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VIA eFiling

March 1, 2023

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

Re: Pennsylvania-American Water Company ("PAWC")  
2022 Wastewater Annual Asset Optimization Plan  
Docket No. M-2023-\_\_\_\_\_

Dear Secretary Chiavetta:

Enclosed for filing is Pennsylvania-American Water Company's 2022 Wastewater Annual Asset Optimization Plan ("AAO Plan") in compliance with 66 Pa.C.S. § 1356.

A copy of the AAO Plan has been served upon the parties listed on the enclosed Certificate of Service. Should you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Teresa Harrold".

Teresa K. Harrold

Enclosures

cc: Certificate of Service  
K. Shaffer w/Enc. VIA E-mail

# **Pennsylvania-American Water Company 2022 Wastewater Annual Asset Optimization Plan**

## **Introduction:**

Pennsylvania-American Water Company ("PAWC") files this Annual Asset Optimization Plan ("AAO Plan") for its Wastewater Operations in compliance with 66 Pa C.S. § 1356. This section requires a utility with an approved distribution system improvement charge ("DSIC") and a long-term infrastructure improvement plan ("LTIP") to file an AAO Plan. PAWC received approval for its modified Wastewater DSIC and 2015-2023 LTIP from the Pennsylvania Public Utility Commission ("Commission") by Order dated April 16, 2020 at Docket No. P-2014-2431005.

The AAO Plan contained herein has the following elements:

- 1) A description of all eligible property repaired, improved, and replaced in the preceding 12 months, pursuant to the utility's long-term infrastructure improvement plan and the prior year's asset optimization plan; and
- 2) A detailed description of all facilities to be improved in the upcoming 12 months.

**Table 1: Description of PAWC's Wastewater Systems (DSIC eligible)**

TOTAL (EOY 2022)								
District #	District Description	Gravity Main (LF)	Force/Low Pressure Main (LF)	Total Main (LF)	Manholes	Valves	Lift Stations	No. Customers as of 12/31/2022
2412	McKeesport WW	905,090	34,954	940,044	4,726	17	13	10,493
2413	Exeter WW	650,680	13,592	664,271	3,110	0	6	7,867
2417	Royersford WW	68,564	4,454	73,017	262	0	2	1,493
2418	Upper Pottsgrove WW	105,050	19,816	124,865	518	0	4	1,546
2419	Kane WW	293,437	33,534	326,971	809	0	8	2,370
2426	Claysville WW	59,243	1,149	60,392	342	0	1	491
2435	Koppel WW	27,428	0	27,428	122	1	0	360
2436	Marcel Lakes WW	30,732	28,597	59,328	130	114	2	361
2437	Franklin WW*	56,584	12,423	69,006	198	10	1	349
2437	*includes Hamiltonban							
2438	Paint Elk WW*	93,318	21,511	114,829	445	52	6	436
2438	*includes Shippenville							
2447	Clarion WW	213,588	36,937	250,524	1,048	18	6	2,476
2458	Pocono County Place WW	150,329	99,807	250,136	643	141	2	877
2460	Fairview WW - North	165,932	20,563	186,495	873	3	11	4,151
2460	Fairview WW - South	197,520	12,889	210,410	1,057	0	6	
2467	Coatesville WW*	661,641	130,470	792,110	3,208	19	24	10,690
2467	*includes Sadsbury & Vallev							
2469	Blue Mountain Lake WW	0	67,899	67,899	0	124	6	923
2469	Lehman Pike WW - Saw Creek	0	266,695	266,695	1	295	13	2,833
2469	Delaware WW (Wild Acres)	8,767	22,035	30,802	30	0	1	
2470	Foster WW	38,684	9,600	48,283	205	0	4	518
2485	McEwensville WW	12,669	1,242	13,911	57	0	4	129
2487	New Cumberland WW	145,413	6,899	152,312	613	0	3	3,110
2489	Turbotville WW	21,416	0	21,416	90	0	1	308
2492	Scranton WW	1,738,447	12,269	1,750,716	9,445	0	7	29,701
2494	York WW	541,398	1,666	543,064	2,636	0	1	13,427
	<b>Total</b>	6,185,926	859,001	7,044,927	30,568	794	132	94,909

**Long Term Infrastructure Plan Summary**

From 2015 through 2022, PAWC has continuously invested in its wastewater infrastructure to maintain safe, reliable service to its customers. The chart below compares the actual to projected cumulative expenditures during the 2015 to 2022.

**Table 2: Projected Annual Expenditures (2015 to 2023)**

Year	Projected Annual Expenditures	Projected Cumulative Expenditures	Actual Annual Expenditures	Actual Cumulative Annual Expenditures
2015	\$5,265,244	\$5,265,244	\$8,923,443	\$8,923,443
2016	\$5,290,000	\$10,555,244	\$5,509,055	\$14,432,498
2017	\$5,682,655	\$16,237,899	\$8,416,554	\$22,849,052
2018	\$5,097,241	\$21,335,140	\$4,810,440	\$27,659,492
2019	\$33,870,930	\$55,206,070	\$32,877,761	\$60,537,253
2020	\$18,184,674	\$73,390,744	\$27,652,414	\$88,189,667
2021	\$20,351,465	\$93,742,209	\$25,594,318	\$113,783,985
2022	\$19,495,725	\$113,237,934	\$26,197,473	\$139,981,458
2023	\$23,839,525	\$137,077,459		
Total	\$137,077,459		\$139,981,458	

**Note:** 2023 projected values are from the Approved LTIP. PAWC anticipates filing a revised LTIP in March 2023.

The 34.37% increase from LTIP's projected expenditure and the actual expenditure in 2022 is due largely to inflation. Similar to 2021, pipe, fitting, and restoration costs have increased at a rate that was not anticipated when the 2022 LTIP budget was prepared, while total investment in 2022 was slightly lower than the average of the previous three years (see Table 3). PAWC's 2021 and 2022 condition assessments showed significant investment needs, particularly in the Scranton and McKeesport systems. PAWC strives to reduce expenditures through favoring rehabilitation over replacement, and in 2022 approximately 81% of footage was rehabilitation (see Table 11).

