
EXHIBIT V

TESTIMONY OF MARK J. BUBEL, SR.

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

AQUA PENNSYLVANIA WASTEWATER, INC.

DOCKET NO. A-2019-3009052

AQUA STATEMENT NO. 2

**DIRECT TESTIMONY OF
MARK J. BUBEL, SR.**

**With Regard To
Description of the System
Integration into Current Operations
Technical Fitness
Public Benefits of the Transaction**

July 30, 2019

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1 **Q. Please state your name and business address.**

2 A. My name is Mark J. Bubel, Sr. My business address is 762 West Lancaster Avenue,
3 Bryn Mawr, Pennsylvania 19010.

4

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by Aqua Pennsylvania, Inc., (“Aqua PA”) as a Project Engineer III.

7

8 **Q. Please provide a brief description of your education and work experience.**

9 A. I received a Bachelor’s of Science Degree (B.S.) in Civil Engineering in 1980 from
10 Lehigh University and a Master’s Degree in Civil Engineering (M.C.E.) with a
11 concentration in Environmental Engineering in 1983 from Villanova University. I have
12 worked in various engineering roles and have over 38 years of experience in
13 environmental engineering related to municipal and industrial wastewater treatment and
14 operations. I have worked at Aqua America since 2003 in roles related to wastewater
15 treatment facilities including planning, design, start-up, and operational troubleshooting. I
16 am a Registered Professional Engineer in Pennsylvania, Delaware, Maryland, North
17 Carolina, and Florida. I am also a Licensed Water and Wastewater Operator in
18 Pennsylvania.

19

20 **Q. Have you previously testified before the Public Utility Commission?**

21 A. Yes. I provided testimony in Aqua Pennsylvania Wastewater, Inc.’s (“APW” or the
22 “Company”) New Garden, Limerick, East Bradford, and Cheltenham Section 1329
23 Application proceedings at Docket Nos. A-2016-2580061, A-2017-2605434, A-2018-

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1 3001582, and A-2019-3008491, respectively. I also provided testimony in Aqua PA and
2 APW's most recent base rate case proceeding at Docket Nos. R-2018-3003558 and R-
3 2018-3003561

4
5 **Q. What is the purpose of your testimony?**

6 A. The purpose of my testimony is as follows: (1) to provide a general description of the
7 acquired system; (2) to explain how the acquired system will be integrated into APW's
8 operations; (3) to describe APW's technical fitness to run the system, and (4) to discuss
9 the benefits of the transaction.

10
11 **Q. Are you sponsoring any Exhibits with the Company's filing?**

12 A. No.

13
14 **Q. Please provide a general overview of APW.**

15 A. APW, a subsidiary of Aqua PA, is engaged in the business of collecting, treating,
16 transporting, and disposing of wastewater for the public. APW serves approximately
17 28,000 customers in Adams, Bucks, Carbon, Chester, Clarion, Clearfield, Delaware,
18 Lackawanna, Luzerne, Monroe, Montgomery, Pike, Schuylkill, Venango, and Wyoming
19 Counties. APW operates 37 wastewater treatment plants ("WWTP") throughout the
20 Commonwealth of Pennsylvania, and 20 systems of APW's Southeast Division are in
21 proximity to East Norriton Township allowing for operational efficiencies. APW, and its
22 parent company Aqua PA, have approximately 600 employees bringing extensive
23 expertise in providing water and wastewater service to citizens of Pennsylvania.

