

DOCUMENT  
FOLDER

RECEIVED

DOCKETED

DEC 19 2002

JAN 14 2003

PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

CINDY PARKS,

Complainant

v.

PENNSYLVANIA-AMERICAN WATER:  
COMPANY,

Respondent

DOCKET NO. C-00015377

---

DIRECT TESTIMONY  
JAY R. LUCAS  
ON BEHALF OF  
PENNSYLVANIA-AMERICAN WATER COMPANY  
STATEMENT 1.0

---

*Exhs. 1.1 & 1.2*

*12/3/02  
1169  
jan*

STATEMENT OF JAY R. LUCAS  
ON BEHALF OF  
PENNSYLVANIA-AMERICAN WATER COMPANY  
STATEMENT-1-0

1   **Q.    What is your name and business address?**

2    A.    My name is Jay R. Lucas and my business address is P. O. Box 1290, 300 Galley  
3        Road, McMurray, PA 15317.

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

5    A.    I am employed by Pennsylvania-American Water Company ("Pennsylvania-  
6        American" or "Company") as an Operations Manager. In my current position, I  
7        oversee the operations that are responsible for the production, supply and  
8        distribution of potable water to approximately 85,000 customers in four (4)  
9        separate Districts located within Pennsylvania-American's Western Operations.  
10       Those Districts are McMurray, Brownsville/California, Elizabeth/Monongahela,  
11       and Uniontown/Connellsville.

12   **Q.    Will you please outline your experience in the water utility industry?**

13    A.    I have worked in various capacities in the water and wastewater utility industry  
14        for more than nineteen (19) years. After graduating from College in 1982, I  
15        accepted a position with the Philadelphia Water Department (PWD) as a Civil  
16        Engineer. In this capacity, I was responsible for managing and start-up of multi-  
17        million dollar wastewater treatment plant construction projects at PWD's North  
18        East Water Pollution Control Plant. In 1989, I left PWD and accepted a position  
19        as Operations Engineer for Pennsylvania-American's Milton Operations. In this  
20        capacity, I was responsible for managing engineering projects for four (4)  
21        separate Districts, which included Milton, Philipsburg, Berwick, and Frackville.  
22        Part of my duties included designing and overseeing the construction of waterline  
23        extension projects. In 1995, I was promoted to Operations Manager for the  
24        Southwest Area of the Company's Western Operations. In this capacity, I am  
25        responsible for the operations of four (4) separate Districts located within the  
26        Company's Western Operations. Those Districts are McMurray, Brownsville/  
27        California, Elizabeth/Monongahela, and Uniontown/Connellsville. I have

1 presented testimony or been involved in formal complaint proceedings which are  
2 listed on PAWC Appendix I.A.

3 **Q. What is your educational background?**

4 A. I am a 1982 graduate of Lafayette College of Easton, Pennsylvania, where I  
5 received a Bachelor of Science Degree in Civil Engineering. I am also a 1998  
6 graduate of Robert Morris College of Moon Township, Pennsylvania, where I  
7 received a Master's Degree of Business Administration.

8 **Q. Do you hold any professional licenses or certification?**

9 A. Yes. I am a Licensed Professional Engineer in the State of Pennsylvania (PE-  
10 038950-E). I am an A-1 Certified Water Treatment Plant Operator in the State of  
11 Pennsylvania (W6712). I am an A-1 Certified Waste Water Treatment Plant  
12 Operator in the State of Pennsylvania (S9957).

13 **Q. Do you belong to any professional or industry associations?**

14 A. Yes. I am a member of the National Society of Professional Engineers (NSPE),  
15 the Pennsylvania Society of Professional Engineers (PSPE), the American Society  
16 of Civil Engineers (ASCE), the Water Works Operators Association of  
17 Pennsylvania (WWOAP), and the American Water Works Association (AWWA),  
18 of which I currently serve as Chairman of the Distribution Committee for the  
19 Pennsylvania Section of AWWA.

20 **Q. What is the nature of your duties with Pennsylvania-American?**

21 A. As an Operations Manager for Pennsylvania-American, I am responsible for  
22 overseeing the operations of four (4) separate Districts in the Company's Western  
23 Operations. These responsibilities primarily focus on three major areas, which  
24 include the production of potable water, the daily reading of water meters and the  
25 installation of new and replacement water meters, and the maintenance and  
26 extension of the waterline distribution system. In this capacity, I have  
27 approximately 15 salaried associates and 100 bargaining unit associates under my  
28 supervision. I am also responsible for the preparation and control of Operating  
29 and Maintenance Budgets and Capital Improvement Budgets.

30

1 **Q. What is the purpose of your testimony?**

2 A. The purpose of my testimony is to discuss the background and history as I know it  
3 of the attempts to extend the Company's water system to the Hickory Area of  
4 Mount Pleasant Township. I will also discuss and describe the meetings  
5 Pennsylvania-American has had with the Mount Pleasant Township Authority  
6 ("MPTA") in order to better define the proposed project and determine the  
7 number of potential Bona Fide Service Applicants. Additionally, I will discuss  
8 how Pennsylvania-American developed the cost estimates for a potential project  
9 to extend the Company's water system to the Hickory Area of Mount Pleasant  
10 Township. Finally, I will state my concerns with the testimony of OCA Witness  
11 Fought.

12 **Q. How many applications for water service has Pennsylvania-American**  
13 **received from homeowners, renters, businesses and local government located**  
14 **in the Hickory Area of Mount Pleasant Township?**

15 A. As of January 4, 2002, PAWC has received no application for water service from  
16 persons residing in the Hickory Area of Mount Pleasant Township that is the  
17 subject of the Formal Complaint proceeding before the Pennsylvania Public  
18 Utility Commission ("Commission" or "PUC"). This has been a continuing  
19 unresolved issue. Based on the Mount Pleasant Township population, the number  
20 of Bona Fide Service Applicants could exceed 600. The OCA and Mount Pleasant  
21 Municipal Authority have both sent surveys to potential Bone Fide Service  
22 Applicants in order to ascertain the Area's interest in public water.

23 **Q. Please describe the Company's existing water facilities in and around**  
24 **Hickory Area of Mount Pleasant Township?**

25 A. Pennsylvania-American currently has limited waterline facilities located within  
26 Mount Pleasant Township. However, the Company owns and operates existing  
27 waterline facilities in neighboring Townships that border and surround Mount  
28 Pleasant Township. They are as follows:

- 29 • To the north of the town of Hickory, there are existing Pennsylvania-  
30 American waterlines in and around Waterdam Road located near the  
31 Cherry Valley Reservoir in Mount Pleasant Township.

- 1 • To the northeast of the town of Hickory, there are existing Pennsylvania-  
2 American waterlines in and around Fort Cherry Road near the Primrose  
3 Area in Mount Pleasant Township.
- 4 • To the east of the town of Hickory, there are existing Pennsylvania  
5 American waterlines in and around SR 50 in Mount Pleasant Township.
- 6 • To the southeast of the town of Hickory, there are existing waterlines in  
7 and around SR 519 near Westland in Mount Pleasant Township.
- 8 • To the south of the town of Hickory, there are existing waterlines in and  
9 around SR 18 and Old Hickory Ridge Road near McCarrell Road in  
10 Chartiers Township.

11 **Q. Please describe the proposed main extension project footprint for the  
12 Hickory Area of Mount Pleasant Township Area?**

13 A. As previously stated above, the Company has waterline facilities generally  
14 surrounding several sides of Mount Pleasant Township. The largest grouping and  
15 density of potential bona fide service applicants residing in Mount Pleasant  
16 Township appear to be located in and around the town of Hickory, which is  
17 approximately located in the geographic center of Mount Pleasant Township.  
18 Initially, the proposed project was designed to include a booster pump station and  
19 a water storage tank. A recent unrelated project located in neighboring Chartiers  
20 Township that is currently under construction resulted in a modification to the  
21 proposed Hickory Area project as initially designed. The current proposed main  
22 extension project footprint for the Hickory Area is outlined in the map provided  
23 at PAWC Exhibit 1.1. Specifically, a booster pump station will be located along  
24 SR 18 in Chartiers Township in close proximity to the Mount Pleasant Township  
25 border. The design for proposed Hickory Area project has changed to utilize SR  
26 18. Designing the Hickory Area project to include SR 18 will eliminate the need  
27 for the booster pump station as initially proposed and the booster pump station  
28 located along SR 18 will be used for the Hickory project. Additionally, the new  
29 design proposal for the Hickory Area project will potentially increase the number  
30 of the potential bona fide service applicants to include homes and/or businesses  
31 located along SR 18. The Hickory Area project pipeline footage is as follows:

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31

<u>Street</u>	<u>Pipe Size</u>	<u>Footage</u>
SR 18	12	17,553
SR 50, Main St., SR 18	12	24,900
Walbash Road	12	1,421
McCarrell Road	12	4,241
Allison Road	8	720
Casey Road	8	3,393
Dire Road	8	1,440
Donaldson Road	8	4,476
Grandview Road	8	2,270
Johnson Road	8	2,300
Pleasant Road	8	4,536
Hornhead Road	8	6,832
Eleanor Street	8	415
Ft. Cherry Road	8	1,667
Washington Road	8	2,709
Tank Site	12	4,800

**Q. How does this project framework differ from the Company's response to OCA Interrogatory Set I No. that is included in OCA Witness Terry Fought Direct Testimony (OCA Statement 1) as Exhibit TLF-4?**

**A.** The initial design for the proposed Hickory Area project included water service for the Primrose area to be provided from the end of the Company's existing waterline located on Fort Cherry Road. The differences between the initial project design and the current design are summarized below:

- 11,880' of 16" waterline from Primrose to Southview replaced with 17,533' of 12" waterline located along SR 18 from Chartiers Township to Hickory.
- 3,800' of 12" waterline along the eastern end of SR 50 is eliminated.
- The booster pump station located in Mount Pleasant Township is has been eliminated.

1 **Q. Why did the Company modify the proposed main extension project?**

2 A. Pennsylvania-American coordinated the design of the proposed Hickory Area  
3 project with the Mount Pleasant Municipal Authority ("Authority" or "MPTMA")  
4 and the Authority's engineer. During the fall of 2001, the Authority requested the  
5 Company to consider and present possible alternative designs and pipeline routes  
6 for the Authority's review and consideration. Additionally, the Company entered  
7 into an agreement with Chartiers Township, during the fall of 2001, to construct a  
8 waterline extension and install a booster pump station. Since the facilities to be  
9 constructed for the Chartiers Township project were in proximity to the Chartiers  
10 Township and Mount Pleasant Township boundary, Pennsylvania-American  
11 reviewed and evaluated the proposed Hickory Area project to determine if there  
12 were alternative routes and designs that would service the Hickory Area at a  
13 lower cost. At a meeting with the MPTMA during the later part of December,  
14 the Company outlined alternative project scope and design. It was determined  
15 that the least cost design while providing adequate water service to the Hickory  
16 Area was the alternative project design which included SR 18 and the booster  
17 pump station that is being constructed and installed in Chartiers Township along  
18 SR 18.

19 **Q. How did the Company determine the project footprint?**

20 A. The project footprint was determined based in large part from input provided by  
21 the MPTMA. It is my understanding that the MPTMA distributed and surveys to  
22 600 residents and businesses residing in the Hickory area in order to determine  
23 the interest in obtaining public water. Based on this information obtained from  
24 the survey, the MPTMA identified the roads along the proposed project that  
25 should be included in the project footprint. The project footprint actually evolved  
26 over the course of several meetings that took place between Pennsylvania-  
27 American and the MPTMA members. The meetings included discussions and  
28 evaluations of the project scope and layout. Several meetings with a MPTMA  
29 Board member were held in the field during 2001 in order to drive the proposed  
30 project route, count houses, etc. This is how the project footprint was ultimately  
31 developed.

1 **Q. What has been the nature of the Company's relationship with the Authority?**

2 A. I believe that the Company and the MPTMA have had a good working  
3 relationship so far on this project. There has been cooperation on each side in  
4 sharing information.

5 **Q. What is the estimated cost of the proposed project?**

6 A. The total estimated cost of the project is \$4,042,019 and include a potential Bona  
7 Fide Service Applicant count of 420. PAWC Exhibit 1.2 outlines the estimated  
8 proposed cost.

9 **Q. Based on the Company's tariff, what is the Company Contribution?**

10 A. There are a total of 420 potential Bona Fide Service Applicants along the  
11 proposed project route. If all 420 potential Bona Fide Service Applicants submit  
12 applications for water service, enter into an Extension Deposit Agreement and  
13 agree to take water service, the Company Contribute, at \$5,655 per customer,  
14 would be \$2,375,100. Based on the Company Tariff Rule 27, the balance of the  
15 project cost, \$1,666,919, would be funded by Customer Contribution. I would  
16 note, however, in other projects of this type and magnitude, there has been a  
17 variety of ways that the balance of a project has been funded. They are at a  
18 minimum as follows and could include any possible combination:

- 19 • Grant(s) from the local State Legislator(s).
- 20 • A Community Development Block Grant (CDBG).
- 21 • Growing Greener Money.
- 22 • A PENNVEST Loan.
- 23 • A Contribution from a local Coal Company whose mining activities may have  
24 damaged the local underground water supplies.
- 25 • Grant from the Federal Office of Surface Mining (OSM) where it can be  
26 proved that previous mining activities may have damaged the local  
27 underground water supplies.