**Table 3: Summary of Wastewater DSIC-eligible expenditures – Calendar Year 2022**

District	Actual Expenditures - 2019	Actual Expenditures - 2020	Actual Expenditures - 2021	Actual Expenditures - 2022	Delta from three year average
Blue Mountain Lake - 76	\$0	\$0	\$0	\$0	\$0
Lehman Pike & Marcel Lakes - 69	\$290,379	\$146,890	\$343,436	\$242,212	(\$18,023)
Pocono - 58	\$1,172,345	\$482,084	\$270,782	\$79,211	(\$562,526)
Claysville - 26	\$0	\$0	\$0	\$0	\$0
Coatesville - 67	\$6,545,705	\$2,110,829	\$1,910,615	\$1,485,880	(\$2,036,503)
Clarion - 47	\$3,888,909	\$1,405,730	\$1,421,210	\$1,466,914	(\$771,702)
SCRANTON WW - 92	\$6,869,935	\$8,993,335	\$13,305,567	\$10,890,880	\$1,167,934
McKeesport - 12	\$12,985,783	\$7,175,305	\$4,984,883	\$8,487,704	\$105,714
FRANKLIN WW - 83	\$0	\$655	\$439,208	\$86,057	(\$60,564)
MCEWENSVILLE WW - 85	\$0	\$1,764	\$180	\$0	(\$648)
NEW CUMBERLAND WW - 87	\$36,337	\$54,030	\$1,396,216	\$1,546,424	\$1,050,896
KOPPEL WW - 35	\$575,568	\$993,487	\$1,148,520	\$1,069,169	\$163,310
FAIRVIEW WW - 60	\$14,282	\$9,789	\$277,941	\$704,188	\$603,518
PAINT ELK TWP WW - 38	\$498,517	\$792,868	\$95,761	\$138,833	(\$323,549)
<b>Total</b>	<b>\$32,877,761</b>	<b>\$22,166,767</b>	<b>\$25,594,318</b>	<b>\$26,197,473</b>	<b>(\$682,143)</b>

**Table 4: Detailed Project Listing of Wastewater-DSIC eligible projects – Calendar year 2022 Actual**

District	Funding Project Number	Description:	Installed Quantity	Capital Investment 2022
<b>Clarion WW</b>				
47	I24-470009	Hemlock Ridge Lift Station Improvement		\$231,380
47	R24-47B1	Sewer line replacement projects (including manholes and laterals)	4,236 ft	\$1,231,816
47	R24-47C1	Emergency sewer main replacement work.	3 ft	(\$3,888)
47	R24-47D1	Carry over cost for Sewer line relocation projects from a prior year	0 ft	(\$24,491)
47	R24-47F1	Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	9	\$15,415
47	R24-47H1	Lateral replacements at locations determined to be deficient during annual inspection program.	6	\$16,683
47	R24-47Q1	Process Plant Facilities and Equip - Lift Stations		
<b>47 Total</b>		<b>Clarion WW</b>	<b>3 ft</b>	<b>\$1,466,914</b>
<b>Pocono WW</b>				
58	R24-58B1	Carry over cost for Sewer line replacement projects from prior year,	0 ft	\$0
58	R24-58C1	Credit for Overstated Emergency sewer main replacement work from prior year.	0 ft	\$2,889
58	R24-58H1	Lateral replacements at locations determined to be deficient during annual inspection program.	29	\$76,322
<b>58 Total</b>		<b>Pocono WW</b>	<b>0 ft</b>	<b>\$79,211</b>
<b>Coatesville WW</b>				
67	R24-67B1	Sewer line replacement projects (including manholes and laterals)	3,371 ft	\$1,267,187
67	R24-67C1	Emergency sewer main replacement work.	13 ft	\$53,983
67	R24-67F1	Manhole replacements at locations determined to be deficient during annual manhole inspection program.	22	\$10,550
67	R24-67H1	Lateral replacements at locations determined to be deficient during annual inspection program.	61	\$154,159
<b>67 Total</b>		<b>Coatesville WW</b>	<b>3,384 ft</b>	<b>\$1,485,880</b>
<b>Lehman Pike WW</b>				
69	R24-69B1	Sewer line replacement projects (including manholes and laterals)	0 ft	\$0
69	R24-69C1	Emergency sewer main replacement work.	4 ft	\$17,740
69	R24-69F1	Manhole replacements at locations determined to be deficient during annual manhole inspection program.		\$1,197
69	R24-69H1	Lateral replacement project	89	\$223,274
<b>69 Total</b>		<b>Lehman Pike WW</b>	<b>4 ft</b>	<b>\$242,212</b>
<b>Scranton WW</b>				
92	R24-92B1	Sewer line replacement projects (including manholes and laterals)	22,744 ft	\$6,664,858
92	R24-92C1	Emergency sewer main replacement work.	655 ft	\$2,665,527
92	R24-92D1	Sewer line relocation projects (including manholes and laterals)	1,098 ft	\$283,147
92	R24-92F1	Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	174	\$603,240
92	R24-92H1	Lateral replacements at locations determined to be deficient during annual inspection program.	272	\$681,122
92	carry over	<i>Outfall #022 - Washburn Street</i>		\$52,757
92	carry over	<i>misc projects</i>		(\$59,772)
<b>92 Total</b>		<b>Scranton WW</b>	<b>24,497 ft</b>	<b>\$10,890,880</b>
<b>McKeesport WW</b>				

12	I24-120014-02		Spring St	1,000	ft	\$206,525
12	R24-12B1		Sewer line replacement projects (including manholes and laterals)	15,367	ft	\$5,304,981
12	R24-12C1		Lateral replacements at locations determined to be deficient during annual inspection program.	184	ft	\$740,113
12	R24-12D1		Sewer line relocation projects (including manholes and laterals)	0	ft	\$1,016
12	R24-12F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	592		\$2,007,214
12	R24-12H1		Lateral replacements at locations determined to be deficient during annual inspection program.			(\$11,388)
12	carry over		4KK Spring St			\$239,244
<b>12 Total</b>		<b>McKeesport WW</b>		<b>16,551</b>	<b>ft</b>	<b>\$8,487,704</b>
<b>FRANKLIN WW</b>						
83	R24-83B1		Sewer line replacement projects (including manholes and laterals)	0	ft	\$86,057
<b>83 Total</b>		<b>FRANKLIN WW</b>		<b>0</b>	<b>ft</b>	<b>\$86,057</b>
<b>McEwensville WW</b>						
85						\$0
<b>85 Total</b>		<b>McEwensville WW</b>				<b>\$0</b>
<b>New Cumberland WW</b>						
87	R24-87B1		Sewer line replacement projects (including manholes and laterals)	13,366	ft	\$1,504,591
87	R24-87C1		Emergency sewer main replacement work.	10	ft	\$14,656
87	R24-87H1		Lateral replacements at locations determined to be deficient during annual inspection program.	11		\$27,177
<b>87 Total</b>		<b>New Cumberland WW</b>		<b>13,376</b>	<b>ft</b>	<b>\$1,546,424</b>
<b>Koppel WW</b>						
35	R24-35B1		Sewer line replacement projects (including manholes and laterals)	1,955	ft	\$961,484
35	R24-35C1		Emergency sewer main replacement work.	0	ft	\$124
35	R24-35D1		Sewer line relocation projects (including manholes and laterals)	0	ft	\$107,561
<b>35 Total</b>		<b>Koppel WW</b>		<b>1,955</b>	<b>ft</b>	<b>\$1,069,169</b>
<b>Fairview WW</b>						
60	R24-60B1		Sewer line replacement projects (including manholes and laterals)	3,555	ft	\$696,805
60	R24-60H1		Lateral replacements at locations determined to be deficient during annual inspection program.	3		\$7,383
<b>60 Total</b>		<b>Fairview WW</b>		<b>3,555</b>	<b>ft</b>	<b>\$704,188</b>
<b>Paint Elk TWP WW</b>						
38	R24-38B1		Sewer line replacement projects (including manholes and laterals)	1,325	ft	\$132,923
38	R24-38F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	2		\$5,910
<b>38 Total</b>		<b>Paint Elk TWP WW</b>		<b>1,325</b>	<b>ft</b>	<b>\$138,833</b>
<b>Total</b>				<b>64,650</b>	<b>ft</b>	<b>\$26,197,473</b>