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1 **Q. Please provide a description of the East Norriton Township (“East Norriton” or**
2 **“Township”) Sanitary Wastewater Collection System (“East Norriton Wastewater”**
3 **or the “System”).**

4 A. The East Norriton Wastewater system is a collection and conveyance system that collects
5 wastewater from within East Norriton Township and conveys wastewater to a wastewater
6 treatment plant (“WWTP”) owned by the East Norriton-Plymouth-Whitpain Joint Sewer
7 Authority (“JSA”). There are certain properties located within East Norriton and
8 Plymouth Township and East Norriton and Whitpain Township that discharge into the
9 sewers of the other township, due to the availability of sewers near these properties
10 located in the other townships. These arrangements are documented in the assigned
11 contracts. Additionally, the Burnside subdivision within East Norriton sends wastewater
12 flows to West Norriton Township due to the inflow and infiltration (“I&I”) within East
13 Norriton’s collection system. These sewers are maintained by West Norriton Township
14 per the November 12, 2003 agreement between the JSA, East Norriton, Whitpain
15 Township and Plymouth Township. The Burnside subdivision is not part of the requested
16 territory in this Application. The East Norriton Wastewater system consists of
17 approximately 59 miles of gravity sewer collection mains and interceptors and four miles
18 of force mains. The System also includes nine pump stations, and a surge tank located at
19 the Einstein Pump Station. The wastewater from East Norriton is conveyed to the JSA
20 via a single connection at the JSA’s Sawmill Pump Station located in the southeast corner
21 of East Norriton.

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1 Description of the System

2 The JSA WWTP provides advanced secondary treatment from two trickling
3 filtration units with an upgrade to an activated sludge treatment train operated as a
4 Modified Ludzack-Ettinger (“MLE”) biological nutrient removal (“BNR”) process along
5 with two BioMag treatment units with polymer and magnetite chemical addition facilities
6 added to the activated sludge train. The plant discharges treated effluent to the Schuylkill
7 River. The effluent from the plant is disinfected with sodium hypochlorite. The JSA
8 WWTP is permitted at an annual average flow of 8.67 million gallons per day (“MGD”)
9 and has a maximum monthly average flow of 11.29 MGD. The 2018 annual average
10 flow was 7.54 MGD and the 3-month maximum average flow was 8.98 MGD. The
11 WWTP is permitted for a maximum organic loading of 33,925 pounds per day (lbs./day).
12 The 2018 maximum month organic loading was 10,189 lbs./day.

13 The East Norriton Wastewater collection and transmission piping is summarized
14 as follows:

15

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	Quantity	Pipe Size & Material
Sewer District No. 1 Phase I	155,563	8" VCP
	78	8" CIP
	6,723	10" VCP
	138	10" CIP
	4,616	12" VCP
	5,271	15" VCP
	1,317	18" RCP
	3,809	21" RCP
	1,240	24" RCP
Sewer District No. 1 Phase II	45,148	8" VCP
	3,280	10" VCP
	2,712	12" VCP
	2,803	15" VCP
Developments	37,356	8" VCP
	38,562	8" PVC
	762	8" DIP
	2,212	8" Unknown
Force Mains	6,254	4" CIP
	3,217	6" DIP
	2,092	6" PVC
	1,704	12" CIP
	4,872	12" CIP (sliplined)
	3,757	16" CIP

1

2 **Q. Please state if there are any current environmental compliance issues for the East**
3 **Norriton Wastewater system.**

4 A. East Norriton has experienced 25 sanitary sewer overflows (“SSO”) in the past year, with
5 3 of those SSO’s occurring due to blockages from roots and grease and the balance of the
6 SSO’s occurring due to wet weather events. East Norriton received a letter from PA DEP
7 dated July 15, 2019 regarding the Department’s review of East Norriton’s 2018 Chapter
8 94 Report. DEP notes that they believe that a portion of the collection system for East

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1 Norriton Township is subject to an excessive amount of wet weather inflow and
2 infiltration and that the sewers tributary to the Norris City Pump Station are hydraulically
3 overloaded. Aqua will work with the Township and DEP to address these issues.
4

5 **Q. Are there any similar noncompliance issues pending with the United States**
6 **Environmental Protection Agency (“EPA”)?**

7 A. No. The DEP holds primacy over EPA in the Commonwealth of Pennsylvania.
8

9 **Q. Please provide the elevations for the JSA WWTP and the Requested Territory.**