28 **Q. Does the project include facilities to provide the Complainant, Cindy Parks,  
29 water service?**

30 A. Yes, Cindy Parks' home is included in the project footprint.

31

- 1 **Q. Did you have an opportunity to review Terry Fought's Direct Testimony?**
- 2 A. Yes, I did review Mr. Fought's testimony.
- 3 **Q. Do you agree with his testimony?**
- 4 A. Not completely
- 5 **21. What are your disagreements?**
- 6 A. My disagreements with Terry Fought's direct testimony are as follows:
- 7 • Page 4, Line 3-7: The Company has correctly applied its tariff in this case. A
- 8 high CIAC is a direct result of the total size and scope of the proposed project,
- 9 whose project footprint was derived based on the input the Company received
- 10 from the MPTMA.
- 11 • Page 5, Lines 13-21: The Company's proposed facilities for this project are
- 12 not oversized. The facilities are correctly sized based experience using sound
- 13 engineering judgment and principles. Pennsylvania-American has a
- 14 responsibility to be able to serve all of the residents within the Mount Pleasant
- 15 Township area, specifically the project footprint. This responsibility includes
- 16 being able to provide adequate domestic flow and pressure as well as adequate
- 17 fire protection.
- 18 • Page 7, Lines 7-19: The allocation of certain costs into DSIC is not correct in
- 19 this case. The 16" waterline installation benefits the new potential Bona Fide
- 20 Service Applicants in Mount Pleasant Township. It will not benefit the
- 21 Company's existing customers along SR 50, etc. because the separate water
- 22 treatment types in this area (chloramination versus chlorine) makes it
- 23 impossible to mix the two types of water.
- 24 • Page 8, Lines 12-21: See the response for page 7 above.
- 25 • Page 11, Lines 14-23: Donaldson Road was included in the project footprint
- 26 at the request of the MPTMA.
- 27 • Page 12, Lines 15-17: There was no distinction between residential and
- 28 commercial customers in developing the estimated project costs analysis and
- 29 the calculation of CIAC because it was assumed based on experience that any
- 30 potential commercial customers in this project would only use a standard 5/8"
- 31 residential type meter. If there were a large commercial or even industrial

# **PAWC APPENDIX 1.A**

PAWC APPENDIX I.A

FORMAL CUSTOMER COMPLAINT PROCEEDINGS

<u>Name</u>	<u>Docket No.</u>
Thomas M Lapinski	C-00971096
Thomas W. Bellas	C-00970869
Deborah E. Cowden, et al.	C-00981949
William D. Stevenson, Jay Sasse, Jr. & Regis E. Karch	C-00981518, C-00981517, C-00981519
Sarah Kildow, Robert K. Ulm & Robert E. Kildow	C-00992267, C-00992268, C-00992271
Donald & Kathleen Graff	C-00992554
Joseph M. Gazvoda, et al.	C-00003200
Robert Maltony, et al.	C-00003636
Edward Morra, Jr. et al.	C-00014733
Cindy Parks	C-00015377

C-00015377

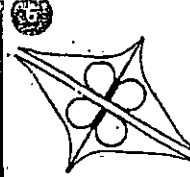
# **PAWC EXHIBIT 1.1**

# FEDINETZ COMPANY

40 Belgium Hollow Road  
McDonald, PA 15057

Troy Fedinetz (724) 796-8741

HEATING • AIR CONDITIONING • REFRIGERATION  
 COMMERCIAL • RESIDENTIAL  
 Trenching Service • RSES Certified  
 Financing Available  
 Visa & MasterCard Accepted  
 (724) 796-8741 • FREE ESTIMATES  
 Fax: (724) 796-5538 • FULLY INSURED  
 25 BELGIUM HOLLOW ROAD  
 MCDONALD, PA 15057



# DEL-SIR SUPPLY INC.

660 W. Pike Street, Meadowlands, PA 15347

(724) 228-8911

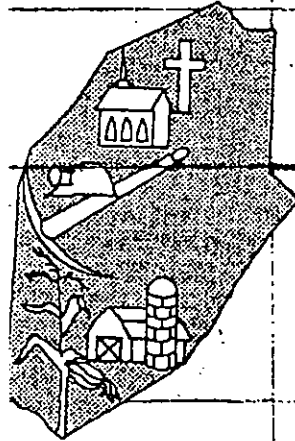
TOWNSHIP

PENNSYLVANIA

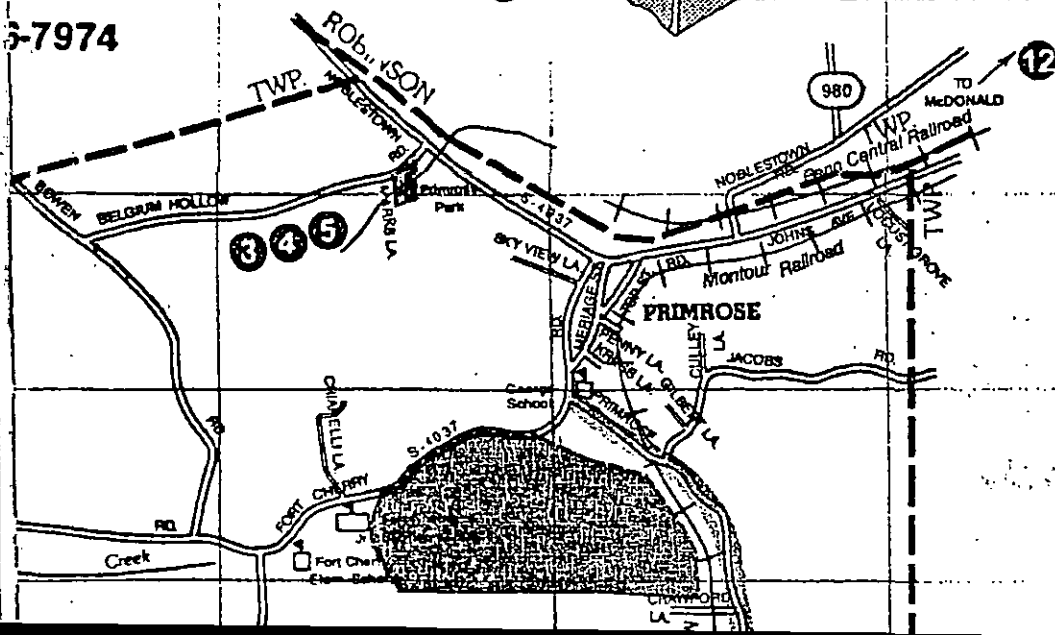
AD  
10

3-7974

OVER SIZED DOCUMENTS



DOCKETED  
JAN 14 2003



000015377

DOCUMENT  
FOLDER

C-20015377

# PAWC EXHIBIT 1.2

**DOCKETED**  
JAN 14 2003

# Mt Pleasant Twp Overview

**Phase 1  
Part One**

**Customers**

Rt 18 from Chartiers twp. project total:	17,553 feet of 12"DI \$750,105	59
---	-----------------------------------	----

---

**Phase 1  
Part Two**

Rt 50 and Rt 18 project total:	24,900 feet of 12"DI \$1,050,384	174
-----------------------------------	-------------------------------------	-----

---

**Phase 1  
Part Three**

Hickory Distribution project total:	5,662 feet of 12", 30,758 feet of \$1,227,464	179
--	--	-----

---

**Phase 1  
Part Four**

Tank	\$850,000	
Pipe line 4,800' of 12"	\$164,066	8
	\$1,014,066	

---

Cost of Distribution project:	\$3,192,019	
Cost of Tank project:	\$850,000	
		420

Total:	\$4,042,019	
PAWC Investment(2\$5655/Customer)	\$2,375,100	

Difference	\$1,666,919	
------------	-------------	--

121001

Mt Pleasant  
Rt 18 from Chartiers

Units	Description	Estimated Cost	Unit Cost
17,553	12" DICL pipe	179,567	10.23
19500	12" polywrap	6,435	0.33
18	12" gate valves	6,786	377
5	12" x 12" solid sleeves	385	77
18	valve boxes	972	54
3	12"-8" tee	372	124
8	12" - 45 bends	768	96
0	12" tee	0	154
8	12" - 22 1/2 bends	768	96
8	12" - 11 1/4 bends	768	96
0	12" plug	0	31
15	blow-off	750	50
17553	Contract Installation	219,413	12.5
2000	Extra Depth	2,000	1
20000	Rock Excavation	25,000	1.25
11,333	stone	135,996	12
35	concrete	4,725	135
10	hauling	400	40
1000	temp paving	9,000	9
0	concrete sidewalk	0	9
8000	berm	72,000	9
2500	paving	47,500	19
1	permits	18,000	18000
1	Water Company Labor	18,500	18500
	subtotal	750,105	

59 Apps @ \$5655=\$333,645

91901

Mt Pleasant  
McCarrell Rd

Units	Description	Estimated Cost	Unit Cost
4,241	12" DI/CL pipe	43,385	10.23
4721	12" polywrap	1,558	0.33
5	12" gate valves	1,885	377
3	12" x 12" solid sleeves	231	77
5	valve boxes	270	54
1	12"-8" tee	124	124
2	12" - 45 bends	192	96
0	12" tee	0	154
3	12" - 22 1/2 bends	288	96
3	12" - 11 1/4 bends	288	96
1	12" plug	31	31
5	blow-off	250	50
4241	Contract Installation	53,013	12.5
500	Extra Depth	500	1
5000	Rock Excavation	6,250	1.25
1880	stone	22,560	12
10	concrete	1,350	135
10	hauling	400	40
150	temp paving	1,350	9
0	concrete sidewalk	0	9
1000	berm	9,000	9
250	paving	4,750	19
1	permits	2,500	2500
1	Water Company Labor	7,500	7500
	subtotal	157,675	

23 Apps @ \$5655=\$130,065

91901

Mt Pleasant  
Allison Rd

Units	Description	Estimated Cost	Unit Cost
720	8" DICL pipe	4,471	6.21
800	8" polywrap	208	0.26
1	8" gate valves	191	191
1	valve box	51	51
2	8" 45 bends	108	54
2	8" 22 bends	108	54
1	blowoffs	100	50
1	8" x 8" solid sleeves	57	57
1	8" plugs	17	17
720	Contract Installation	9,000	12.5
100	extra dept	100	1
500	rock	625	1.25
300	2rc stone	3,600	12
2	concrete blocking	270	135
250	paving	4,750	19
0	stream crossing	0	125
1	Pawc labor	1,500	1500
1	permits	500	500
	subtotal	25,656	

7 Apps @ \$5655=\$39,585

91901

Mt Pleasant  
Casey Rd

Units	Description	Estimated Cost	Unit Cost
3393	8" DICL pipe	21,071	6.21
3500	8" polywrap	910	0.26
2	8" gate valves	382	191
2	valve box	102	51
4	8" 45 bends	216	54
4	8" 22 bends	216	54
3	blowoffs	100	50
3	8" x 8" solid sleeves	171	57
0	8" plugs	0	17
3393	Contract Installation	42,413	12.5
250	extra dept	250	1
2000	rock	2,500	1.25
690	2rc stone	8,280	12
10	concrete blocking	1,350	135
500	paving	9,500	19
0	stream crossing	0	125
1	Pawc labor	3,500	3500
1	permits	1,000	1000
	subtotal	91,960	

16 Apps @ \$5655=\$90,480

91901

Mt Pleasant  
Dire Rd

Units	Description	Estimated Cost	Unit Cost
1440	8" DICL pipe	8,942	6.21
1600	8" polywrap	416	0.26
2	8" gatevalves	382	191
2	valve box	102	51
2	8" 45 bends	108	54
2	8" 22 bends	108	54
2	blowoffs	100	50
1	8" x 8" solid sleeves	57	57
1	8" plugs	17	17
1440	Contract Installation	18,000	12.5
200	extra dept	200	1
1000	rock	1,250	1.25
600	2rc stone	7,200	12
5	concrete blocking	675	135
450	paving	8,550	19
0	stream crossing	0	125
1	Pawc labor	2,000	2000
1	permits	500	500
	subtotal	48,607	

27 Apps @ \$5655=\$152,685

91901

Mt Pleasant  
Donaldson Rd

Units	Description	Estimated Cost	Unit Cost
4476	8" DICL pipe	27,796	6.21
4973	8" polywrap	1,293	0.26
5	8"gatevalves	955	191
5	valve box	255	51
4	8" 45 bends	216	54
4	8" 22 bends	216	54
7	blowoffs	100	50
2	8" x 8" solid sleeves	114	57
0	8" plugs	0	17
4476	Contract Installation	55,950	12.5
300	extra dept	300	1
6000	rock	7,500	1.25
1900	2rc stone	22,800	12
10	concrete blocking	1,350	135
1500	paving	28,500	19
0	stream crossing	0	125
1	Pawc labor	3,500	3500
1	permits	2,500	2500
	subtotal	153,345	

5 Apps @ \$5655=\$28,275

91901

Mt Pleasant  
Grandview Rd

Units	Description	Estimated Cost	Unit Cost
2270	8" DICL pipe	14,097	6.21
2522	8" polywrap	656	0.26
3	8"gatevalves	573	191
3	valve box	153	51
4	8" 45 bends	216	54
2	8" 22 bends	108	54
4	blowoffs	100	50
1	8" x 8" solid sleeves	57	57
1	8" plugs.	17	17
2270	Contract Installation	28,375	12.5
300	extra dept	300	1
1200	rock	1,500	1.25
1000	2rc stone	12,000	12
10	concrete blocking	1,350	135
1000	paving	19,000	19
0	stream crossing	0	125
1	Pawc labor	2,000	2000
1	permits	500	500
	subtotal	81,001	

23 Apps @ \$5655=\$130,065

91901

MT Pleasant  
Johnson Rd

Units	Description	Estimated Cost	Unit Cost
2300	8" DICL pipe	14,283	6.21
2500	8" polywrap	650	0.26
3	8"gatevalves	573	191
3	valve box	153	51
4	8" 45 bends	216	54
4	8" 22 bends	216	54
1	blowoffs	100	50
1	8" x 8" solid sleeves	57	57
1	8" plugs	17	17
2300	Contract Installation	28,750	12.5
800	extra dept	800	1
1500	rock	1,875	1.25
1000	2rc stone	12,000	12
30	concrete blocking	4,050	135
250	paving	4,750	19
0	stream crossing	0	125
1	Pawc labor	3,500	3500
1	permits	2,500	2500
	subtotal	74,490	

9 Apps @ \$5655=\$50,895

91901

Mt Pleasant  
Pleasant Rd

Units	Description	Estimated Cost	Unit Cost
4536	8" DICL pipe	28,169	6.21
5040	8" polywrap	1,310	0.26
5	8" gatevalves	955	191
5	valve box	255	51
4	8" 45 bends	216	54
4	8" 22 bends	216	54
3	blowoffs	100	50
3	8" x 8" solid sleeves	171	57
0	8" plugs	0	17
4536	Contract Installation	56,700	12.5
250	extra dept	250	1
3000	rock	3,750	1.25
2000	2rc stone	24,000	12
10	concrete blocking	1,350	135
1000	paving	19,000	19
0	stream crossing	0	125
1	Pawc labor	3,500	3500
1	permits	1,000	1000
	subtotal	140,942	

12 Apps @ \$5655=\$67,860

91901

Mt Pleasant  
Walbash Rd

Units	Description	Estimated Cost	Unit Cost
1,421	12" DICL pipe	14,537	10.23
1578	12" polywrap	521	0.33
2	12"gatevalves	754	377
2	12" x 12" solid sleeves	154	77
2	valve boxes	108	54
1	12"-8" tee	124	124
2	12" - 45 bends	192	96
0	12" tee	0	154
1	12" - 22 1/2 bends	96	96
1	12" - 11 1/4 bends	96	96
1	12" plug	31	31
3	blow-off	150	50
1421	Contract Installation	17,763	12.5
200	Extra Depth	200	1
1000	Rock Excavation	1,250	1.25
1500	stone	18,000	12
5	concrete	675	135
10	hauling	400	40
1000	temp paving	9,000	9
500	concrete sidewalk	4,500	9
0	berm	0	9
500	paving	9,500	19
1	permits	1,500	1500
1	Water Company Labor	2,000	2000
	subtotal	81,550	