**Table 5: Detailed Project Listing of Wastewater DSIC-Eligible projects – Calendar year 2023 Projected**

The project listing envisioned for the upcoming 12 months consist of a mixture of sewer line replacement, manhole and company owned lateral work. The information is preliminary and subject to change.

District	Funding Project Number		Description:	Est. Quantity	Capital Projection 2023
<b>Clarion WW</b>					
47	R24-47B1		Sewer line replacement projects (including manholes and laterals)	6,506 ft	\$1,830,502
47	R24-47C1		Emergency sewer main replacement work.	4 ft	\$15,000
47	R24-47F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	17	\$60,000
47	R24-47H1		Lateral replacements at locations determined to be deficient during annual inspection program.	18	\$45,000
<b>47 Total</b>		<b>Clarion WW</b>		<b>6,510 ft</b>	<b>\$1,950,502</b>
<b>Pocono WW</b>					
58	R24-58C1		Emergency sewer main replacement work.	8 ft	\$30,000
58	R24-58F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	5	\$16,000
58	R24-58H1		Lateral replacements at locations determined to be deficient during annual inspection program.	20	\$50,000
<b>58 Total</b>		<b>Pocono WW</b>		<b>8 ft</b>	<b>\$96,000</b>
<b>Claysville WW</b>					
26	R24-26C1	2426	Emergency sewer main replacement work.	0 ft	\$0
26	R24-26F1	2426	Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	4	\$15,000
26	R24-26H1	2426	Lateral replacements at locations determined to be deficient during annual inspection program.	10	\$25,000
<b>26 Total</b>		<b>Claysville WW</b>		<b>0 ft</b>	<b>\$40,000</b>
<b>Coatesville WW</b>					
67	R24-67B1		Sewer line replacement projects (including manholes and laterals)	7,507 ft	\$2,471,033
67	R24-67C1		Emergency sewer main replacement work.	48 ft	\$190,000
67	R24-67F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	17	\$60,000
67	R24-67H1		Lateral replacements at locations determined to be deficient during annual inspection program.	88	\$200,000
<b>67 Total</b>		<b>Coatesville WW</b>		<b>7,555 ft</b>	<b>\$2,921,033</b>
<b>Lehman Pike WW</b>					
69	R24-69B1		Sewer line replacement projects (including manholes and laterals)	835 ft	\$232,990
69	R24-69C1		Emergency sewer main replacement work.	18 ft	\$70,000
69	R24-69F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	7	\$25,000
69	R24-69H1		Lateral replacements at locations determined to be deficient during annual inspection program.	198	\$500,000
<b>69 Total</b>		<b>Lehman Pike WW</b>		<b>853 ft</b>	<b>\$827,990</b>
<b>Scranton WW</b>					
92	I24-920041		Scranton WW CSO #055, 056/057 Outfall Relocation Project	9,500 ft	\$2,750,000

92	R24-92B1		Sewer line replacement projects (including manholes and laterals)	18,354	ft	\$7,407,130
92	R24-92C1		Emergency sewer main replacement work.	500	ft	\$2,000,000
92	R24-92D1		Sewer line relocation projects (including manholes and laterals)	24	ft	\$10,000
92	R24-92F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	400		\$1,400,000
92	R24-92H1		Lateral replacements at locations determined to be deficient during annual inspection program.	1,060		\$2,670,000
<b>92 Total</b>		<b>Scranton WW</b>		<b>28,378</b>	<b>ft</b>	<b>\$16,237,130</b>
<b>McKeesport WW</b>						
12	I24-120012		McKeesport Replace Glenn Avenue Pump Station			\$1,163,319
12	I24-120013		McKeesport - Eastshore force main replacement	8,000	ft	\$2,796,254
12	I24-120020		McKeesport White Street Interceptor Upgrades			\$1,556,819
12	R24-12B1		Sewer line replacement projects (including manholes and laterals)	14,616	ft	\$5,034,117
12	R24-12C1		Lateral replacements at locations determined to be deficient during annual inspection program.	150	ft	\$600,000
12	R24-12F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	43		\$150,000
12	R24-12H1		Lateral replacements at locations determined to be deficient during annual inspection program.	0		\$0
<b>12 Total</b>		<b>McKeesport WW</b>		<b>22,766</b>	<b>ft</b>	<b>\$11,300,509</b>
<b>FRANKLIN WW</b>						
83	R24-83B1		Sewer line replacement projects (including manholes and laterals)	0	ft	\$0
83	R24-83C1		Lateral replacements at locations determined to be deficient during annual inspection program.	5	ft	\$20,000
83	R24-83F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	4		\$15,000
83	R24-83H1		Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	6		\$15,000
<b>83 Total</b>		<b>FRANKLIN WW</b>		<b>5</b>	<b>ft</b>	<b>\$50,000</b>
<b>McEwensville WW</b>						
85	R24-85C1		Emergency sewer main replacement work.	3	ft	\$10,000
85	R24-85F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	3		\$10,000
85	R24-85H1		Lateral replacements at locations determined to be deficient during annual inspection program.	2		\$6,000
<b>85 Total</b>		<b>McEwensville WW</b>		<b>3</b>	<b>ft</b>	<b>\$26,000</b>
<b>New Cumberland WW</b>						
87	R24-87B1		Sewer line replacement projects (including manholes and laterals)	0	ft	\$0
87	R24-87C1		Emergency sewer main replacement work.	13	ft	\$50,000
87	R24-87F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program id required.	9		\$30,000
87	R24-87H1		Lateral replacements at locations determined to be deficient during annual inspection program.	43		\$50,000
<b>87 Total</b>		<b>New Cumberland WW</b>		<b>13</b>	<b>ft</b>	<b>\$130,000</b>