10 A. JSA WWTP: elevation generally varies between EL 62 to EL 71.

11 Requested Territory: Area elevations vary generally from:

- 12 • EL 335 to EL 428 along the western boundary.
 - 13 • EL 335 to EL 207 along the southern boundary.
 - 14 • EL 428 to EL 280 along the northern boundary.
 - 15 • EL 280 to EL 207 along the eastern boundary.
- 16

17 **Q. Please state the approximate time of the installation of the component facilities of**
18 **the system.**

19 A. With regard to the approximate time of the original construction, the JSA WWTP was
20 constructed in approximately 1960 and provided basic primary treatment. The plant was
21 upgraded to provide advanced secondary treatment with total nitrogen removal in
22 approximately 2007. The majority of the East Norriton Wastewater system was
23 originally constructed in two phases in the 1960s and 1970s. Various areas of the System

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1 have been replaced since then, and several developments have been added to the System
2 from the mid-1970s through 2012. However, the average age of the pipe in the East
3 Norriton system is approximately 50 years old.

4
5 **Q. Is APW planning any capital projects over the next 10 years?**

6 A. Yes. APW looked at upgrades to pump stations, force mains, and gravity collection
7 systems based on facility conditions observed, facility age, and safety. APW estimates
8 that it will invest approximately \$16 million over the next 10 years.

9 Upgrades to pump stations included pump replacement, electrical and mechanical
10 replacement, emergency generator replacement, as well as facilities upgrade. Force main
11 replacement will occur based on pipe age. Gravity collection system pipe rehabilitation
12 and replacement will occur based on an assessment of pipe age and condition. APW will
13 work with East Norriton and DEP to address the I&I and SSOs within the system.

14
15 **Q. Do you foresee any other projects that would be required in the immediate future?**

16 A. Replacement and upgrade of facilities will continue beyond APW's 10-year capital plan
17 based on facility age and expected facility life span.

18
19 **Q. Please state the actual number of customers by class and gallons treated for those
20 classes for East Norriton residents.**

21 A. East Norriton has 4,966 customers. East Norriton does not distinguish between
22 residential, commercial, and industrial customers. All customers are charged either a
23 metered rate or a flat rate.

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1 The number of gallons from East Norriton that is treated by the JSA was
2 approximately 989 million gallons for the period of January 1, 2018 to December 31,
3 2018. East Norriton does not distinguish between residential, commercial, and industrial
4 customers.

5
6 **Q. Please state the estimated number of future connections for the system for the next 5**
7 **years.**

8 A. The below table provides projected equivalent dwelling units (“EDU”) for the next five
9 years (2019-2023):

	2019	2020	2021	2022	2023	Total
East Norriton	109	116	63	129	111	528

10

11 **Q. Is there present system capacity to meet the demands of current and future**
12 **customers?**

13 A. The 2018 Chapter 94 Report notes that a potential hydraulic overload condition may be
14 present in the Stony Creek No. 1 interceptor in 2021. The summary table however
15 suggests this condition in 2022. The July 15, 2019 communication from PA DEP,
16 mentioned above, notes that DEP believes a portion of the East Norriton sanitary sewer
17 collection system may be hydraulically overloaded and that DEP wishes to meet and
18 discuss the need for a Corrective Action Plan (“CAP”) and a Connection Management
19 Plan (“CMP”). As such, it appears that a portion of the East Norriton system may have a
20 capacity issue. APW plans on meeting with the Township and DEP to work toward a
21 resolution of this condition. APW is familiar with CAPs and CMPs which tie
22 rehabilitation work and upgrades to a release of EDU’s for new sewer connections.