23 Apps @ \$5655=\$130,065

91901

Mt Pleasant  
Hornhead Rd

Units	Description	Estimated Cost	Unit Cost
6832	8" DICL pipe	42,427	6.21
7591	8" polywrap	1,974	0.26
7	8"gatevalves	1,337	191
7	valve box	357	51
4	8" 45 bends	216	54
6	8" 22 bends	324	54
5	blowoffs	100	50
3	8" x 8" solid sleeves	171	57
0	8" plugs	0	17
6832	Contract Installation	85,400	12.5
300	extra dept	300	1
4000	rock	5,000	1.25
3000	2rc stone	36,000	12
15	concrete blocking	2,025	135
1200	paving	22,800	19
0	stream crossing	0	125
1	Pawc labor	6,000	6000
1	permits	3,000	3000
	subtotal	207,430	

11 Apps @ \$5655=\$62,205

91901

Mt Pleasant  
Eleanor Rd

Part 3

Units	Description	Estimated Cost	Unit Cost
415	8" DICL pipe	2,577	6.21
420	8" polywrap	109	0.26
1	8" gate valves	191	191
1	valve box	51	51
4	8" 45 bends	216	54
6	8" 22 bends	324	54
2	blowoffs	100	50
1	8" x 8" solid sleeves	57	57
1	8" plugs	17	17
415	Contract Installation	5,188	12.5
100	extra dept	100	1
200	rock	250	1.25
170	2rc stone	2,040	12
8	concrete blocking	1,080	135
200	paving	3,800	19
0	stream crossing	0	125
1	Pawc labor	750	750
1	permits	150	150
	subtotal	17,000	

4 Apps @ \$5655=\$22,620

91901

Mt Pleasant  
Ft Cherry

Units	Description	Estimated Cost	Unit Cost
1667	8" DICL pipe	10,352	6.21
1800	8" polywrap	468	0.26
2	8"gatevalves	382	191
2	valve box	102	51
4	8" 45 bends	216	54
6	8" 22 bends	324	54
2	blowoffs	100	50
1	8" x 8" solid sleeves	57	57
1	8" plugs	17	17
1667	Contract Installation	20,838	12.5
200	extra dept	200	1
500	rock	625	1.25
400	2rc stone	4,800	12
10	concrete blocking	1,350	135
400	paving	7,600	19
0	stream crossing	0	125
1	Pawc labor	1,500	1500
1	permits	500	500
	subtotal	49,431	

4 Apps @ \$5655=\$22,620

91901

Mt Pleasant  
Washington Ave

Part 3

Units	Description	Estimated Cost	Unit Cost
2709	8" DICL pipe	16,823	6.21
2900	8" polywrap	754	0.26
2	8" gatevalves	382	191
2	valve box	102	51
4	8" 45 bends	216	54
4	8" 22 bends	216	54
3	blowoffs	100	50
3	8" x 8" solid sleeves	171	57
1	8" plugs	17	17
2709	Contract Installation	33,863	12.5
484	extra dept	484	1
4000	rock	5,000	1.25
1000	2rc stone	12,000	12
10	concrete blocking	1,350	135
1100	paving	20,900	19
0	stream crossing	0	125
1	Pawc labor	4,500	4500
1	permits	1,500	1500
	subtotal	98,377	

15 Apps @ \$5655=\$84,825

91901

## Tank site Mt Pleasant

Units	Description	Estimated Cost	Unit Cost
4,800	12" DICL pipe	49,104	10.23
4900	12" polywrap	1,617	0.33
5	12"gatevalves	1,885	377
3	12" x 12" solid sleeves	231	77
5	valve boxes	270	54
0	12"-8" tee	0	124
2	12" - 45 bends	192	96
0	12" tee	0	154
3	12" - 22 1/2 bends	288	96
3	12" - 11 1/4 bends	288	96
1	12" plug	31	31
5	blow-off	250	50
4800	Contract Installation	60,000	12.5
500	Extra Depth	500	1
5000	Rock Excavation	6,250	1.25
1880	stone	22,560	12
10	concrete	1,350	135
10	hauling	400	40
150	temp paving	1,350	9
0	concrete sidewalk	0	9
1000	berm	9,000	9
0	paving	0	19
1	permits	2,500	2500
1	Water Company Labor	6,000	6000
	subtotal	164,066	

8 Apps @ \$5655=\$45,240

121101

## RT 50 ,Main Street and Rt 18 Mt Pleasant

Units	Description	Estimated Cost	Unit Cost
24,900	12" DICL pipe	254,727	10.23
2766	12" polywrap	913	0.33
23	12" gatevalves	8,671	377
6	12" x 12" solid sleeves	462	77
23	valve boxes	1,242	54
5	12"-8" tee	620	124
8	12" - 45 bends	768	96
3	12" tee	462	154
8	12" - 22 1/2 bends	768	96
8	12" - 11 1/4 bends	768	96
2	12" plug	62	31
15	blow-off	750	50
24900	Contract Installation	311,250	12.5
2000	Extra Depth	2,000	1
40000	Rock Excavation	50,000	1.25
9733	stone	116,796	12
35	concrete	4,725	135
10	hauling	400	40
1000	temp paving	9,000	9
6000	concrete sidewalk	54,000	9
8000	berm	72,000	9
6500	paving	123,500	19
1	permits	18,000	18000
1	Water Company Labor	18,500	18500
	subtotal	1,050,384	

174 Apps @ \$5655=\$983,970



STATEMENT OF JERRY E. HANKEY  
ON BEHALF OF  
PENNSYLVANIA-AMERICAN WATER COMPANY  
STATEMENT 2.0

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

2       A.    My name is Jerry E. Hankey and my business address is 1909 Oakland Ave.,  
3            Indiana, PA 15701.

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

5       A.    I am employed by Pennsylvania-American Water Company ("Pennsylvania-  
6            American" or "Company") as an Engineering Manager.

7       **Q.    Please outline your experience in the water utility industry.**

8       A.    For the past 15 years, I worked for Pennsylvania-American in its engineering  
9            department. During this time, I have been involved in the planning, design and  
10           construction administration of projects related to the production and  
11           distribution of water. Specifically, I have designed and served as the lead  
12           project engineer for wastewater holding tank, chemical feed equipment  
13           installations, pump replacements and a new laboratory construction. I have  
14           also been involved in the design and installation of booster pump stations in  
15           the distribution system as well as the sizing of new main installations.  
16           Recently, I completed two PENNVEST Projects involving the acquisition of  
17           existing water systems, the installation of approximately 156,000 feet of water  
18           mains to provide service to these systems and the surrounding areas as well as  
19           the replacement of booster station pumps. I am completing the design and  
20           permitting for a third PENNVEST Project that includes the installation of  
21           104,470 feet of main, a booster station replacement, installation of three  
22           Pressure Reducing Valve Stations, and the construction of an elevated water  
23           tower. I have presented testimony or been involved in formal complaint  
24           proceedings which are listed on PAWC Appendix 2.A.

25       **Q.    What is your educational background?**

26       A.    I have a Bachelor of Science Degree in Civil Engineering from the  
27            Pennsylvania State University and a Master Degree in Business  
28            Administration from the Indiana University of Pennsylvania.

29

- 1       **Q.    Do you hold any professional licenses or certification?**
- 2       A.    Yes. I have a Professional Engineer's License for the state of Pennsylvania  
3       and a Water Operators License for Water Plants.
- 4       **Q.    Do you belong to any professional or industry associations?**
- 5       A.    Yes. I belong to the American Society of Civil Engineers and the American  
6       Water Works Association.
- 7       **Q.    What is the nature of your duties with Pennsylvania-American?**
- 8       A.    I perform engineering duties for six water districts in Northern Pennsylvania  
9       as well as supervise the work of four other engineers and one drafter. As  
10      Engineering Manager, I review the work performed by the other engineers as  
11      well as approve invoices, time sheets and expense statements. I regularly  
12      review their projects and attend meetings pertaining to said projects. I oversee  
13      the work performed by the drafter and determine the priority of jobs to be  
14      completed.
- 15      **Q.    What is the purpose of your testimony?**
- 16      A.    The purpose of my testimony is two fold. First, I will explain the initial design  
17      of the proposed water system for the Hickory Area. Second, I will state my  
18      concerns with the testimony of OCA Witness Terry Fought.
- 19      **Q.    Please describe the facilities needed to serve the potential bona fide  
20      service applicants located in the Hickory Area?**
- 21      A.    The proposed service area requires a booster pump station, tank and  
22      distribution system. The distribution system is designed to provide a pressure  
23      range of 40 pounds per square inch ("psi") to 50 psi during normal operating  
24      conditions and 20 psi during a fire flow occurrence of 750 gallons per minute.  
25      Velocities in all pipes during any condition are kept less than 5 feet per  
26      second. The elevation of the proposed distribution area ranges from 1200 feet  
27      to 1300 feet. The existing hydraulic gradient that will be used to provide water  
28      service is at 1360 feet. This would provide approximately 26 psi pressure at  
29      the highest elevations thus requiring the booster pump station. I would note  
30      that the proposed project as originally designed has changed.

1 **Q. Please describe the water storage tank for the proposed project?**

2 A. The water storage tank will be a ground level standpipe. It will be of welded  
3 steel construction.

4 **Q. Why is a 1 million gallon water storage tank needed to provide water**  
5 **service to the potential Bona Fide Service Applicants located in the**  
6 **Hickory Area?**

7 A. The tank size was determined based on two demands:

8 1. Fire service reserve for a flow of 750 gpm for a time period of 4 hours.

9 This equates to 180,000 gallons of storage.

10 2. Average day demand for the estimated customers. This amount is

11 estimated at 48,500 gallons for service to 362 potential Bona Fide Service

12 Applicants.

13 The total of these two demands are 228,500 gallons. Generally, standard tank

14 size is 200,000, 250,000, and 300,000 gallons. PAWC Witness Jay Lucas

15 indicated in his Direct Testimony that one of the difficulties experienced with

16 this proposed project has been determining the potential customer base. Since

17 there is a potential customer base in excess of 600 residents and/or businesses,

18 the size of the tank was actually estimated at 300,000 gallons. The standpipe

19 design was used for this tank because the cost of a one million gallon

20 standpipe is less than the cost of a 300,000 gallon elevated tank.

21 **Q. Please describe the initial design of a booster pump station for the**  
22 **proposed project.**

23 A. The booster station will contain three pumps sized at 275 gallons per minute.

24 The station will operate in an on/off mode. The tank level will be allowed to

25 drop to a specific level at which time the first pump will turn on. If the tank

26 level continues to drop, the second pump will start at a second predetermined

27 level and continue to run until the level in the tank has risen above the turn on

28 level for the pump. The third pump will serve as a spare.

29

1 Q. Why was a 550-gallon per minute booster pump station needed to provide  
2 water service to the potential Bona Fide Service Applicants?

3 A. The 550-gallon per minute booster station is required to provide the potential  
4 bona fide service applicants fire protection and domestic service. If a four-  
5 hour fire at a demand of 750 gallons per minute occurs, 180,000 gallons is  
6 used. The booster will refill this volume in less than six hours preparing it  
7 again for a fire. The pumps will also provide fire protection during periods  
8 when the tank is taken out of service for inspection or recoating.

9 Q. Did you have an opportunity to review the testimony submitted by OCA  
10 Witness Terry Fought in this proceeding?

11 A. Yes, I have reviewed Terry Fought's testimony.

12 Q. Do you agree with this analysis?

13 A. I do not agree with the position taken by Mr. Fought regarding distribution of  
14 costs for the 16-inch main, booster station, and tank.

15 Q. Why do you disagree with OCA Fought's position regarding the 11,800  
16 feet of 16" main for Primrose to Southview?

17 A. Pennsylvania-American's initial proposed project design plan to run a 16"  
18 main from Primrose to Southview. The 16" main not only helps the pressures  
19 in Southview during the max day demands for the Hickory Area, but also  
20 helps the water quality. The water from the McDonald system is treated with  
21 Ammonia. This chemical addition forms Chloramines in the water. The  
22 chloramines hold the total chlorine residual for a longer period of time. This is  
23 important in areas that stretch a long way from the original production facility  
24 such as Hickory. This water cannot be mixed with water that does not have  
25 Ammonia added. This requirement restricts the area that can benefit from this  
26 main. This area has been reduced even more from the time of OCA  
27 Interrogatories Set II, question 13. Please see PAWC Exhibit 2.1. A 12-inch  
28 main has been installed in SR 980 that connects to the Canonsburg area. Since  
29 this water is not treated with ammonia, the separation of the two systems must  
30 move west towards Southview. But for the provision of water service to the

1 Hickory Area as initially designed, the Company did not contemplate  
2 connecting the McDonald system to the Washington system.  
3 A 10-inch main may be adequate to provide 275 gpm to the booster station.  
4 However, it is the Company's operating standard to install 12-inch rather than  
5 10-inch. The difference in cost between 10" and 12" is minimum. As  
6 previously indicated in my testimony, the potential customer base for the Mt.  
7 Pleasant Township Area exceeds 600. If there is a modification to the  
8 estimated project cost, the cost allocation to CIAC should be the cost of a 12"  
9 main with the difference allocated to future growth. The cost of 16" pipe is  
10 \$15.81 per foot. The amount going to future growth would be \$65,844  
11  $(\$15.81-10.23)*11,800$ . The amount going to CIAC would be \$457,299.

12 **Q. Why do you disagree with Mr. Fought's position regarding the booster**  
13 **station?**

14 A. The size of the pumps was determined, in part, on the requirement to provide  
15 fire service. The 550 gallon per minute capacity will provide a quick refill  
16 time should the 180,000 gallon reserved for fire fighting occur. The pumps  
17 will also provide fire protection during periods when the tank is taken out of  
18 service for inspection or recoating. Because of this, the cost of the booster  
19 should be allocated as CIAC since the potential Bona Fide Service Applicants  
20 will benefit from the fire protection.

21 **Q. Why do you disagree with Mr. Fought's position regarding the water**  
22 **storage tank?**

23 A. The fire protection storage will be required no matter what the actual count for  
24 the number of Bona Fide Service Applicants becomes. Since the 372 potential  
25 Bona Fide Service Applicants will benefit from the fire protection, the cost of  
26 this storage should not be distributed between the future and initial potential  
27 proposed customers base. The cost break down should be based on the fire  
28 storage of 180,000 gallons plus the average day demand of 48,500 gallons.  
29 This total becomes 76.17% of the 300,000-gallon storage. The additional  
30 71,500 gallons is for future demand or 23.83%. These are the percentages that  
31 should be used to distribute the cost of the tank between future growth and

1 CIAC. The break down becomes \$647,455 to CIAC and \$202,555 to future  
2 growth. If the customer count provided by Mr. Fought is used, the average  
3 day demand becomes 25,992 gallons. The percentage then going to CIAC  
4 would be 68.66%.  $((180,000 + 25,992) / 300,000)$  or \$583,610 with \$266,390  
5 going to future growth. If the potential Bona Fide Service Applicant count of  
6 600 is used, the average day demand becomes 80,387 gallons. The percentage  
7 then going to CIAC would be 86.80%  $((180,000+80,387)/300,000)$  or  
8 \$737,800 with \$112,200 going to future growth.