<b>Koppel WW</b>					
35	R24-35B1		Sewer line replacement projects (including manholes and laterals)	2,402 ft	\$893,618
35	R24-35C1		Emergency sewer main replacement work.	6 ft	\$25,000
35	R24-35F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program.	6	\$20,000
35	R24-35H1		Lateral replacements at locations determined to be deficient during annual inspection program.	9	\$22,500
<b>35 Total</b>		<b>Koppel WW</b>		<b>2,408 ft</b>	<b>\$961,118</b>
<b>Fairview WW</b>					
60	I24-600007		Fairview South Bienhower Lift Station	1	\$1,272,083
60	R24-60B1		Sewer line replacement projects (including manholes and laterals)	0 ft	\$0
60	R24-60C1		Emergency sewer main replacement work.	15 ft	\$60,000
60	R24-60F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program.	9	\$30,000
60	R24-60H1		Lateral replacements at locations determined to be deficient during annual inspection program.	20	\$50,000
<b>60 Total</b>		<b>Fairview WW</b>		<b>15 ft</b>	<b>\$1,412,083</b>
<b>Paint Elk TWP WW</b>					
38	R24-38B1		Sewer line replacement projects (including manholes and laterals)	2,010 ft	\$592,403
38	R24-38C1		Emergency sewer main replacement work.	1 ft	\$5,000
38	R24-38F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program.	6	\$20,000
38	R24-38H1		Lateral replacements at locations determined to be deficient during annual inspection program.	9	\$22,500
<b>38 Total</b>		<b>Paint Elk TWP WW</b>		<b>2,011 ft</b>	<b>\$639,903</b>
<b>Exeter Twp. WW</b>					
13	R24-13B1		Sewer line replacement projects (including manholes and laterals)	1,109 ft	\$154,628
13	R24-13C1		Emergency sewer main replacement work.	8 ft	\$30,000
13	R24-13F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program.	43	\$150,000
13	R24-13H1		Lateral replacements at locations determined to be deficient during annual inspection program.	48	\$120,000
<b>13 Total</b>		<b>Exeter Twp. WW</b>		<b>1,117 ft</b>	<b>\$454,628</b>
<b>Sadsbury WW</b>					
15	R24-15F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program.	4	\$15,000
15	R24-15H1		Lateral replacements at locations determined to be deficient during annual inspection program.	4	\$10,000
<b>15 Total</b>		<b>Sadsbury WW</b>		<b>0 ft</b>	<b>\$25,000</b>
<b>Royersford WW</b>					
17	R24-17F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program.	9	\$30,000
17	R24-17H1		Lateral replacements at locations determined to be deficient during annual inspection program.	24	\$60,000
<b>17 Total</b>		<b>Royersford WW</b>		<b>0 ft</b>	<b>\$90,000</b>
<b>Upper Pottsgrove WW</b>					
18	R24-18D1		Sewer line relocation projects (including manholes and laterals)	2,934 ft	\$1,200,000
18	R24-18F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program.	2	\$7,000
18	R24-18H1		Lateral replacements at locations determined to be deficient during annual inspection program.	4	\$10,000

<b>18 Total</b>		<b>Upper Pottsgrove WW</b>		<b>2,934</b> ft	<b>\$1,217,000</b>
<b>Kane WW</b>					
19	R24-19B1		Sewer line replacement projects (including manholes and laterals)	4,670	\$1,402,101
19	R24-19C1		Emergency sewer main replacement work.	25	\$100,000
19	R24-19F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program.	100	\$350,000
19	R24-19H1		Lateral replacements at locations determined to be deficient during annual inspection program.	60	\$150,000
<b>19 Total</b>		<b>Kane WW</b>		<b>4,695</b> ft	<b>\$2,002,101</b>
<b>Foster TWP WW</b>					
70	R24-70F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program.	1	\$4,500
<b>70 Total</b>		<b>Foster TWP WW</b>		<b>0</b> ft	<b>\$4,500</b>
<b>Turbotville WW</b>					
89	R24-89C1		Emergency sewer main replacement work.	3	\$10,000
89	R24-89F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program.	11	\$40,000
89	R24-89H1		Lateral replacements at locations determined to be deficient during annual inspection program.	5	\$12,000
<b>89 Total</b>		<b>Turbotville WW</b>		<b>3</b> ft	<b>\$62,000</b>
<b>York WW</b>					
94	R24-94C1		Emergency sewer main replacement work.	13	\$50,000
94	R24-94D1		Sewer line relocation projects (including manholes and laterals)	122	\$50,000
94	R24-94F1		Manhole replacements at locations determined to be deficient during annual manhole inspection program.	23	\$80,000
94	R24-94H1		Lateral replacements at locations determined to be deficient during annual inspection program.	20	\$50,000
<b>94 Total</b>		<b>York WW</b>		<b>135</b> ft	<b>\$230,000</b>
<b>Total</b>				<b>79,406</b> ft	<b>\$40,677,499</b>

Tables 6 through 11 provide updated information by district on the sewer main size and material as well as updated information by district on the quantity of sewer pipe replaced and rehabilitated. A baseline and updated progress of inflow and infiltration (I&I) for each wastewater district (Table 12). Note that PAAW evaluates long-term I&I because seasonal and annual precipitation skews year over year results. Positive results are noticed more quickly in smaller systems, like Koppel WW, where significant investment has led to a 61% reduction in I&I since 2019.

Combined sanitary sewer systems are more impacted by storm events because storm drains and inlets local to the sewer collect storm water and discharge directly into the sewer system for collection and conveyance to the treatment facility. For combined sewer systems, the performance target from DEP and EPA is to reduce combined sewer overflow events and volumes versus I&I volume reduction.