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1 **Q. Please state how many miles the East Norriton Wastewater system is from APW's**
2 **existing service territory.**

3 A. The East Norriton Wastewater system's distance from APW's existing service territory is
4 as follows:

5

Buyer's Plant	Location	Approximate Distance to East Norriton, miles
Media WWTP	Media, PA	16.4
Stony Creek WWTP	Worcester Township, PA	1.1
Bryn Mawr, PA Corporate HQ	Bryn Mawr, PA	8.8

6

7 **Q. Will the East Norriton Wastewater system be physically interconnected with APW's**
8 **system or be operated as a standalone system?**

9 A. The East Norriton Wastewater system will be operated as a standalone system within
10 APW's footprint.

11

12 **Q. Please describe how APW will integrate the operation of the East Norriton**
13 **Wastewater system into its current operations.**

14 A. The operation of the East Norriton System will be managed from APW's Southeastern
15 office. Management, customer service, regulatory compliance, engineering, financial,
16 and ancillary services will be provided seamlessly from our Southeastern Division
17 headquarters in Bryn Mawr, PA. APW will offer employment to current East Norriton
18 Wastewater employees prior to closing the transaction.

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1 **Q. Are the acquired East Norriton wastewater customers currently Aqua PA water**
2 **customers?**

3 A. No. East Norriton wastewater customers are currently served by Pennsylvania American
4 Water Company and wells for water service.

5

6 **Q. Will other Aqua PA employees assist in the operation of the system, if needed.**

7 A. Yes. APW has 19 wastewater operators, many holding dual water and wastewater
8 certifications, which may be called upon to assist in the operations of the system. These
9 operators are also supported by Aqua PA employees, which will benefit customers
10 through engineering and field service functions.

11

12 **Q. Please explain the support services that Aqua Services will provide to the East**
13 **Norriton Wastewater system.**

14 A. Aqua Services, Inc. (“Aqua Services”), the Service Company for Aqua America,
15 provides expertise in a variety of areas to the subsidiaries of Aqua America. Aqua
16 Services will provide support to the operation of the system through its employees’
17 expertise in accounting and financial, administrative, communications, corporate
18 secretarial, customer service and billing, engineering, fleet services, human resources,
19 information systems, operations, regulatory compliance, rates and regulatory, risk
20 management, water quality, legal, and purchasing, contracts and sales of real estate.

21

22 **Q. Does APW plan any physical, operational, and managerial changes after closing?**

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1 A. As mentioned above, there are planned capital improvements. The East Norriton
2 Wastewater system will be operated under APW's Southeastern division. There will be
3 no other physical, operational, and managerial changes after closing.

4
5 **Q. Is the East Norriton Wastewater system similar to other systems owned and**
6 **operated by APW?**

7 A. Yes. The East Norriton Wastewater system, as stated above, is a wastewater collection
8 system only. APW owns three (3) other collection system only systems.

9
10 **Q. Do you believe that APW is technically fit to own and operate the system?**

11 A. Yes.

12
13 **Q. Please describe the Company's technical fitness and how the Company can provide**
14 **quality and reliable service to East Norriton Wastewater customers.**

15 A. Aqua PA and APW are Class A utilities that already have certificates to operate
16 throughout the Commonwealth and have acquired many systems in the last three decades.
17 APW will provide quality and reliable service to the East Norriton Wastewater customers
18 given the Company's operational expertise as well as engineering support local to the
19 East Norriton Wastewater system. APW has expertise in troubleshooting mechanical
20 equipment as well as wastewater treatment processes. APW also has expertise in
21 operating wastewater collection and conveyance systems. APW strives to ensure the
22 collection, conveyance and pumping systems which the Company owns provide
23 continuous safe and reliable service. APW has worked with the Commission and

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1 statutory advocates to acquire and improve troubled wastewater systems (e.g.,
2 Washington Park Wastewater, Docket No. A230550F2000). In addition, APW was
3 appointed receiver for the North Heidelberg Sewer Company system in Berks County by
4 the Commission effective March 5, 2018. APW took over daily wastewater operations of
5 the facility serving approximately 274 customers on March 5, 2018. APW has provided
6 operations service and improvements to the system to ensure quality and reliable service.