9 **Q. Does this conclude your direct testimony?**

10 **A. Yes, it does.**

# **PAWC APPENDIX 2.A**

PAWC APPENDIX 2.A

FORMAL CUSTOMER COMPLAINT PROCEEDINGS

<u>Name</u>	<u>Docket No.</u>
William E. & Martha McClain	C-00935050
Thomas M Lapinski	C-00971096
Thomas W. Bellas	C-00970869
Deborah E. Cowden, et al:	C-00981949
William D. Stevenson, Jay Sasse, Jr. & Regis E. Karch	C-00981518, C-00981517, C-00981519
Sarah Kildow, Robert K. Ulm & Robert E. Kildow.	C-00992267, C-00992268, C-00992271
Donald & Kathleen Graff	C-00992554
Joseph M. Gazvoda, et al.	C-00003200
Robert Maltony, et al.	C-00003636
Edward Morra, Jr. et al.	C-00014733
Cindy Parks	C-00015377

# **PAWC EXHIBIT 2.1**

DOCUMENT  
FOLDER

RECEIVED

DEC 19 2002  
PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

CINDY PARKS,

Complainant

v.

PENNSYLVANIA-AMERICAN WATER  
COMPANY,  
Respondent

DOCKET NO. C-00015377

---

DIRECT TESTIMONY  
PAUL T. DISKIN  
ON BEHALF OF  
PENNSYLVANIA-AMERICAN WATER COMPANY  
STATEMENT 3.0

*0 Exh 3.1 and 3.2*

**DOCKETED**

JAN 14 2003

*12/3/02*

*MS*

*Jan*

STATEMENT OF PAUL T. DISKIN  
ON BEHALF OF  
PENNSYLVANIA-AMERICAN WATER COMPANY  
STATEMENT 3.0

1   **Q.    What is your name and address?**

2    A.    My name is Paul T. Diskin and my business address is 800 West Hershey Park Drive,  
3        Hershey, Pennsylvania 17033.

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

5    A.    I am employed by Pennsylvania-American Water Company ("Pennsylvania-American" or  
6        the "Company") as Director of Rates and Planning.

7   **Q.    Please state your educational background and experience in the waterworks business.**

8    A.    I received a Bachelor of Science Degree in Business Administration with a dual  
9        concentration in Accounting and Management from Clarion State College in December of  
10       1977. In December of 1992, I was awarded my MBA from York College of Pennsylvania. I  
11       have completed the continuing education program conducted by the National Association  
12       of Regulatory Utility Commissioners (NARUC) and the University of Utah. In addition, I  
13       am a Certified Management Accountant (CMA) recognized by the Institute of Management  
14       Accountants. I also serve as the Chairman of the Rates and Revenue Committee of the  
15       Pennsylvania Chapter of the National Association of Water Companies.

16       My experience in the water utility industry began in 1979 when I was employed as a Junior  
17       Accountant in the Continuing Property Records Section of the American Water Works  
18       Service Company, Inc. My principal duties were to process investment and retirement work  
19       orders and to record additions and retirements of utility plant in the subsidiary ledgers of  
20       the various districts of the Company's predecessor corporations. Later in the same year, I

1 was assigned to the Rates and Revenue Section to aid in the preparation of rate filings. In  
2 1980, I was promoted to the position of Rate Analyst I, and in 1981 was promoted to Rate  
3 Analyst II. Effective January 1982, I was promoted to the position of Revenue Requirement  
4 Specialist. On July 1, 1988, I became Assistant Director of Rates and Revenue for the  
5 Pennsylvania Region. Effective January 1, 1993, I was transferred to Pennsylvania-  
6 American. On July 1, 2001, I became the Director of Rates and Planning.

7 **Q. What are your duties as Director of Rates and Planning?**

8 A. I supervise and coordinate the preparation of data and various exhibits in rate matters and  
9 the preparation of tariffs along with the responsibility of managing and directing the  
10 Company's annual and strategic planning process. I also present testimony in formal rate  
11 cases and formal complaint proceedings. I have testified in the various Pennsylvania Public  
12 Utility Commission ("Commission" or "PUC") proceedings concerning base rate increases,  
13 which are listed in PAWC Appendix 3.A. I have also presented testimony or been involved  
14 with formal complaint proceedings, which are listed on PAWC Appendix 3.B.

15 **Q. What is the purpose of your testimony?**

16 A. The purpose of my testimony is two fold. First, I will describe the customer contribution  
17 model that is contained in the Company's tariff and how the Company has utilized it.  
18 Second, I will state my concerns with the testimony of OCA Witness Kraus.

19 **Q. Mr. Diskin, are you familiar with Rule 27 of the Company's tariff?**

20 A. Yes, I am. Rule 27, as shown in PAWC Exhibit 3.1, is the section that details the  
21 Company's rule concerning main extensions for Bona Fide Service Applicants which is in  
22 compliance with the Commission regulations at 52 Pa. Code §§65.21-65.23.

1 **Q. Describe the provisions of the Company's Main Extension Tariff for Bona Fide**  
2 **Service Applicants.**

3 A. Pennsylvania-American, in accordance with its Tariff, will extend its main for a Bona Fide  
4 Service Applicant who has made an application for water service. The tariff further  
5 provides that when the costs of the main extension for the Bona Fide Service Applicant  
6 exceeds the Company's contribution, the extension is made pursuant to an Extension  
7 Deposit Agreement. The formula for the calculation of the Company Contribution is shown  
8 on Tariff pages 72 and 73 (PAWC Exhibit 3.1 pp 2-3). I am the individual who performs  
9 the calculation of the Company Contribution.

10 **Q. What components are used to calculate the amount of the Company Contribution?**

11 A. As shown in PAWC Exhibit 3.1 at page 2 the components are average annual revenue,  
12 operation and maintenance expense, the depreciation rate on an 8" main along with the  
13 weighted cost of debt. The Company investment is arrived at by taking the net amount of  
14 revenue less operating expenses and dividing that number by the composite rate of  
15 depreciation and the weighted cost of debt

16 **Q. Mr. Diskin, what is the current amount of the Company Contribution and how**  
17 **frequently does that number change?**

18 A. The current amount, which is shown in PAWC Exhibit 3.2, is \$5,655. The Company  
19 Contribution changes when the PUC approves a base rate increase for the Company. The  
20 current calculation is based upon the rate increase which became effective December  
21 18,1999.

22

1 Q. **What is your understanding of the use of the Company Contribution?**

2 A. It is my understanding that the Company has used the Company Contribution amount that I  
3 have calculated for Bona Fide Service Applicants.

4 Q. **Describe the provisions of the Company's Main Extension Tariff Rule 27 as it relates**  
5 **to Customer Contribution.**

6 A. The Customer Contribution is the amount equal to the difference between the Company  
7 Contribution and the cost of the main extension. The Bona Fide Service Applicant(s) are  
8 required to pay one-third of the Customer Contribution prior to the commencement of the  
9 project and the remainder is payable over thirty-six equal monthly installments.

10 Q. **Have you reviewed the testimony submitted by OCA witness Marilyn Kraus in this**  
11 **proceeding?**

12 A. Yes, I have and I do not agree with the position taken by Ms. Kraus on utilizing a specific  
13 debt cost rate in the calculation of the Company Contribution or the rate, which was used.  
14 Witness Kraus has used the lower debt cost associated with a Pennsylvania Infrastructure  
15 Investment Authority ("PENNVEST") project to calculate her contribution of \$14,689 on  
16 pages 11-12 of her testimony. One aspect of the Commission prescribed formula, as  
17 provided for in its regulations at 52 PA Code §65.21, is the use of the weighted cost of debt  
18 for the entire Company, **not** a specific rate associated with a specific project. I will agree  
19 that the use of a lower cost instrument of debt will result in a lower weighted cost of debt  
20 in the long run, but that reduction will have to be achieved over time.

21

1 Q. Do you agree with OCA Witness Kraus's use of a 1% rate?

2 A. No, I do not. Ms. Kraus has chosen to use a rate of 1% in her calculation of the Company  
3 Contribution for the proposed Hickory area project. The rates for PENNVEST projects  
4 vary by county. Moreover, the lower rate usually only exists during the first five years of  
5 the PENNVEST loan. A higher rate is charged for the remaining 15 years of the loan. For  
6 example, the rates for Washington County, where Mount Pleasant Township is located, for  
7 the first five years of the loan is 1.387% and 2.774% for years 6 through 20. If,  
8 hypothetically, the Company was to use the PENNVEST rate, I believe a blended rate of  
9 2.427% ( $1.387 \times .25 + 2.774 \times .75$ ) should be used in the calculation of the Company  
10 Contribution. The use of this rate would decrease OCA Witness Kraus' proposed Company  
11 Contribution amount from \$14,689 to \$8,730 ( $[(397-90) / (1.09\% + 2.427\%)]$ ).

12 Q. If a lower debt rate is used, do you have another proposal to offer?

13 A. Yes, I do. The Company has not experienced average usage from customers who are  
14 similarly situated as the potential Bona Fide Service Applicants in the Hickory area and the  
15 provision of water service is the result of a main extension. The average water usage is  
16 significantly lower for these new customers in comparison to our existing customers. We  
17 believe the reason may be due, in large part, to the usage characteristics of individuals who  
18 have had restricted, limited, or contaminated sources of water and thus have been forced to  
19 conserve water. Generally, these customers are consuming a low amount of water. If a  
20 specific lower PENNVEST debt rate is used in the calculation of the Company

1 Contribution, I would propose to use a lower annual consumption, around 3,000 gallons for  
2 such customers

3 **Q. What affect would the use of the PENNVEST debt cost and 3,000 gallons a month**  
4 **usage have on the Company contribution?**

5 A. The Company Contribution would decrease to \$6,398 ( $[(292-67) / (1.09\%+2.427\%)]$ ).

6 **Q. Do you agree that the PENNVEST financing should be sought for this project?**

7 A. The Commission fegulations regarding the Duty of the Public Utility to Make Line  
8 Extension does not require companies to finance main extension projects from loans  
9 provided by PENNVEST. Even if the Company were to submit an application for such a  
10 loan, there is no guarantee that the loan application would be approved. Moreover, PAWC  
11 is not the only entity that can make such an application. PAWC Witness Jay Lucas  
12 indicated in his Direct Testimony that the Mount Pleasant Township Authority previously  
13 applied for at least one and possibly two PENNVEST loans and the loan application was  
14 approved.

15 **Q. Does this conclude your direct testimony?**

16 A. Yes, it does.

# **PAWC APPENDIX 3.A**

PAWC APPENDIX 3.A

	<u>DOCKET NO.</u>
Pennsylvania-American Water Company	R-00016339
(Wastewater)	R-00005212
	R-00994638
(Wastewater)	R-00973973
	R-00973944
	R-00943231
	R-00932670
	R-922428
	R-911909
	R-901652
	R-891208
Pennsylvania-American Water Company (Pre-merger)	R-880916
Keystone Water Company	R-850245
Berwick District	R-842759
Northeast Region	R-842755
Southern Central Region	R-842756
Riverton Consolidated Water Company	R-850153
Western Pennsylvania Water Company	R-870825
	R-860397
Butler District	R-842624
Clarion-Punxsutawney District	R-842625
Indiana-Kane	R-842623
Warren District	R-842622
	R-850097
Western Region	R-842621
	R-850096

# **PAWC APPENDIX 3.B**

PAWC APPENDIX 3.B

FORMAL CUSTOMER COMPLAINT PROCEEDINGS

<u>DOCKET NO.</u>	<u>COMPLAINT</u>
C-00971106	Gilbert
C-00981273	Drew
C-00992304	Sayegh
C-00992569	Waste Recycling
C-00003629	Ellis
C-00004511	Valvanno

C - 00015377

DOCUMENT  
FOLDER

**DOCKETED**  
JAN 14 2003

---

**PAWC EXHIBIT 3.1**

## 27. MAIN EXTENSIONS FOR BONA FIDE SERVICE APPLICANTS

### 27.1 General Provisions

(A) (1) The Company will extend existing distribution mains for a Bona Fide Service Applicant making application for water service, other than temporary or seasonal service, under, and pursuant to, these Rules and Regulations, to commence immediately upon installation of the Street Service Connection.

(2) When the costs of the main extension exceed the Company Contribution as defined in Subsection (D), then such extension will be made under and pursuant to the terms of an Extension Deposit Agreement for Bona Fide Service Applicant, as hereinafter set forth, and subject to the applicable provisions of these Rules and Regulations. The construction of facilities to serve such Bona Fide Service Applicant will not commence until an Extension Deposit Agreement for Bona Fide Service Applicant has been executed and all applicable terms and conditions therein have been satisfied by the Applicant.

(3) When an extension is requested or required to serve a Bona Fide Service Applicant requiring Special Utility Service, construction of the extension or of any facilities needed to provide such Special Utility Service will not commence until a Special Utility Service Agreement has been executed and all applicable terms and conditions therein have been satisfied by the Applicant including, but not limited to, paying the requisite sum of money for construction of the facilities needed to furnish Special Utility Service, in accordance with the Preliminary Memorandum to such Special Utility Service Agreement.

(B) The Company shall have exclusive right to determine the type and size mains to be installed and the other facilities required to render adequate service. If a Bona Fide Service Applicant desires any facilities other than those facilities determined by the Company to be required to render adequate service, those other facilities will be installed by, owned by, maintained by, and will become the sole responsibility of the Bona Fide Service Applicant. (C)

All estimated or actual cost figures referred to in the Extension Deposit Agreement, the Special Utility Service Agreement and the Preliminary and Final Memoranda thereto shall include a reasonable allowance for overhead costs. (C)

(C) In determining the length of and necessity for any extension required pursuant hereto, the terminal point of such extension shall, in all cases, be at the point in the curb line which is equidistant from the side property lines of the last lot for which water service is requested, except as provided in Paragraph B above wherein it may be necessary to extend beyond the last lot and connect to an existing main to provide adequate and reliable water service. A street service connection will be provided only when Customer service lines from the curb to the premises to be served are laid in a straight line at right angles to the curb line.