**Table 6: Miles of Main Summary**

DISTRICT CODE	DISTRICT	TOTAL MILES (2021 AAOP)	TOTAL MILES (2022 AAOP)	2021 - 2022 MILES DIFFERENCE	2022 MILES OF NEW SEWER
2412	McKeesport WW	182.2	178.0	-4.2	0.0
2413	Exeter WW	125.4	125.8	0.4	0.0
2417	Royersford WW	13.7	13.8	0.1	0.0
2418	Upper Pottsgrove WW	0.0	23.6	23.6	0.0
2419	Kane WW	48.4	61.9	13.5	0.0
2426	Claysville WW	11.4	11.4	0.0	0.0
2435	Koppel WW	5.1	5.2	0.1	0.0
2436	Marcel Lakes WW	11.2	11.2	0.0	0.0
2437	Franklin WW*	13.1	13.1	0.0	0.0
2437	*includes Hamiltonban		0.0		
2438	Paint Elk WW*	21.1	21.7	0.7	0.1
2438	*includes Shippenville		0.0		
2447	Clarion WW	46.2	47.4	1.2	0.3
2458	Pocono County Place WW	47.4	47.4	-0.1	0.0
2460	Fairview WW - North	35.3	35.3	0.0	0.0
2460	Fairview WW - South	39.8	39.9	0.0	0.0
2467	Coatesville WW*	148.1	150.0	1.9	0.6
2467	*includes Sadsbury & Valley		0.0		
2469	Blue Mountain Lake WW	12.9	12.9	-0.1	0.0
2469	Lehman Pike WW - Saw Creek	50.5	50.5	0.0	0.0
2469	Delaware WW (Wild Acres)	5.8	5.8	0.0	0.0
2470	Foster WW	0.0	9.1	9.1	0.0
2485	McEwensville WW	2.6	2.6	0.0	0.0
2487	New Cumberland WW	28.7	28.8	0.1	0.0
2489	Turbotville WW	4.1	4.1	0.0	0.0
2492	Scranton WW	331.1	331.6	0.5	0.0
2494	York WW	0.0	102.9	102.9	0.0
<b>TOTAL</b>		<b>1,184.3</b>	<b>1,334.3</b>	<b>150.0</b>	<b>1.0</b>

**NOTES:**

1) Upper Pottsgrove WW, Foster WW, and York WW do not have 2021 AAOP data because they were acquired in 2022.

**Table 7: Miles of Main by Diameter (MI)**

DISTRICT CODE	DISTRICT	TOTAL LENGTH BY DIAMETER (MI)						Unknown	TOTAL (MI)
		≤ 4"	6" - 8"	10" - 12"	14" - 18"	20" - 24"	> 24"		
2412	McKeesport WW	0.2	41.4	51.3	34.9	13.0	11.5	25.8	178.0
2413	Exeter WW	0.2	104.0	8.8	6.2	1.1	2.8	2.8	125.8
2417	Royersford WW	0.1	11.3	0.6	1.7	0.0	0.0	0.2	13.8
2418	Upper Pottsgrove WW	1.3	18.2	3.3	0.8	0.0	0.0	0.1	23.6
2419	Kane WW	5.8	37.6	14.1	0.9	1.3	1.9	0.4	61.9
2426	Claysville WW	0.2	9.5	1.7	0.0	0.0	0.0	0.0	11.4
2435	Koppel WW	0.0	3.8	0.4	1.0	0.0	0.0	0.0	5.2
2436	Marcel Lakes WW	5.4	5.2	0.7	0.0	0.0	0.0	0.0	11.2
2437	Franklin WW*	0.0	11.2	1.7	0.0	0.0	0.0	0.3	13.1
2437	*includes Hamiltonban								
2438	Paint Elk WW*	2.1	19.0	0.2	0.2	0.0	0.0	0.2	21.7
2438	*includes Shippenville								
2447	Clarion WW	0.9	36.0	6.3	2.7	0.4	0.6	0.6	47.4
2458	Pocono County Place WW	15.5	27.6	1.2	2.6	0.2	0.1	0.2	47.4
2460	Fairview WW - North	0.8	30.9	3.4	0.0	0.2	0.0	0.0	35.3
2460	Fairview WW - South	0.0	38.8	1.1	0.0	0.0	0.0	0.0	39.9
2467	Coatesville WW*	9.2	66.9	8.1	6.5	1.3	1.4	56.7	150.0
2467	*includes Sadsbury & Valley								
2469	Blue Mountain Lake WW	10.6	2.3	0.0	0.0	0.0	0.0	0.0	12.9
2469	Lehman Pike WW - Saw Creek	41.7	7.2	1.6	0.0	0.0	0.0	0.0	50.5
2469	Delaware WW (Wild Acres)	0.0	0.0	0.0	0.0	0.0	0.0	5.8	5.8
2470	Foster WW	1.4	6.9	0.8	0.0	0.0	0.0	0.0	9.1
2485	McEwensville WW	0.1	2.1	0.3	0.0	0.0	0.0	0.1	2.6
2487	New Cumberland WW	0.1	24.4	2.9	1.4	0.1	0.1	0.0	28.8
2489	Turbotville WW	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.1
2492	Scranton WW	0.4	133.3	110.6	37.0	21.1	21.2	7.9	331.6
2494	York WW	0.0	77.4	10.6	4.9	2.8	7.1	0.1	102.9
<b>TOTAL (MI)</b>		<b>96.1</b>	<b>718.9</b>	<b>229.4</b>	<b>100.7</b>	<b>41.4</b>	<b>46.6</b>	<b>101.2</b>	<b>1,334.3</b>

