION OF PROJECT COSTS

Description	Unit	Quantity	Unit Price	Ext. Price
<b>A. Construction Costs</b>				
Replacment of 8" Gravity Line with 10" SDR-35 PVC Pipe	LF	1,300	\$ 80.00	\$ 104,000.00
Manhole Repairs/Adjustments	Each	12	\$ 1,000.00	\$ 12,000.00
Yard Restoration	SY	3,000	\$ 2.00	\$ 6,000.00
Miscellaneous/Contigency	Each	1	\$ 8,000.00	\$ 8,000.00
<b>SUBTOTAL CONSTRUCTION COSTS</b>				<b>\$ 130,000.00</b>
<b>B. Project Related Costs</b>				
Design Survey Costs				\$ 5,000.00
Planning Design Costs				\$ 16,500.00
Permit Cost/Administration				\$ 2,000.00
Legal Fees				\$ 2,500.00
Construction Stakeout				\$ 3,000.00
Construction Phase/Observation				\$ 3,500.00
<b>SUBTOTAL PROJECT RELATED COSTS</b>				<b>\$ 32,500.00</b>
<b>TOTAL OPINION OF PROJECT COSTS</b>				<b>\$ 162,500.00</b>

## VERIFICATION

I, STEPHEN A. DEFRIECE, hereby state that the facts above set forth in the attached Responses above are true and correct to the best of my knowledge, information and belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements made herein are made subject to the penalties of 18 Pa. Cons. Stat. §4904 relating to unsworn falsification to authorities.



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Stephen A. DeFriece, Project Manager  
Pennsylvania-American Water Company

Dated: 10/8/2024