(D) For the purposes of this rule:

(1) "Bona Fide Service Applicant" shall mean a person or entity applying for General Water Service to an existing structure for which a valid occupancy permit has been issued if such structure is within the Company's certificated service territory and is either: (1) a primary residence of the Applicant; or (2) a place of business. An Applicant shall not be deemed a Bona Fide Service Applicant if such Applicant is requesting water service to: (1) a building lot or subdivision; or (2) a primary residence if such primary residence was constructed, or the request for water service was made, as part of a plan for the development of a residential subdivision; or (3) water service for temporary or seasonal services. To become a Bona Fide Service Applicant, a person or entity must file a signed application for a new Street Service Connection to qualifying premises, extend the necessary service line to the curb line of premises, agree to separate any existing private well system from the public water system in accordance with the Cross Connection provisions of the Company's tariff, and request water service to begin immediately following installation of the Street Service Connection. If the Company shall be delayed or prevented from installing the Street Service Connection for a period of one (1) year or more from the date of application, the Bona Fide Service Applicant shall have the right to withdraw the Application for Service.

(2) "Company Contribution" shall mean that portion of the main extension costs which the Company will fund based upon the following formula:

Average Annual Revenue minus	\$ _____
Operation and Maintenance Expenses	\$ _____
Subtotal	\$ _____

Pennsylvania-American Water Company

divided by  
Depreciation Rate and  
weighted cost of debt  
Company Investment

\$ \_\_\_\_\_ %  
\_\_\_\_\_ (C)

The Bona Fide Service Applicant will be required to pay one-third of the Customer Contribution prior to the commencement of any work by the Company. The Customer Contribution will be an amount equal to the difference between the Company Contribution and the cost of the main extension and applicable interest charges. After the initial payment any remainder will be amortized over thirty-six (36) equal monthly installments beginning with the Bona Fide Service Applicant's first bill for water service. The Company will also provide information to the applicant on financial institutions that may offer financing to the Bona Fide Service Applicant for the line extension. (C)

(a) The Average Annual Revenue for residential customers with a 5/8" meter shall be calculated based upon the average residential consumption for customers with a 5/8" meter used to determine rates approved by the Pennsylvania Public Utility Commission in the Company's last approved general rate increase. Consumption for residential customers with larger meters will be determined by selecting up to twenty (20) existing customers with similar meter sizes, as available, which have received service for at least twelve (12) months prior to the date of application, and applying the Company's latest approved rates to the annual average consumption of those customers. (C)

(b) The Average Annual Revenue for Commercial and Municipal customers shall be calculated by selecting up to twenty (20) existing, similar commercial or municipal ratepayers, as available, which have received service for at least twelve (12) months prior to the date of application, to determine the average consumption to be used in calculating the Company Contribution.

(c) Operation and Maintenance Expenses shall be the Company's average annual operation and maintenance costs associated with serving an additional customer. (C)

(d) The depreciation rate shall be the Company's depreciation rate for the facilities to be installed as determined in the Company's last approved general rate increase filing. (C)

(e) The weighted cost of debt shall be the Company's long-term debt costs as determined in the Company's last approved general rate increase. (C)

(3) "General Water Service" shall mean basic residential water service or water service for general commercial or municipal purposes but excluding, without limitation, water service for seasonal or temporary uses and water service solely for sprinkler systems or for any other fire protection use.

(4) "Special Utility Service" shall mean any residential or business service which exceeds that required for ordinary residential purposes. By way of illustration and not limitation, Special Utility Service shall include: the installation of facilities such as oversized mains, booster pumps and storage tanks as necessary to provide adequate flows or to meet specific pressure criteria, or service to large water consuming commercial and industrial facilities. (An otherwise Bona Fide applicant requesting service which includes a "special utility service" component is entitled to a Bona fide applicant status, including the corresponding Company contribution toward the costs of the line extension which do not meet the special utility service criteria.) (C)

(5) "Street Service Connection" shall mean a pipe with appurtenances used to conduct water from a distribution main of the Company to the curb line of the premises.

(E) (1) Street service supplying a premises shall not pass through or across any premises or property other than that to be supplied, except as provided in (E) (2). No water pipes or plumbing in any premises shall be extended therefrom to adjacent or other premises. Street service connections shall not be connected to hydrant branch lines and they will not be permitted to cross intervening properties unless there is no other way in which service can be provided and appropriate easements are obtained. Only service applicant(s) owning property in fee which directly abuts a street wherein there is an existing main of the Company will be permitted to attach a street-service connection to the Company's main for the purpose of receiving water service therefrom; unless appropriate easements are obtained pursuant to Subsection (2) below. It is understood that such property owned in fee by the said service applicant(s) shall be a complete standard building lot which complies with the existing zoning laws and regulations of the municipality in which such property is located. It is further understood that if such property owned in fee by a service applicant(s) is subsequently sold, the purchaser of such property will be entitled to receive water service upon compliance with all of the provisions of this tariff, but that the seller of such property shall only be entitled to continue to receive service if such seller complies with all of the provisions of this tariff.

(2) A residential service applicant(s) may obtain a recorded easement or right-of-way that runs with the land, of at least fifteen (15) feet in width connecting the property to be served to the street wherein the Company's main is located. Such easement or right-of-way shall not cross multiple properties. The residential service applicant(s) shall present the Company with a certified copy of a duly recorded instrument which (a) describes the easement or right-of-way by metes and bounds, (b) gives the easement in perpetuity to the heirs, successors and assigns

Pennsylvania-American Water Company

Supplement No. 26 to  
Tariff Water-PA P.U.C. No. 4  
Second Revised Page No. 75  
Canceling First Revised Page 75

of said residential service applicant(s), (c) grants access to the service pipe for purposes of repair and replacement, and (d) is recorded in the County Office of the Recorder of Deeds.

PENNSYLVANIA-AMERICAN WATER COMPANY  
(Illustrative Purposes Only)

Calculation of Company Funded Portion of Main Extensions  
Per Proposed Tariff Supplement Filed

Average Annual Revenue	\$ 340	
minus		
Operation and Maintenance Expenses	102	
Subtotal	238	
divided by		
Depreciation Rate (Mains Only) and Weighted Debt Costs	6.08%	
Total	\$3,914	(C)

Issued: January 13, 1997

Effective: March 14, 1997

RULES AND REGULATIONS GOVERNING THE  
DISTRIBUTION AND SALE OF WATER  
(Continued)

27.2 EXTENSION DEPOSIT AGREEMENT FOR  
BONA FIDE SERVICE APPLICANT

THIS AGREEMENT entered into this \_\_\_\_\_ day of \_\_\_\_\_,  
19\_\_\_\_, by and between Pennsylvania-American Water Company hereinafter called  
the "COMPANY," and \_\_\_\_\_ hereinafter called the  
"BONA FIDE SERVICE APPLICANT."

WHEREAS, the BONA FIDE SERVICE APPLICANT desires extension of the water  
mains of the COMPANY, as hereinafter described;

NOW, THEREFORE, this agreement WITNESSETH:

FIRST: THE COMPANY contracts and agrees to lay the water main(s) (and  
other facilities, if any) as shown in red on the diagram hereto attached and made  
a part hereof described and located as follows:

(LEAVE SPACE FOR DESCRIPTION)

SECOND: It is expressly understood and agreed that if the COMPANY shall  
be delayed or prevented from installing the water main (s) (and other facilities,  
if any) hereinabove described because of its failure to secure pipe or other  
construction materials, or for any other causes beyond its control, such failure  
or delay in performance shall be excused; provided, however, if such failure or  
delay in performance shall extend for a period of more than one (1) year from the  
date thereof, the BONA FIDE SERVICE APPLICANT shall have the right to cancel and  
terminate this agreement on thirty (30) days' written notice to the COMPANY, and  
thereafter both parties shall be relieved of all duties and obligations arising  
hereunder. But this right to cancel and terminate by the BONA FIDE SERVICE  
APPLICANT shall not be invoked if the COMPANY has received the construction  
material, in which event the COMPANY shall have the obligation to prosecute the  
work diligently to its completion.

Pennsylvania-American Water Company

THIRD: The BONA FIDE SERVICE APPLICANT hereby agrees, upon notice from the COMPANY that it is prepared and able to go forward with the work provided in Paragraph FIRST hereof, to pay for the actual costs of extending the facilities as provided in Paragraph FIRST hereof, by depositing an amount in cash equal to (1) the Estimated Cost less (2) the Company Contribution. Items (1) and (2) are to be determined as follows: (C)

- (1) The Estimated Cost shall be the estimated cost of the extension, including the estimated cost of said main(s) and the estimated cost of any other facilities which the COMPANY shall have determined are required to render adequate service.
- (2) The Company Contribution shall be a credit as determined by the following formula:

Average Annual Revenue	\$		
minus			
Operation and Maintenance Expenses	\$		
Subtotal	\$		
divided by			
Depreciation Rate and Weighted Cost of Debt			%
Total	\$		(C)

multiplied by the number of bona fide service applicants who will be directly served by the extension.

The BONA FIDE SERVICE APPLICANT agrees to pay at least one-third of the deposit prior to the commencement of construction of the extension, and the remainder of the deposit plus applicable interest charges in thirty-six (36) equal monthly installments beginning with BONA FIDE SERVICE APPLICANT'S first bill for water service. Interest will be charged on the unpaid portion each month, equal to the monthly portion of the embedded cost of long-term debt recognized in the Company's last approved general rate increase. (C)

Issued: January 13, 1997

Effective: March 14, 1997

Pennsylvania-American Water Company

Upon such written notice, a Preliminary Memorandum in the form attached shall be prepared and signed by both parties showing the deposit required in accordance with foregoing provisions. Upon completion of the installation of the extension, a Final Memorandum in the form attached shall be prepared and signed by both parties showing the deposit required based on the same calculations as set forth above but by using the actual cost of the extension, including the actual installation costs of the mains and other facilities, for the Estimated Cost and calculating the Applicable Credit. If the deposit shown to be due on the Final Memorandum differs from that shown on the Preliminary Memorandum, the APPLICANT will deposit any additional amount shown to be due or the COMPANY will refund to the APPLICANT any excess amount shown to have been deposited. Any additional amount of required deposit must be made by the APPLICANT to the COMPANY before the granting of refunds to the APPLICANT. (C)

FOURTH: The COMPANY hereby agrees to refund to the BONA FIDE SERVICE APPLICANT during the period of ten (10) years from actual date of deposit as shown on the Preliminary Memorandum a Per-Customer Refund Amount for each additional BONA FIDE SERVICE APPLICANT for whom a street service connection shall be directly attached to such main extension, as distinguished from extensions or branches thereof; provided however, that the total amount refunded shall not exceed the amount of the original deposit by the BONA FIDE SERVICE APPLICANT to the COMPANY as of the date of the refund, and further provided that, if there is an unpaid balance owed then the Per-Customer Refund Amount shall first be deducted from the unpaid balance. All or any part of the deposit not refunded within said 10-year period shall become the property of the COMPANY. The Per-Customer Refund Amount shall be an amount determined by multiplying the number of bona fide customers directly served by the facilities installed in Paragraph FIRST by the most recent average annual bill for the appropriate customer class. (C)

FIFTH: The BONA FIDE SERVICE APPLICANT may request refunds under Paragraph FOURTH, once in each Calendar quarter, furnishing the COMPANY, at such time, a listing of additional bona fide service applicants; however, failure on the part of the BONA FIDE SERVICE APPLICANT to make such request shall not constitute a waiver of any rights hereunder or relieve the COMPANY of the obligation to make refunds with reasonable promptness.

SIXTH: The ownership of the water main(s) and other facilities installed hereunder shall at all times be with the COMPANY, its successors and assigns. (C)

SEVENTH: This agreement shall be valid and binding on the COMPANY only when executed by its duly authorized representative. (C)

EIGHTH: This agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the respective parties.

Issued: January 13, 1997

Effective: March 14, 1997

Pennsylvania-American Water Company

Supplement No. 26 to  
Tariff Water-Pa. P.U.C. No. 4  
First Revised Page 79  
Canceling Original Page 79

NINTH: Any notice given hereunder shall be deemed sufficient if in writing and sent by registered mail to the COMPANY at

\_\_\_\_\_  
(Address of COMPANY)

and to the BONA FIDE SERVICE APPLICANT at

\_\_\_\_\_  
(Address of BONA FIDE SERVICE APPLICANT)

TENTH: This agreement is entered into pursuant to the legally established Rules and Regulations of the COMPANY, and the words, phrases, and terms hereof are to be understood and interpreted in conformity with said Rules and Regulations, which are hereby incorporated herein by reference.

Executed in triplicate by the parties hereto on the date first above written.

PENNSYLVANIA-AMERICAN WATER COMPANY

WITNESS:

\_\_\_\_\_

BY: \_\_\_\_\_

Title: \_\_\_\_\_ (C)

WITNESS:

\_\_\_\_\_

BONA FIDE SERVICE APPLICANT

\_\_\_\_\_

Issued: January 13, 1997

Effective: March 14, 1997

RULES AND REGULATIONS GOVERNING THE  
DISTRIBUTION AND SALE OF WATER  
(Continued)

PRELIMINARY MEMORANDUM

This Preliminary Memorandum is executed by the parties hereto under and pursuant to the provisions of Paragraph THIRD of a certain agreement in writing between the parties entered into on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, for the installation by the COMPANY of certain water main(s) and other facilities therein described. It is, therefore, agreed and stipulated: (C)

- (a) Estimated Cost Main(s) \$ \_\_\_\_\_
- (b) Estimated Cost of Other Facilities \$ \_\_\_\_\_
- (c) Total \$ \_\_\_\_\_
- (d) Company Contribution \$ \_\_\_\_\_ (C)
- (e) Amount of Deposit \$ \_\_\_\_\_ (C)  
(c) minus (d)

This Preliminary Memorandum shall be attached to the original agreement in accordance with the provisions of Paragraph THIRD thereof.

Dated: \_\_\_\_\_ PENNSYLVANIA-AMERICAN WATER COMPANY  
Date

WITNESS:

\_\_\_\_\_ BY: \_\_\_\_\_

Title: \_\_\_\_\_ (C)

WITNESS:

\_\_\_\_\_ BONA FIDE SERVICE APPLICANT  
\_\_\_\_\_

Issued: January 13, 1997

Effective: March 14, 1997

Pennsylvania-American Water Company

RULES AND REGULATIONS GOVERNING THE  
DISTRIBUTION AND SALE OF WATER  
(Continued)

FINAL MEMORANDUM

This Final Memorandum is executed by the parties hereto under and pursuant to the provisions of Paragraph THIRD of a certain agreement in writing between the parties entered into on the \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_, for the installation by the COMPANY of certain water main(s) and other facilities therein described. It is, therefore, agreed and stipulated:

- |     |                                    |          |     |
|-----|------------------------------------|----------|-----|
| (a) | Actual Cost of Main(s)             | \$ _____ |     |
| (b) | Actual Cost of Other Facilities    | \$ _____ |     |
| (c) | Total                              | \$ _____ |     |
| (d) | Company Contribution               | \$ _____ | (C) |
| (e) | Amount of Deposit<br>(c) minus (d) | \$ _____ | (C) |

This Final Memorandum shall be attached to the original agreement in accordance with the provisions of Paragraph THIRD thereof.