**NOTE:**

1) Upper Pottsgrove WW, Foster WW, and York WW do not have 2021 AAOP data

**Table 8: Miles of Main by Diameter (%)**

DISTRICT CODE	DISTRICT	TOTAL LENGTH BY DIAMETER (MI)							TOTAL (MI)
		≤ 4"	6" - 8"	10" - 12"	14" - 18"	20" - 24"	> 24"	Unknown	
2412	McKeesport WW	0.1%	23.2%	28.8%	19.6%	7.3%	6.4%	14.5%	<b>178.0</b>
2413	Exeter WW	0.2%	82.7%	7.0%	4.9%	0.8%	2.2%	2.3%	<b>125.8</b>
2417	Royersford WW	0.5%	81.5%	4.5%	12.0%	0.0%	0.0%	1.5%	<b>13.8</b>
2418	Upper Pottsgrove WW	5.5%	76.9%	13.9%	3.4%	0.0%	0.0%	0.3%	<b>23.6</b>
2419	Kane WW	9.3%	60.7%	22.8%	1.4%	2.1%	3.0%	0.7%	<b>61.9</b>
2426	Claysville WW	1.9%	82.9%	15.2%	0.0%	0.0%	0.0%	0.0%	<b>11.4</b>
2435	Koppel WW	0.0%	73.5%	7.4%	19.1%	0.0%	0.0%	0.0%	<b>5.2</b>
2436	Marcel Lakes WW	48.2%	45.9%	5.9%	0.0%	0.0%	0.0%	0.0%	<b>11.2</b>
2437	Franklin WW*	0.0%	85.4%	12.6%	0.0%	0.0%	0.0%	2.0%	<b>13.1</b>
2437	*includes Hamiltonban								
2438	Paint Elk WW*	9.9%	87.5%	0.8%	1.1%	0.0%	0.0%	0.7%	<b>21.7</b>
2438	*includes Shippenville								
2447	Clarion WW	1.9%	75.9%	13.2%	5.7%	0.9%	1.2%	1.2%	<b>47.4</b>
2458	Pocono County Place WW	32.8%	58.3%	2.5%	5.5%	0.4%	0.2%	0.4%	<b>47.4</b>
2460	Fairview WW - North	2.3%	87.4%	9.6%	0.0%	0.7%	0.0%	0.0%	<b>35.3</b>
2460	Fairview WW - South	0.0%	97.3%	2.7%	0.0%	0.0%	0.0%	0.0%	<b>39.9</b>
2467	Coatesville WW*	6.1%	44.6%	5.4%	4.3%	0.8%	1.0%	37.8%	<b>150.0</b>
2467	*includes Sadsbury & Valley								
2469	Blue Mountain Lake WW	82.2%	17.8%	0.0%	0.0%	0.0%	0.0%	0.0%	<b>12.9</b>
2469	Lehman Pike WW - Saw Creek	82.6%	14.3%	3.1%	0.0%	0.0%	0.0%	0.0%	<b>50.5</b>
2469	Delaware WW (Wild Acres)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	<b>5.8</b>
2470	Foster WW	15.7%	75.5%	8.7%	0.0%	0.0%	0.0%	0.0%	<b>9.1</b>
2485	McEwensville WW	5.3%	78.7%	11.6%	0.0%	0.0%	0.0%	4.3%	<b>2.6</b>
2487	New Cumberland WW	0.4%	84.6%	10.0%	4.7%	0.2%	0.2%	0.0%	<b>28.8</b>
2489	Turbotville WW	1.2%	98.8%	0.0%	0.0%	0.0%	0.0%	0.0%	<b>4.1</b>
2492	Scranton WW	0.1%	40.2%	33.4%	11.2%	6.4%	6.4%	2.4%	<b>331.6</b>
2494	York WW	0.0%	75.3%	10.3%	4.7%	2.7%	6.9%	0.1%	<b>102.9</b>
<b>TOTAL (MI)</b>		<b>96.1</b>	<b>718.9</b>	<b>229.4</b>	<b>100.7</b>	<b>41.4</b>	<b>46.6</b>	<b>101.2</b>	<b>1,334.3</b>

**NOTE:**

1) Upper Pottsgrove WW, Foster WW, and York WW do not have 2021 AAOP data

**Table 9: Miles of Main by Material (MI)**

DISTRICT CODE	DISTRICT	TOTAL LENGTH BY MATERIAL (MI)														UNKNOWN	TOTAL (MI)		
		ABS	AC/TR	Brick	CIL	CIU	COBBLESTONE	DI	HDPE	PCCP	PE	PVC	RCP	ST	STONE			VCP	OTH
2412	McKeesport WW	0.0	0.0	0.2	1.4	55.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	83.9	2.3	13.8	178.0
2413	Exeter WW	0.0	0.3	0.0	0.0	1.8	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	57.3	0.0	9.9	125.8
2417	Royersford WW	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	13.8
2418	Upper Pottsgrove WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	9.8	23.6
2419	Kane WW	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	25.4	0.0	0.4	61.9
2426	Claysville WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4
2435	Koppel WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	5.2
2436	Marcel Lakes WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2
2437	Franklin WW*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	13.1
2437	*Includes Hamiltonban																		
2438	Paint Elk WW*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.8	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.9	21.7
2438	*includes Shipperville																		
2447	Clanton WW	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.6	5.8	0.0	0.0	0.0	0.0	12.4	0.0	0.0	4.6	47.4
2458	Pocono County Place WW	22.7	0.1	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.4
2460	Fairview WW - North	0.0	9.3	0.0	0.0	0.0	0.0	0.0	0.2	0.9	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	35.3
2460	Fairview WW - South	0.0	2.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	39.9
2467	Coatesville WW*	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.3	2.7	0.0	0.0	0.0	0.0	22.6	0.0	0.0	66.2	150.0
2467	*Includes Sadsbury & Valley																		
2469	Blue Mountain Lake WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9
2469	Lehman Pike WW - Saw Creek	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.5
2469	Delaware WW (Wild Acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	5.8
2470	Foster WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1
2485	McEwensville WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6
2487	New Cumberland WW	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	25.4	0.0	0.0	0.1	28.8
2489	Turbotville WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	4.1
2492	Scranton WW	0.1	0.0	4.5	0.2	0.2	0.5	0.6	0.6	0.1	0.2	19.5	9.8	0.0	112.0	0.7	182.5	331.6	102.9
2494	York WW	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	6.6	5.2	0.0	86.7	0.0	1.9	102.9	1.9
	<b>TOTAL (MI)</b>	<b>24.7</b>	<b>12.2</b>	<b>4.7</b>	<b>4.3</b>	<b>57.8</b>	<b>0.5</b>	<b>4.8</b>	<b>16.0</b>	<b>0.1</b>	<b>37.0</b>	<b>395.2</b>	<b>25.4</b>	<b>0.0</b>	<b>438.5</b>	<b>3.0</b>	<b>310.0</b>	<b>1,334.3</b>	<b>1.9</b>

**NOTES:**

- 1) 'OTH' material includes, but is not limited to, Corrugated Metal Pipe, Corrugated Plastic Pipe, and Corrugated Polyethylene Pipe.
- 2) Upper Pottsgrove WW, Foster WW, and York WW do not have 2021 AAOP data