7
8 **Q. Does APW have emergency preparedness measures in place?**

9 A. Yes. APW currently has emergency preparedness measures in place in order to ensure
10 security and continued service in emergency circumstances.

11
12 **Q. Please explain APW's safety programs.**

13 A. APW and Aqua PA maintain safety programs that entail basic safety training in all the
14 major categories which operators and management personnel are required to complete
15 including but not limited to:

- 16 • Confined Space Training
- 17 • Back and Lifting Safety
- 18 • Work Zone Traffic Control
- 19 • Excavation Safety Awareness
- 20 • Fall Protection Training
- 21 • Hazard Communication
- 22 • Personal Protective Equipment
- 23 • Emergency Egress, Exits and Fire Safety
- 24 • Electrical Safety Training
- 25 • Control of Hazardous Energy | Lockout Tagout
- 26 • Respiratory Protection
- 27 • Hearing Conservation
- 28

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1 APW's safety program and procedures provide public benefits in that the East
2 Norriton customers will have a leader in the wastewater industry providing service.

3

4 **Q. Can APW provide adequate wastewater collection, treatment, or disposal capacity**
5 **to meet present and future customer demands?**

6 A. Yes. APW can provide adequate wastewater service for present and future customers.
7 Aqua will continue to make improvements to the system to ensure any future customer
8 demands are met.

9

10 **Q. Please summarize why you believe it is in the public benefit for APW to own and**
11 **operate the system.**

12 A. Based on my explanation of APW's current operations, the East Norriton Wastewater
13 system's similarity to other systems operated by APW, the East Norriton Wastewater
14 system's proximity to APW's service territory, the additional support that will be
15 provided by APW as an experienced wastewater utility, and my explanation of APW's
16 technical fitness, all support that it is in the public benefit for APW to own and operate
17 the East Norriton Wastewater System.

18

19

DEP REQUIREMENTS

20 **Q. Does the Application include National Pollution Discharge Elimination System**
21 **("NPDES") permits?**

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1 A. Yes, although not part of the East Norriton Township wastewater system acquisition, the
2 NPDES discharge permits for the JSA WWTP is included in the Application as Exhibit
3 N1.

4
5 **Q. Does the Application include Water Quality Management (“WQM”) Permits?**

6 A. Yes. Although not part of the East Norriton Township wastewater system acquisition,
7 the WQM Permits for the JSA WWTP, issued in 2005, 2008 and 2014, are included in
8 the Application as Exhibits M1, M2 and M3.

9
10 **Q. Are Act 537 plans included in the Application?**

11 A. Yes. East Norriton Township’s current Act 537 plan update is included in the
12 Application as Exhibit P1. The East Norriton Act 537 plan special study revised and
13 appended from April 2009 is included in the Application as Exhibit P2. The Act 537 Plan
14 for the JSA has also been included as Exhibit P3.

15
16 **Q. Are there any Notices of Violation (“NOV”) issued to East Norriton Township by
17 the DEP in the last five years?**

18 A. Yes. There were 4 NOVs of which we are aware in the last 5 years. The NOVs and
19 narrative reports related to the East Norriton Wastewater system are included in the
20 Application as Exhibits O1, O2, O3 and O4. The explanations for the NOVs and
21 corrective actions are included in the narrative reports of the DEP.

22

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1 **Q. Were there any other NOVs issued to East Norriton Township by the DEP during**
2 **the last five years?**

3 A. To Aqua's knowledge, based upon a file search of the DEP's records, the above NOVs
4 are the only ones of record in the last 5 years.

5
6 **Q. Have there been any Consent Assessments of Civil Penalty ("CACP") entered into**
7 **by the Township and the DEP?**

8 A. No. There are not current CACPs entered into by the Township and the DEP.

9

10 **Q. Does this conclude your testimony?**

11 A. Yes, it does. However, I reserve the right to supplement my testimony as additional
12 issues and facts arise during the course of this proceeding.