Dated: \_\_\_\_\_ PENNSYLVANIA-AMERICAN WATER COMPANY  
Date

WITNESS:

\_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_ (C)

WITNESS:

\_\_\_\_\_

\_\_\_\_\_ BONA FIDE SERVICE APPLICANT

Issued: January 13, 1997

Effective: March 14, 1997

DOCUMENT  
FOLDER

DOCKETED

JAN 14 2003

---

C-00015377

**PAWC EXHIBIT 3.2**

PAWC EXHIBIT 3.2

PENNSYLVANIA-AMERICAN WATER COMPANY		
CALCULATION OF COMPANY FUNDED PORTION OF MAIN		
EXTENSIONS PER PUC FINAL RULEMAKING AT L-00930089		
AVERAGE ANNUAL REVENUE		\$397
MINUS		
OPERATION AND MAINTENANCE EXPENSES		90
SUBTOTAL		307
DIVIDED BY		
DEPRECIATION RATE FOR 8" MAIN	0.0109	
AND WEIGHTED COST OF DEBT	0.0434	
COMPOSITE RATE		0.0543
COMPANY INVESTMENT		\$5,655

RATE FILING INFORMATION FROM  
DOCKET NO R-994638  
EFFECTIVE 12-18-99



# Pennsylvania-American Water Company

800 West Hershey Park Drive • P.O. Box 888 • Hershey, PA 17033-0888  
(717) 533-5000 • FAX (717) 531-3251

*jav*  
*110g*

**RECEIVED**

OCT 31 2002

OFFICE OF  
CONSUMER ADVOCATE

October 30, 2002

James J. McNulty, Secretary  
Pennsylvania Public Utility Commission  
P.O. Box 3265  
Harrisburg, PA 17105-3265

**DOCUMENT  
FOLDER**

Dear Mr. McNulty,

Please find enclosed a copy of Pennsylvania-American Water Company's Earnings Disclosure Report for the twelve month period ending September 30, 2002 in accordance with Commission Order L-910061, adopted October 1, 1992.

Sincerely,

Paul T. Diskin  
Director of Rates and Revenues

PTD\jal

Pc: Office of Consumer Advocate  
Office of Trial Staff  
Office of Small Business Advocate  
Fixed Utility Services

**DOCKETED**

JAN 14 2003

**RECEIVED**

DEC 19 2002  
PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU



SCHEDULE A

Company Name: Pennsylvania American Water Company - 212285

Financial Report for Twelve Months Ended

September 30, 2002

(Thousands of Dollars)

	Actual per <u>Books</u> (1)	Intrastate <u>Percent</u> (2)	Intrastate <u>per books</u> (3)	<u>Adjustments (a)</u> (4)	<u>Adjusted Results</u> (5)
(1) Original Cost of Plant In Service	\$1,908,794	1.0000	\$1,908,794		\$1,908,794
(2) Less: Depreciation Reserve	326,308	1.0000	326,308		326,308
(3) Net Plant in Service	<u>1,582,486</u>		<u>1,582,486</u>	<u>0</u>	<u>1,582,486</u>
<u>Additions:</u>					
(4) Land/Plant Held for Future Use	335	1.0000	335		335
(5) Materials & Supplies & Fuel Stocks	2,411	1.0000	2,411		2,411
(6) Cash Working Capital (b)	8,716	1.0000	8,716		8,716
(7) Other - Acquisition Adjustment (b)	16,300	1.0000	16,300		16,300
<u>Deductions:</u>					
(8) Accumulated Deferred Income Taxes			0		0
(9) Liberalized Depreciation	89,906	1.0000	89,906		89,906
(10) Investment Tax Credit	573	1.0000	573		573
(11) Other	0	1.0000	0		0
(12) Customer Deposits	0	1.0000	0		0
(13) Customer Advances	35,458	1.0000	35,458		35,458
(14) Contributions in Aid of Construction	76,399	1.0000	76,399		76,399
(15) Other	<u>1,605</u>	1.0000	<u>1,605</u>		<u>1,605</u>
(16) RATE BASE	<u>\$1,406,307</u>		<u>\$1,406,307</u>	<u>0</u>	<u>\$1,406,307</u>
(17) <u>Operating Revenues</u>	<u>\$337,860</u>	1.0000	<u>337,860</u>		<u>\$337,860</u>
<u>Operating Expenses:</u>					
(18) Operation & Maintenance	131,280	1.0000	131,280		131,280
(19) Annual Depreciation	49,802	1.0000	49,802		49,802
(20) Taxes - Other than Income	9,325	1.0000	9,325		9,325
(21) State Income Tax - Current	6,352	1.0000	6,352		6,352
(22) Federal Income Tax - Current	15,888	1.0000	15,888		15,888
(23) Deferred Income Taxes	16,520	1.0000	16,520		16,520
(24) Investment Tax Credit (Net)	<u>(234)</u>	1.0000	<u>(234)</u>		<u>(234)</u>
(25) Total Operating Expenses	<u>228,933</u>		<u>228,933</u>	<u>0</u>	<u>228,933</u>
(26) INCOME AVAILABLE FOR RETURN	<u>\$108,927</u>		<u>\$108,927</u>	<u>\$0</u>	<u>\$108,927</u>
RATE OF RETURN - OVERALL	<u>7.75%</u>		<u>7.75%</u>		<u>7.75%</u>

(a) Schedule B and Schedule C

(b) As adjudicated in last rate case at R-00016339

SCHEDULE D-1

COMPANY NAME: Pennsylvania American Water Company - 212285

Intrastate Per Books

Calculation of Return on Common Equity  
for the 12 Months Ended 9/30./2002

(Thousands of Dollars)

	Capital Ratios (a)		Rate Base (b)		Totals		Embedded Cost Rates(c)		Total Rate Base Related Cost of Debt and Preferred & Preference
	(1)		(2)		(3)		(4)		(5)
	Sch. E Col. 2	x	Sch. A. Col. 3 Line 16	=		x	Sch. F Col. 7	=	
1) Debt	57.64%		\$1,406,307		\$810,659		6.65%		\$53,909
2) Preferred	1.01%		\$1,406,307		14,188		8.06%		1,144
3) Common Equity	<u>41.35%</u>		\$1,406,307		<u>581,460</u>				
4) Total	<u>100.00%</u>				<u>\$1,406,307</u>				<u>\$55,052</u>

12 Months ended 9/30./2002

	Intrastate Per Books
5) Income Available for Return (from Sch. A, Col. 3, Line 26)	\$108,927
6) Less: Total Rate Base Related Cost of Debt and Preferred (Col 5, Line 4)	<u>\$55,052</u>
7) Income Available for Common Equity (Line 5 Less Line 6)	<u>\$53,875</u>
8) Debt Cost (Col 5., Line 1)	\$53,909
9) Less: Interest Expense used to compute State and Federal Income Taxes	<u>55,927</u>
10) Difference (Line 8 Less Line 9)	(2,018)
11) Times: Composite State and Federal Income Tax Rate	<u>41.49%</u>
12) Net Addition or (Deduction) (Line 10 x Line 11)	<u>(\$837)</u>
13) Income Available for Common Equity, including Income Tax Effect of using Debt Cost (Line 7 plus Line 12)	<u>\$53,037</u>
14) Return on Common Equity (Line 7/Line 3, Col. 3)	<u>9.27%</u>
15) Return on Common Equity, including Income Tax Effect of using Debt Cost (Line 13/Line 3, Col. 3)	<u>9.12%</u>

SCHEDULE E

COMPANY NAME: Pennsylvania American Water Company - 212285  
 Calculation of Capital Structure and Related Ratios  
 for the Twelve Months Ended 9/30./2002

(Thousands of Dollars)

	Total Company Actual Amount Outstanding <u>(1)</u>	<u>Ratios</u> <u>(2)</u>
Total Debt (Sch. F., Col. 4)	\$867,893	57.64%
Total Preferred & Preference Stock Stock (Sch. F., Co.. 4)	15,190	1.01%
<u>Common Equity</u>		
Common Stock	21,507	
Premium on Common Stock	86,703	
Capital Surplus	318,699	
Capital Stock		
Retained Earnings	194,642	
Other	<u>961</u>	
Total Common Equity	<u>622,512</u>	<u>41.35%</u>
Total Capital	<u>\$1,505,595</u>	<u>100.00%</u>

## Schedule F

COMPANY NAME: Pennsylvania American Water Company - 212285  
 Cost of Debt and Preferred Stock as Adjusted  
 For the 12 Months Ended 9/30./2002  
 (Thousands of Dollars)

Item/Description	Issue Date	Maturity Date	Interest Rate	Outstanding Balance	Effective Cost Rate	Percent to Total	Weighted Cost Rate
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Long Term Debt							
Short Term Debt (If Applicable)							
Total				867,892,905			6.65%
Preferred Stock			(See Appendix B)				
Total				15,190			8.06%

PENNSYLVANIA AMERICAN WATER COMPANY  
SCHEDULE OF DEBT AT SEPTEMBER 30, 2002

DATE OF ISSUE	DATE OF MATURITY	AMOUNT ISSUED	AMOUNT OUTSTANDING	COUPON RATE	ANNUAL INTEREST	ISSUANCE EXPENSE	NET PROCEEDS	SINKING REQUIR.	PERCENT TO TOTAL	EFFECTIVE COST RATE	WEIGHTED COST RATE		
General Mortgage Bonds													
01-Nov-67	01-Jan-06	205,000	55,000	5.25%	2,888	1	0	205,000	10.00%	0.01%	5.25%	0.00%	
01-Apr-88	31-Mar-03	15,600,000	15,600,000	9.34%	1,457,040		66,123	15,513,877		1.84%	9.39%	0.17%	
15-Jun-88	31-Mar-08	29,400,000	29,400,000	9.35%	2,748,900	2	167,527	29,232,473		3.47%	9.40%	0.33%	
24-Aug-89	01-Aug-19	15,500,000	15,500,000	9.71%	1,505,050		165,469	15,334,531		1.83%	9.81%	0.18%	
15-Feb-91	15-Jan-21	20,000,000	20,000,000	9.69%	1,938,000		116,061	19,883,939		2.36%	9.75%	0.23%	
01-Nov-91	01-Nov-06	11,000,000	5,500,000	8.51%	468,050	3	97,988	10,902,012	1,100,000	0.65%	8.59%	0.06%	
01-Nov-91	01-Nov-31	10,000,000	10,000,000	8.82%	882,000		88,352	9,911,648		1.18%	8.90%	0.10%	
01-Nov-92	01-Nov-02	50,000,000	50,000,000	7.15%	3,575,000		590,181	49,409,819		5.89%	7.24%	0.43%	
01-Dec-92	01-Dec-07	37,900,000	37,900,000	8.58%	3,251,820		546,181	37,353,819		4.47%	8.71%	0.39%	
01-Nov-93	01-Nov-33	38,000,000	38,000,000	6.78%	2,576,400		174,946	37,825,054		4.48%	6.81%	0.31%	
15-Aug-95	01-Aug-25	10,000,000	10,000,000	8.15%	815,000		60,119	9,939,881		1.18%	8.20%	0.10%	
15-Aug-95	01-Aug-05	14,000,000	14,000,000	7.87%	1,101,800		84,166	13,915,834		1.65%	7.92%	0.13%	
01-Sep-96	01-Sep-26	150,000,000	150,000,000	7.80%	11,700,000		2,069,648	147,930,352		17.68%	7.91%	1.40%	
21-Nov-97	01-Nov-17	33,000,000	33,000,000	7.08%	2,336,400		551,683	32,448,317		3.89%	7.20%	0.28%	
01-Jun-99	01-Jun-29	24,030,000	23,885,000	5.25%	1,253,963		1,191,706	22,838,294		2.82%	5.52%	0.16%	
01-Apr-01	01-Apr-11	47,000,000	47,000,000	6.87%	3,228,900		321,163	46,678,837		5.54%	6.92%	0.38%	
06-Nov-01	06-Oct-07	73,000,000	73,000,000	4.92%	3,591,600		38,650	72,961,350		8.61%	4.92%	0.42%	
15-Jan-02	06-Nov-06	61,619,549	61,619,549	4.92%	3,031,682		34,955	61,584,594		7.26%	4.92%	0.36%	
01-Jan-98	01-Sep-18	18,250,000	18,250,000	2.30%	419,750		141,119	18,108,881		2.15%	2.32%	0.05%	
01-Jan-91	15-Mar-19	17,950,000	17,950,000	2.20%	394,900		0	17,950,000		2.12%	2.20%	0.05%	
01-Jan-96	01-Jul-31	16,700,000	16,700,000	2.30%	384,100		0	16,700,000		1.97%	2.30%	0.05%	
First Mortgage Bonds													
15-Sep-92	01-Oct-17	50,000,000	50,000,000	7.20%	3,600,000	4	1,396,219	48,603,781		5.89%	7.41%	0.44%	
22-Dec-92	01-Dec-22	30,000,000	30,000,000	7.125%	2,137,500	4	1,011,071	28,988,929		3.54%	7.37%	0.26%	
21-Dec-93	01-Jan-19	19,000,000	19,000,000	6.05%	1,149,500	4	732,754	18,267,246		2.24%	6.29%	0.14%	
15-Nov-94	01-Dec-17	30,000,000	30,000,000	7.000%	2,100,000	4	1,987,578	28,012,422		3.54%	7.50%	0.27%	
Pennvest Loans													
03-Mar-91	01-Apr-11	213,171	144,734	1.00%	17,604	5	0	213,171	15,631	0.02%	8.26%	0.00%	
31-Jul-89	01-Aug-09	490,811	322,627	3.25%	52,147	6	0	490,811	37,433	0.04%	10.62%	0.00%	
01-Jul-00	01-Jan-18	1,179,442	1,179,442	1.396%	85,488	7	69,942	1,109,500		0.14%	1.48%	0.00%	
07-May-98	01-May-18	8,600,000	5,986,066	1.00%	555,312	8	24,276	8,575,724		0.71%	1.00%	0.01%	
10-Feb-99	01-Jan-19	3,250,000	2,588,009	1.45%	198,888	9	28,660	3,221,340		0.31%	1.47%	0.00%	
23-Aug-01	23-Aug-21	4,400,000	1,979,430	1.38%	27,455	15		4,400,000		0.23%	1.39%	0.00%	
21-Oct-99	01-Oct-19	1,810,000	1,719,500	1.409%	24,228	10	0	1,810,000		0.20%	1.41%	0.00%	
01-Apr-02	01-Mar-22	3,694,410	3,288,408	1.619%	196,734	11		3,694,410		0.39%	1.62%	0.01%	
10-Feb-00	01-Jan-20	3,737,400	2,868,460	1.00%	28,685	12	0	3,737,400		0.34%	1.00%	0.00%	
01-Apr-02	01-Mar-22	3,760,814	3,114,164	1.619%	211,721	13		3,760,814		0.37%	1.62%	0.01%	
13-Feb-01	01-Jan-21	4,655,458	3,961,032	1.619%	64,129	14		4,655,458		0.47%	1.62%	0.01%	
Water Facility Restoration Loans													
03-Mar-89	01-Mar-09	4,000,000	1,795,075	4.188%	315,936	4	0	4,000,000	209,820	0.21%	7.90%	0.02%	
03-Mar-89	01-Mar-09	3,000,000	1,330,614	4.188%	234,192	4	0	3,000,000	155,531	0.16%	7.81%	0.01%	
03-Dec-92	01-Dec-12	1,955,878	1,660,578	3.450%	193,884	4	21,754	1,934,124	121,956	0.20%	9.91%	0.02%	
		<b>\$866,901,933</b>	<b>\$848,297,688</b>					<b>\$57,856,646</b>	<b>\$11,798,291</b>	<b>\$855,103,642</b>	<b>\$1,650,371</b>	<b>100.00%</b>	<b>6.76%</b>