**Table 10: Miles of Main by Material (%)**

DISTRICT CODE	DISTRICT	TOTAL LENGTH BY MATERIAL (MI)																UNKNOWN	TOTAL (MI)
		ABS	AC/TR	Brick	CIL	CIU	COBBLESTONE	DI	HDPE	PCCP	PE	PVC	RCP	ST	STONE	VCP	OTH		
2412	McKeesport WW	0.0%	0.0%	0.1%	0.8%	30.9%	0.0%	0.2%	0.0%	0.0%	0.1%	4.3%	0.0%	0.0%	47.1%	1.3%	7.8%	178.0	
2413	Exeter WW	0.0%	0.2%	0.0%	0.0%	1.4%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	45.6%	0.0%	7.8%	125.8	
2417	Royersford WW	0.0%	0.0%	0.0%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	93.9%	13.8	
2418	Upper Pottsgrove WW	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.5%	0.0%	41.5%	23.6	
2419	Kane WW	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.3%	0.0%	0.0%	55.5%	1.5%	0.0%	0.0%	41.0%	0.0%	0.7%	61.9	
2426	Claysville WW	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.4	
2435	Koppel WW	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	31.5%	0.0%	0.0%	0.0%	67.9%	0.0%	0.0%	5.2	
2436	Marcel Lakes WW	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.2	
2437	Franklin WW*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	87.3%	0.0%	0.0%	0.0%	12.7%	0.0%	0.0%	13.1	
2437	*includes Hamiltonban	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	8.1%	0.0%	77.8%	0.0%	0.0%	0.0%	4.9%	0.0%	8.7%	21.7	
2438	Paint Elk WW*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	47.4	
2438	*includes Shippenville	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	12.3%	0.0%	46.0%	0.0%	0.0%	0.0%	26.2%	0.0%	9.8%	47.4	
2447	Clarion WW	47.8%	0.1%	0.0%	0.0%	1.3%	0.0%	0.5%	0.0%	0.0%	49.3%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3	
2458	Pocono County Place WW	0.0%	26.5%	0.0%	0.0%	0.0%	0.0%	0.6%	2.6%	0.0%	58.6%	0.0%	0.0%	0.0%	11.7%	0.0%	0.0%	39.9	
2460	Fairview WW - North	0.0%	6.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	93.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	150.0	
2460	Fairview WW - South	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	0.2%	1.8%	0.0%	38.0%	0.2%	0.0%	0.0%	15.0%	0.0%	44.1%	150.0	
2467	Coatesville WW*	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.9	
2467	*includes Sadsbury & Valley	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.3%	0.0%	69.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.5	
2469	Blue Mountain Lake WW	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8	
2469	Lehman Pike WW - Saw Creek	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	9.1	
2469	Delaware WW (Wild Acres)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5	
2470	Foster WW	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.8	
2485	McEwensville WW	0.0%	0.0%	0.0%	3.4%	0.0%	0.0%	1.2%	0.0%	0.0%	6.9%	0.2%	0.0%	0.0%	88.2%	0.0%	0.2%	4.1	
2487	New Cumberland WW	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	86.4%	0.0%	0.0%	0.0%	6.9%	0.0%	0.0%	331.6	
2489	Turbotville WW	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.0%	5.9%	3.0%	0.0%	0.0%	33.8%	0.2%	55.0%	102.9	
2492	Scranton WW	0.0%	0.0%	1.4%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	6.0%	0.0%	0.0%	84.3%	0.0%	1.9%	310.0	
2494	York WW	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	6.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1334.3	
	<b>TOTAL (MI)</b>	<b>24.7</b>	<b>12.2</b>	<b>4.7</b>	<b>4.3</b>	<b>57.8</b>	<b>0.5</b>	<b>4.8</b>	<b>16.0</b>	<b>0.1</b>	<b>37.0</b>	<b>25.4</b>	<b>0.0</b>	<b>0.1</b>	<b>438.5</b>	<b>3.0</b>	<b>310.0</b>	<b>1334.3</b>	

**NOTES:**

- 1) 'OTH' material includes, but is not limited to, Corrugated Metal Pipe, Corrugated Plastic Pipe, and Corrugated Polyethylene Pipe
- 2) Upper Pottsgrove WW, Foster WW, and York WW do not have 2021 AAOP data

**Table 11: District Subtotals with Replacement vs Rehabilitation Quantity**

District & Type	District #	Water/WW	Project TYPE	WBS Description	2022 DSIC Filing	Average Cost per foot	Replacement Footage	Replacement Miles	Rehabilitation Footage	Rehabilitation Miles	# of Services	# of Laterals	# of Manhole							
2412-B Total	PA-MCKEESPORT WW	WW	B	Mains-Replaced	5,304,980.78	345.72	2,012	0.38	13,355.00	2.53	0	0	13							
2412-C Total	PA-MCKEESPORT WW	WW	C	Mains-Unscheduled	740,112.77		0	-			0	0	0							
2412-D Total	PA-MCKEESPORT WW	WW	D	Mains-Relocated	1,015.52		0	-			0	0	0							
2412-F Total	PA-MCKEESPORT WW	WW	F	Manholes-Rep	2,007,214.21		0	-			0	0	0							
2412-H Total	PA-MCKEESPORT WW	WW	H	Services and Laterals-Replaced	(11,388.03)		0	-			0	0	0							
2412-X - IP Total	PA-MCKEESPORT WW	WW	X - IP	Spring St	445,768.92	445.77	1,000	0.19			0	0	3							
2435-B Total	PA-KOPPEL WW	WW	B	Mains-Replaced	961,484.42	491.81	1,955	0.37			18	0	4							
2435-C Total	PA-KOPPEL WW	WW	C	Mains-Unscheduled	123.50		0	-			0	0	0							
2435-D Total	PA-KOPPEL WW	WW	D	Mains-Relocated	107,560.63		0	-			0	0	0							
2438-B Total	PA-PAINT ELK TWP WW	WW	B	Mains-Replaced	132,923.38	100.32	1,325	0.25			0	0	0							
2438-F Total	PA-PAINT ELK TWP WW	WW	F	Manholes-Rep	5,910.00		0	-			0	0	0							
2447-B Total	PA-CLARION WW	WW	B	Mains-Replaced	1,231,815.92	390.31	1,670	0.32	1,486.00	0.28	25	0	3							
2447-C Total	PA-CLARION WW	WW	C	Mains-Unscheduled	(3,887.78)	(323.98)	12	0.00			0	0	0							
2447-D Total	PA-CLARION WW	WW	D	Mains-Relocated	(24,491.27)		0	-			0	0	0							
2447-F Total	PA-CLARION WW	WW	F	Manholes-Rep	15,414.85		0	-			0	0	0							
2447-H Total	PA-CLARION WW	WW	H	Laterals-Replaced	16,682.81		0	-			0	0	0							
2447-X - IP Total	PA-CLARION WW	WW	X - IP	Hemlock Ridge Lift Station Improvem	231,379.68		0	-			1	0	0							
2458-C Total	PA-POCONO WW	WW	C	Mains-Unscheduled	2,889.09	1,444.55	2	0.00			0	0	0							
2458-H Total	PA-POCONO WW	WW	H	Laterals-Replaced	76,322.39		0	-			0	0	0							
2460-B Total	PA-FAIRVIEW WW	WW	B	Mains-Replaced	696,805.38	196.01	0	-	3,555.00	0.67	0	0	0							
2460-H Total	PA-FAIRVIEW WW	WW	H	Laterals-Replaced	7,383.06		0	-			0	0	0							
2467-B Total	PA-COATESVILLE WW	WW	B	Mains-Replaced	1,267,187.33	375.91	0	-	3,371.00	0.64	78	1	18							
2467-C Total	PA-COATESVILLE WW	WW	C	Mains-Unscheduled	53,982.55	8,997.09	6	0.00			0	0	0							
2467-F Total	PA-COATESVILLE WW	WW	F	Manholes-Rep	10,550.43		0	-			0	0	0							
2467-H Total	PA-COATESVILLE WW	WW	H	Laterals-Replaced	154,159.46		0	-			0	0	0							
2469-C Total	PA-LEHMAN PIKE WW	WW	C	Mains-Unscheduled	17,740.22	1,971.14	9	0.00			0	0	0							
2469-F Total	PA-LEHMAN PIKE WW	WW	F	Manholes-Rep	1,197.26		0	-			0	0	0							
2469-H Total	PA-LEHMAN PIKE WW	WW	H	Laterals-Replaced	223,274.31		0	-			0	0	0							
2483-B Total	PA-FRANKLIN WW	WW	B	Mains-Replaced	86,057.17		0	-			0	0	0							
2487-B Total	PA-NEW CUMBERLAND WW	WW	B	Mains-Replaced	1,504,591.14	112.57	0	-	13,366.00	2.53	0.00	0	0							
2487-C Total	PA-NEW CUMBERLAND WW	WW	C	Mains-Unscheduled	14,656.03	4,885.34	3	0.00			0	0	0							
2487-H Total	PA-NEW CUMBERLAND WW	WW	H	Laterals-Replaced	27,176.87		0	-			0	0	0							
2492-B Total	PA-SCRANTON WW	WW	B	Mains-Replaced	6,664,858.37	293.04	3,334	0.63	19,410.00	3.68	23	0	13							
2492-C Total	PA-SCRANTON WW	WW	C	Mains-Unscheduled	2,665,526.96	9,159.89	291	0.06			0	0	0							
2492-D Total	PA-SCRANTON WW	WW	D	Mains-Relocated	283,146.65	757.87	1,098	0.21			0	0	0							
2492-F Total	PA-SCRANTON WW	WW	F	Manholes-Rep	603,240.05		0	-			0	0	0							
2492-H Total	PA-SCRANTON WW	WW	H	Laterals-Replaced	681,122.21		0	-			0	0	0							
2492-X - IP Total	PA-SCRANTON WW	WW	X - IP	025	(7,014.74)		0	-			0	0	0							
Total													54,543	2	12,717	29,143	26,197,473	145	1	54