- (1) Owned by American Water Works Company. 40 year demand note.
- (2) There is a sinking fund provision for this issue of \$4,900,000 annually on March 31, beginning in 2003 and continuing through March 31, 2007.
- (3) The 8.51% Bonds shall be subject to an annual sinking fund in the amount of \$1,100,000 commencing October 31, 1997 which shall be sufficient to retire the principal amount of the 8.51% Bonds upon maturity.
- (4) Acquired by PAWC on February 16, 1996 from the former PG & W.
- (5) Acquired by PAWC in May of 1998 from the former Fairview Water Company
- (6) Acquired by PAWC in May of 1998 from the former NUI, Pocono Division
- (7) Clarion Township Pennvest Loan. Interest rate increases to 2.566% in 2003.
- (8) Pocono Regionalization Pennvest Loan. Interest 1.00% from 1998 to 2003 and 1.384 from 2004 to 2018.
- (9) Independence Twp Municipal Authority and Cedar Grove Water Assoc. Interest 1.453% from 1999 thru 2004 and 2.905% from 2005 thru 2019.
- (10) Clark Summit Regionalization (Abington). Interest 1.409% from 1999 to 2004 and 2.795% from 2005 to 2019.
- (11) Strattanville Pennvest Loan. Interest 1.619% from 2002 to 2007 and 3.237% starting March 2007.
- (12) Pocono Country Place. Interest 1.00% from 2000 to 2005 and 1.184% from 2006 to 2020.
- (13) Franklin Township. Interest 1.619% from 2002 to 2007 and 3.237% starting April 2007.
- (14) Jackson Township. Interest 1.619% from 2001 to 2008 and 3.237 from 2009 to 2021.

**PENNSYLVANIA AMERICAN WATER COMPANY**  
**SCHEDULE OF PREFERRED STOCK AT SEPTEMBER 30, 2002**

DATE OF ISSUE	DATE OF MATURITY	SHARES ISSUED	SHARES OUTSTANDING	AMOUNT ISSUED	AMOUNT OUTSTANDING	EXPENSE	NET PROCEEDS	SINKING REQUIR	DIVIDEND RATE		ANNUAL DIVIDEND	PERCENT TO TOTAL	EFFECTIVE COST RATE	WEIGHTED COST RATE
02-Dec-40	---	20,000	17,247	2,000,000	1,724,700	0	2,000,000	0	4.500%		77,612	11.35%	4.50%	0.51%
23-Apr-71	---	3,000	1,780	300,000	178,000	5,473	294,527	0	9.750%	(1)	17,355	1.17%	9.96%	0.12%
23-Apr-71	---	4,250	2,735	425,000	273,500	7,275	417,725	0	9.350%		25,572	1.80%	9.54%	0.17%
31-Dec-98	---	18,637	10,137	1,863,700	1,013,700	0	1,863,700	0	7.730%		78,359	6.67%	7.73%	0.52%
21-Nov-91	---	120,000	120,000	12,000,000	12,000,000	82,714	11,917,286	0	8.490%		1,018,800	79.00%	8.55%	6.75%
		165,887	151,899	16,588,700	15,189,900	95,462	16,493,238	0	8.016%		1,217,698	100.00%		8.06%

(1) The total sinking fund requirement does not include \$10,000 for the 9.750% issue and \$12,000 for the 9.35% issue which are at the option of the holder.

Gallagher St. 1-5  
C-00015377  
12/13/02  
HGS  
Jaw

1 PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

2 A. Patrick M. Gallagher, 1613 Millers Run Road, McDonald, Pennsylvania, 15057.

4 Q FOR WHOM ARE YOU TESTIFYING AND IN WHAT CAPACITY?

5 A. I am the Chairman of the Mt. Pleasant Township Municipal Authority and I represent the  
6 Authority in an official capacity for the purpose of this surrebuttal testimony.

8 Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS PROCEEDING?

9 A. Yes. I testified on September 9, 2002 at the Public Hearing held in Mount Pleasant  
10 Township.

DOCUMENT  
FOLDER

DOCKETED

JAN 14 2003

12 Q. WHY ARE YOU PROVIDING THIS SURREBUTTAL TESTIMONY?

13 A. The purpose of this surrebuttal testimony is to respond to the supplemental testimony of  
14 Mr. Jay Lucas (PAWC Statement No. 1.1) who has testified on behalf of the Pennsyl-  
15 vania-American Water Company ("PAWC").

17 Q WHAT ARE THE ISSUES IN MR. LUCAS' TESTIMONY THAT YOU ARE YOU  
18 RESPONDING TO?

19 A. I am responding to Mr. Lucas' testimony regarding the (1) adoption of a mandatory con-  
20 nection ordinance, and (2) the assertion made by Mr. Lucas that the township residents  
21 would realize a financial cost savings in regard to the installation of proposed public sani-  
22 tary sewers as a result of the installation of a public water supply system.

RECEIVED

DEC 19 2002  
PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

1 Q. WHY IS A MANDATORY TAP-IN ORDINANCE DETRIMENTAL TO BRINGING  
2 WATER TO MT. PLEASANT TOWNSHIP?

3 A. A mandatory tap-in ordinance will require all township residents to tie into any proposed  
4 public water line that is constructed on or adjacent to a persons property. I have been a  
5 member of the Mt. Pleasant Township Municipal Authority (MPTMA) Board since 1998.  
6 It is my understanding that there was a previous attempt to bring water to the Mt. Pleasant  
7 Township area through PAWC in the early 1990's. It is also my understanding in investi-  
8 gating the previous attempt, that there were residents that opposed the public water line  
9 project at that time which ultimately prevented the project from going forward.

10  
11 Q. WHAT DO YOU MEAN BY OPPOSED TO THE PUBLIC WATER SYSTEM?

12 A It is my understanding that some residents viewed the proposed waterline project as a  
13 threat to their rural lifestyle. The opposing residents cited future urban sprawl from de-  
14 velopment along with being forced to tie into the proposed public water lines (mandatory  
15 tap-in ordinance) as the main objections. Mt. Pleasant Township is a rural area except for  
16 the Westland, Southview and Hickory areas. The homes and farms outside of these more  
17 populated areas are located in some cases a considerable distance from the public road-  
18 ways. It would be an undue financial burden on these residents to require them to install  
19 waterline services of distances that in some instances approach ¼ to ½ mile in length. Mr.  
20 Lucas would require all residents to tie into the main lines as a result of a proposed man-  
21 datory tap-in ordinance.

22 Q. MR. GALLAGHER IS THERE ANY STATISTICAL EVIDENCE THAT SUPPORTS  
23 YOUR TESTIMONY?

1 A. Yes, The MPTMA conducted a survey in 2000 to ask all MPT residents to respond to  
2 questions pertaining to proposed public water and public sewer service in Mt. Pleasant  
3 Township. The survey asked residents to answer 'yes' or 'no' to the question: "assuming  
4 the Authority is able to obtain water from a public utility at a reasonable rate, would you  
5 be interested in purchasing this water service?" The survey results for public water at that  
6 time were 381 "yes" votes for water and 239 "no" votes. A meeting was held on February  
7 21, 2002 at the PAWC office to review the proposed waterline service footprint area. I  
8 emphatically stated at this meeting to PAWC representatives that a mandatory tap-in re-  
9 quirement would hinder the acceptance of the proposed waterline project. I left this meet-  
10 ing with the understanding that a mandatory tap-in requirement was not going to be part  
11 of this project. Mt. Pleasant Township does not have an ordinance adopted requiring  
12 mandatory tap-ins for water lines. The OCA conducted another survey in 2001-2002 ask-  
13 ing residents whether they would take service if there were no tap-in fee and the only cost  
14 were a \$30.00 application and associated on-lot service line construction cost. The OCA  
15 survey results included 469 yes votes, 217 no votes throughout Mount Pleasant Town-  
16 ship. The difference between the two survey results clearly indicates that more residents  
17 are willing (yes votes) to accept the proposed public water project without tap-in fees and  
18 mandatory tap-ins. It is clear that more residents are willing to participate given these  
19 conditions. The survey results clearly indicate public opposition to a mandatory tap-in or-  
20 dinance.

21 There was a definite change in the public attitude in favor of the project when the  
22 announcement that public water was coming to Hickory along with the information that  
23 there would be no tap-in fee and no mandatory tap-in ordinance was in place. With the

1 only cost to the customers being the \$30.00 PAWC application fee and the costs of a ser-  
2 vice line, many more residents were in favor of the project. There are a number of resi-  
3 dents that have and use good producing wells for their source of water. These residents  
4 are concerned that they would be required to tap-in as a requirement of the mandatory  
5 tap-in ordinance and be forced to disconnect their existing wells. There were a number of  
6 residents who opposed the previous project but had made comments to me that they are  
7 now considering tapping in to the proposed line since it would be readily available and  
8 that they are not being forced to tap-in. This proposal definitely changed public opinion  
9 and many of the residents who were in staunch opposition to the project suddenly favored  
10 the idea and even admitted that they would now tap-in if public water came to Mt. Pleas-  
11 ant Township under the above stated conditions.

12 Q. WHAT OTHER ISSUES IN MR LUCAS'S TESTIMONY ARE YOU RESPONDING  
13 TO?

14 A. I am responding to Mr. Lucas's statement pertaining to his assertion that "the installation  
15 of a public water supply system would make it more likely that the costly alternative of  
16 installing a public sewer system in the Township could be avoided or minimized in scope,  
17 with resulting savings to the Township and its residents." Mr. Lucas's assertion that there  
18 will be a reduction in the need to construct proposed sanitary sewer collection, convey-  
19 ance and either new or expanded treatment facilities is incorrect. Various witnesses at the  
20 September 9, 2002 hearing testified that they have the following conditions:

- 21 1. Non-producing wells or water supplies and have to rely on purchased bulk water delivered to  
22 their residences,

- 1 2. Quantity of water is poor were they are unable to do laundry, shower on limited time basis,  
2 wash cars, run dishwashers, etc.
- 3 3. Quality of water is poor or undrinkable resulting in them purchasing bottled water or install-  
4 ing costly treatment and disinfecting systems.

5       Once a public water system is installed, it is obvious that residents will use more water  
6 due to its availability therefore increasing the amount of sewage flows to the on-lot septic sys-  
7 tems or the existing outfalls from the lots. The MPTMA has approved a draft version of the  
8 ACT 537 Sewage Facilities Plan and forwarded it to local planning agencies and the Pennsyl-  
9 vania Department of Environmental Protection (PADEP) for review, comment and approval. The  
10 ACT 537 Plan study area includes the areas of Westland, Southview, and the Village of Hickory.  
11 The study area was determined by PADEP and Mt. Pleasant Township as part of the Task Activ-  
12 ity Report (TAR) that was submitted to PADEP by MPTMA Engineer Gannett Fleming, Inc. and  
13 approved. A component of the ACT 537 Plan is a "Needs Survey". The Needs Survey was com-  
14 pleted by the Washington County Local Cooperative Sanitation Council and the results are sum-  
15 marized in the ACT 537 Plan. The following is a paragraph from the ACT 537 Plan section 2.0  
16 Plan Summary, "A needs survey was done in 1994 by PADEP for the Westland area and a needs  
17 survey was done for the Village of Hickory and the Village of Southview as part of this plan. The  
18 1994 Needs Survey for the Westland area indicated the area was a mass sewage discharge. The  
19 Needs Survey of the Village of Southview Identified 79 homes with malfunctioning systems out  
20 of approximately 82 homes that were inspected. Of the 79 homes with malfunctions, 56% dis-  
21 charge to storm drains and 25% have malfunctioning systems. The village of Southview is con-  
22 sidered a mass sewage discharge area and in need of a sewer and treatment system that meets the  
23 requirements of PADEP. Approximately 315 homes were inspected in the village of Hickory and

1 118 homes or 37% were found to have malfunctions. Another 37% of the homes have possible  
2 malfunctions. This area is also in need of sewers but not as immediate as the Village of South-  
3 view and Westland". The majority if not all of the homes in the survey area for the Village of  
4 Southview and Westland have public water supplied by PAWC. The village of Hickory does not  
5 have public water at this time. It is clear from the results of the survey, that a correlation is evi-  
6 dent that where public water is available there are a higher amount of on-lot malfunctions and  
7 discharges to storm sewers or stream areas. It is common knowledge that once public water is  
8 introduced, the amount of water used will increase therefore resulting in higher sewage flows.  
9 The resulting higher sewage flows will eventually lead to further on-lot malfunctions, discharges  
10 to storm sewers, and to waters of the Commonwealth of Pennsylvania. This will result in the  
11 need for a revised ACT 537 Plan to encompass a larger study area resulting in the need for addi-  
12 tional sanitary sewer collection, conveyance, and either new or expanded treatment facilities. The  
13 residents of Mt. Pleasant Township who end up being the users of these facilities will bear the  
14 additional cost of the construction and maintenance of these facilities. In conclusion, Mr. Lu-  
15 cas's assertion that the installation of a public water supply system would make it more likely  
16 that the costly alternative of installing a public sewer system in the Township could be avoided or  
17 minimized in scope, with resulting savings to the Township and its residents is totally incorrect.