**Table 12: District WWTP Flows and Estimated I&I for 2019 – 2022**

Sanitary Sewer Systems	2019		2020		2021		2022	
	WWTP Flows 1000 gals	Estimated I&I 1000 gals	WWTP Flows 1000 gals	Estimated I&I 1000 gals	WWTP Flows 1000 gals	Estimated I&I 1000 gals	WWTP Flows 1000 gals	Estimated I&I 1000 gals
Claysville WW	37,017	17,465	32,361	14,562	30,021	11,386	31,646	12,852
Koppel WW	78,445	66,713	62,678	51,333	54,568	41,683	36,865	25,661
Clean Treatment WW	14,053	2,437	14,366	2,007	15,360	2,698	15,014	2,349
Clarion WW/Paint Elk WW	536,520	302,141	439,933	221,189	463,642	264,057	482,895	281,678
Pocono WW	226,635	84,365	243,787	91,179	261,097	119,250	261,144	124,698
Fairview WW/New Cumberland WW	544,579	210,933	493,154	129,398	525,021	179,856	584,930	251,895
Coatesville WW	1,220,225	224,139	1,381,559	433,826	1,202,249	276,715	1,108,579	440,130
Lehman Pike WW <sup>(1)</sup>	114,226	-10,628	128,172	-14,350	129,352	-6,913	200,003	67,896
Franklin WW <sup>(2)</sup>	29,468	4,844	26,252	1,412	30,484	5,428	28,981	3,853
McEwensville WW	6,604	1,040	6,518	890	6,953	1,613	7,191	2,262
<b>Combined Sewer Systems</b>		Permitted Stormwater and I&I		Permitted Stormwater and I&I		Permitted Stormwater and I&I		Permitted Stormwater and I&I
	WWTP Flows 1000 gals	1000 gals	WWTP Flows 1000 gals	1000 gals	WWTP Flows 1000 gals	1000 gals	WWTP Flows 1000 gals	1000 gals
McKeesport WW	4,203,492	3,661,527	4,295,831	3,750,618	4,444,757	3,933,818	4,317,151	3,786,870
Scranton WW	5,009,017	2,812,294	4,557,615	2,370,727	4,696,212	2,481,243	4,281,450	2,124,276

Notes:

(1) Lehman Pike WW is primarily a low pressure system with very little I&I. Small differences can be attributed to metering and consupitive water use. 2022 data includes WWTP flows from Saw Creek WWTP and Blue Mountain Lake WWTP.

(2) Franklin WW does not have a metered water system, the 2019 average per customer flow of 72,000 gpy (197 gpd) was used to approximate flow.

**Summary:**

PAWC's AAO Plan demonstrates that PAWC has accelerated DSIC-eligible wastewater capital investment and the actual cumulative expenditures over the last 4 years exceed planned budgetary levels included in the LTIP, primarily due to an increased level of investment, higher material, and restoration costs.

The projected 2023 wastewater replacement and rehabilitation program on Table 5 of this AAO Plan is consistent with, though higher than, year 2023 of the current approved LTIP for the wastewater operations covered under this AAO Plan. The elevated investment is a result of including newer acquisitions in the projected plan along with the higher material costs, higher restoration costs and additional work due to poor infrastructure condition that has been uncovered in the newer acquisitions. A revised Long Term Infrastructure Improvement Plan (LTIP) will be submitted to the Commission in March of 2023 and will outline these costs along with the newer acquisitions that were not included in the previous LTIP.

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**CERTIFICATE OF SERVICE**

I hereby certify that I have on this day served a true and correct copy of Pennsylvania-American Water Company's 2022 Wastewater Annual Asset Optimization Plan upon the participants listed below, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54:

**VIA ELECTRONIC DELIVERY**

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Bureau of Investigation and Enforcement  
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Dated this 1<sup>st</sup> day of March, 2023