18 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

19 A. Yes, it does.

20

21 00071902



1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

2 A. Terry L. Fought, 780 Cardinal Drive, Harrisburg, Pennsylvania, 17111.

3

4 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

5 A. I am a self-employed consulting engineer.

6

7 Q. PLEASE DESCRIBE YOUR BACKGROUND AND QUALIFICATIONS.

8 A. I graduated from Cleveland State University in 1967 with a Bachelor of Civil  
9 Engineering Degree. In 1983, I became a self-employed consulting engineer generally  
10 working on wastewater, water supply, and stormwater management projects. Prior to  
11 1983, I was a member of a consulting engineering firm and provided service to water  
12 supply and wastewater clients. I have consulted with the Pennsylvania Office of  
13 Consumer Advocate (OCA) since 1984 and the New Jersey Rate Counsel before that.  
14 Since 1996, the OCA has retained me to investigate approximately twelve different  
15 complaints regarding Pennsylvania-American Water Company (PAWC) water main  
16 extensions; most located in the western region of the State. The PAWC complaints  
17 involved groups of applicants as small as 3 and as large as over 300.  
18 Appendix A, which is attached to this testimony, describes my educational background  
19 and applicable experience in detail.

20

21 Q. WHAT WAS YOUR ASSIGNMENT IN THIS CASE?

1 A. I was asked by the OCA to investigate a complaint by a resident in the Hickory area of  
2 Mount Pleasant Township, Washington County regarding obtaining water utility service  
3 from the PAWC.

4

5 Q. WHAT DID YOUR INVESTIGATION CONSIST OF?

6 A. My investigation consisted of a review of the formal complaint form submitted to the  
7 Public Utility Commission (PUC) by Ms. Cindy Parks; a field inspection of the proposed  
8 water main extension alignments and the adjacent areas; a meeting with the Mount  
9 Pleasant Township Municipal Authority; telephone conversations with a member of that  
10 Authority; a review of consumer survey forms mailed to Township residents; a review of  
11 PAWC's responses to interrogatories, including all maps and attachments; and a review  
12 of PUC and Pennsylvania Department of Environmental Protection (PaDEP)  
13 requirements for water mains, pumping stations, and storage tanks.

14

15 Q. IS THE HICKORY AREA OF MOUNT PLEASANT TOWNSHIP WITHIN PAWC'S  
16 FRANCHISE TERRITORY?

17 A. Yes, it is.

18

19 Q. BASED UPON THE INFORMATION YOU REVIEWED, IS THERE A PUBLIC  
20 NEED FOR WATER SERVICE IN THE HICKORY AREA?

21 A. Yes. For over 10 years attempts have been made to obtain public water supply service to  
22 the Hickory area primarily because of the number of contaminated wells in the area.  
23 According to water quality tests performed by the PaDEP several years ago, 44% of the

1 wells tested contained total coliform and 40% of the wells tested contained fecal  
2 coliform. See Exhibit TLF-1, Pages 1 through 6. PaDEP considers springs and roof  
3 collection cisterns as contaminated. See Exhibit TLF-1, Page 1. According to the  
4 responses to a recent consumer survey conducted by the OCA, there are 16 springs and  
5 62 cisterns being used in the project area (30% of the 258 responses). Also according to  
6 the consumer survey, approximately 14% of the Hickory area residents use a water  
7 hauling service to fill cisterns and holding tanks. Another 18% of the residents stated that  
8 they had insufficient quantity of water. Thirteen (13%) of the Hickory area residents use  
9 bottled water for drinking.

10  
11 Q. WHAT IS THE SOURCE OF THE WATER SUPPLIED BY THE BULK WATER  
12 HAULERS?

13 A. Some of the bulk water haulers are delivering PAWC water to their Hickory area  
14 customers.

15  
16 Q. WHERE ARE EXISTING PAWC WATER MAINS LOCATED IN RELATIONSHIP  
17 TO THE HICKORY AREA?

18 A. The Hickory area is almost surrounded by PAWC's distribution system. PAWC's  
19 distribution system is located approximately 2.8 miles east of Hickory, 1.7 miles south of  
20 Hickory, 3.3 miles north of Hickory, and 7.3 miles west of Hickory. PAWC is the closest  
21 public water supplier to Hickory.

22

1 Q. WHAT HAS PREVENTED THE INSTALLATION OF THE PROPOSED WATER  
2 MAIN EXTENSION NEEDED TO SERVE THE HICKORY RESIDENTS?

3 A. The way in which PAWC has applied its main extension tariff provisions has resulted in  
4 a high "Contribution in Aid of Construction", or CIAC, request per applicant for  
5 installing the proposed facilities. An insufficient number of applicants have been able or  
6 willing to pay the CIAC as calculated by PAWC and the project has been unable to go  
7 forward.

8  
9 Q. ARE YOU FAMILIAR WITH THE PAWC'S TARIFF REGARDING WATER MAIN  
10 EXTENSIONS?

11 A. Yes, due to my past experience in main extension cases involving PAWC, I am aware of  
12 the applicable tariff, which contains the following formula:

13 Company Investment = [Average Annual Revenue minus Operation and Maintenance  
14 Expense] divided by [Depreciation Rate and weighted cost of  
15 debt].

16 This formula is intended to be a "break-even" analysis, showing what portion of the  
17 project is justified by the future revenue generated by the applicants once they become  
18 customers.

19  
20 Q. HOW DOES THE APPLICATION OF THIS FORMULA AFFECT THE APPLICANTS  
21 FOR RESIDENTIAL WATER SERVICE?

22 A. The Company is required only to pay for the cost of the construction of the project to the  
23 extent those expenditures are justified by the anticipated revenues. Currently, the

1 Company investment per applicant is \$5,655. The Company multiplies this amount by  
2 the number of expected customers and deducts the total from the total estimated costs of  
3 construction.

4  
5 Q. PLEASE EXPLAIN HOW PAWC CALCULATED THE CIAC IN THIS CASE.

6 A. PAWC has estimated the construction cost of the proposed facilities at \$4,176,696.<sup>1</sup>  
7 Assuming a PAWC Investment of \$5,655 per customer and 362 customers, the remainder  
8 to be financed by the customers is \$2,129,586. Therefore, each customer must contribute  
9 \$5,883 ( $\$2,129,586 \div 362$ ) to obtain service.

10  
11 Q. DO YOU HAVE ANY GENERAL COMMENTS CONCERNING THE COMPANY'S  
12 CONSTRUCTION ESTIMATE?

13 A. Yes. First, PAWC's construction cost estimates generally include facilities that are  
14 oversized to serve the applicants. The water mains are sized to provide fire protection in  
15 addition to domestic service to the residential applicants. Some of the water mains are  
16 oversized in order to serve future customers. The costs of pumping stations and tanks are  
17 included in the estimate to be borne solely by the applicants – even though these pumping  
18 stations and tanks are designed with capacity to serve many more customers than have  
19 applied for service. Sometimes facilities that will improve service to existing customers  
20 are included in construction estimates and their entire costs are included in the CIAC to  
21 be paid by the applicants in need of service.

22  

---

<sup>1</sup> PAWC Response to OCA Set II-1.

1 Q. WHAT EFFECT DOES THIS HAVE ON THE APPLICANTS FOR SERVICE?

2 A. In some cases, the inclusion of oversized plant or large plant items intended to serve  
3 future growth drives the cost estimate for the project much higher than necessary to meet  
4 the needs of the applicants. In a number of instances, the applicants are unable to pay the  
5 CIAC as calculated by PAWC and the project cannot go forward. Those with  
6 contaminated wells or with only cisterns as a domestic water source must continue to  
7 either purchase water for household use from a hauling service or use water that may be  
8 unsafe.

9  
10 Q. IN THIS CASE, HAS PAWC INCLUDED THE COST OF FACILITIES LARGER  
11 THAN NEEDED TO SERVE APPLICANTS FOR RESIDENTIAL SERVICE IN THE  
12 HICKORY AREA?

13 A. Yes. Some of the water mains, the booster pump station, and the water storage tank are  
14 larger than necessary to serve the initial customers.

15  
16 Q. WHAT WOULD BE A MORE REASONABLE ESTIMATE OF THE  
17 CONSTRUCTION COSTS USED TO CALCULATE CIAC?

18 A. First, any facility that can be allocated to the Distribution System Improvement Charge  
19 (DSIC) should be removed from the cost estimate.<sup>2</sup> Second, the customer contribution or  
20 CIAC should be based only upon estimates of the portion of the proposed facilities that  
21 are necessary to provide the applicants with service, not those proposed to improve  
22 existing service or to provide for future demand. And finally, the Company could seek

---

<sup>2</sup> OCA witness Marilyn Kraus has addressed this point in her testimony. OCA Statement 2 at Pages 7 and 8.

1 least-cost financing by applying for a low-interest PennVest loan to fund the project and  
2 adjust the Company contribution per applicant accordingly.

3  
4 Q. WHAT COSTS WOULD BE REASONABLY ALLOCATED TO THE APPLICANTS  
5 FOR SERVICE TO MORE FAIRLY DETERMINE AN APPROPRIATE CUSTOMER  
6 CONTRIBUTION?

7 A. I recommend that the costs be allocated as follows, based upon the proposed project  
8 scope and other information provided by PAWC<sup>3</sup> (See Exhibit TLF-2, Page 1 for a  
9 tabulation):

10 Part One, Primerose to Southview, 11,800 feet of 16" DI, Project Total = \$523,143.

11 Amount allocated to DSIC = \$523,143.

12 Amount allocated to CIAC (customer contribution) = \$0.

13 Part Two, Rt. 50 and Rt. 18, 28,700 feet of 12" DI, Project Total = \$1,160,400.

14 Amount allocated to CIAC = \$1,150,672.

15 Amount allocated for future growth = \$9,728.

16 Part Three, Hickory Distribution, 5,662 feet of 12" DI, 28,049 feet of 8" DI, Project Total  
17 = \$1,129,087.

18 Amount allocated to CIAC = \$1,106,326.

19 Amount allocated for future growth = \$22,761.  
20

---

<sup>3</sup> PAWC Response to Set II-1.

1 Part Four, Tank, Pipe line, 4,800 feet of 12" DI, Project Total = \$1,014,066.

2 Amount allocated to CIAC = \$507,608. This is also the case for the 12-inch pipe  
3 along McCarrell Road.

4 Amount allocated for future growth = \$506,458.

5 Part Five, Booster Pump Station, Project Total = \$350,000.

6 Amount allocated to CIAC = \$45,977.

7 Amount allocated for future growth = \$304,023.

8 Total Allocated to CIAC, Parts 1 through 5 = \$2,810,582.

9  
10 Q. PLEASE EXPLAIN WHY THE PART ONE OF THE PROJECT IS DSIC-ELIGIBLE  
11 PROPERTY.

12 A. The primary purpose of installing this 16-inch main is to reinforce the Washington  
13 District Distributing System by interconnecting it with the McDonald District  
14 Distribution System. This line could provide service to approximately 14 potential  
15 customers. PAWC states that Southview (in the Washington District) would experience a  
16 20 pounds per square inch (psi) pressure drop during maximum day conditions in  
17 Hickory.<sup>4</sup> However, based on the difference in hydraulic gradients between the  
18 McDonald and Washington Districts, a 10-inch main between Primerose and Southview  
19 will be large enough to pass 275 gallons per minute (gpm) – which is the capacity of one  
20 proposed booster pump. The maximum day demand of the Hickory area is 48.2 gpm.<sup>5</sup>  
21 The proposed 16-inch main will benefit many existing customers extending as far back as

---

<sup>4</sup> PAWC Response to OCA Set I-13.

<sup>5</sup> PAWC Response to OCA Set II-13.

1 2.7 miles into the existing distribution system.<sup>6</sup> Also, this proposed 16-inch main will  
2 allow the elimination of an existing dead-end main near Primerose. Therefore, I believe  
3 the cost of this main should be included in the DSIC and not be paid for by the  
4 applicants, as OCA witness Kraus has more fully explained.

5  
6 Q. PLEASE EXPLAIN HOW YOU WOULD MORE REASONABLY ALLOCATE THE  
7 COST OF PART TWO.

8 A. The 2,420 feet of 12-inch pipe along Route 18 can be reduced to 8-inch pipe and still  
9 adequately serve the applicants. Since the cost of 12-inch pipe is \$10.23 per foot and the  
10 cost of 8-inch pipe is \$6.21 per foot; the amount allocated for future growth is \$9,728  
11 ( $[\$10.23 - \$6.21] \times 2,420$ ). The remaining \$1,150,672 is allocated to CIAC.

12  
13 Q. PLEASE EXPLAIN HOW YOU WOULD MORE REASONABLY ALLOCATE THE  
14 COST OF PART THREE.

15 A. The Company states that normally 8-inch pipe would be installed in Walbash Avenue and  
16 Henderson Road.<sup>7</sup> However, they are proposing to install 12-inch pipe in these roads to  
17 provide for future growth. This is also the case for the 12-inch pipe along McCarrell  
18 Road. Since the cost of 12-inch pipe is \$10.23 per foot and the cost of 8-inch pipe is  
19 \$6.21 per foot and the length of the pipelines is 5,662 feet, the amount allocated to future  
20 growth is \$22,761 ( $[\$10.23 - \$6.21] \times 5,662$ ). The remaining \$1,106,326 is allocated to  
21 CIAC.

---

<sup>6</sup> PAWC Response to OCA Set II-18.

<sup>7</sup> PAWC Response to OCA Set II-24.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23

Q. PLEASE EXPLAIN HOW YOU WOULD MORE REASONABLY ALLOCATE THE COST OF PART FOUR.

A. Only the upper 30 feet of the proposed tank (300,000 gallons) is considered usable and should contain water for fire protection and store water equal to one average day's usage. The proposed fire flow is 180,000 gallons based on 750 gallons per minute (gpm) for 4 hours. Therefore, only 120,000 gallons of tank storage is available for average daily usage. The average day usage of the 362 applicants is estimated by PAWC to be 48,500 gallons or 40.42% of the storage available for average daily use. The fire protection storage should be allocated between initial and future customers by the same percentage. Therefore, only \$343,542 (40.42%) of the cost of the tank should be allocated to CIAC. The remaining \$506,458 should be allocated to future use. The cost of the 4,800 foot long pipeline to the tank is \$164,066, all of which is allocated to CIAC.

The total amount of Part Four allocated to CIAC is  $\$343,542 + \$164,066 = \$507,608$ . The total amount allocated for future service is  $\$1,014,066 - \$507,608 = \$506,458$ .

Q. PLEASE EXPLAIN HOW YOU WOULD MORE REASONABLY ALLOCATE THE COST OF PART FIVE.

A. Pumping stations that supply a distribution system containing a storage tank are generally sized to satisfy the maximum day or peak hour demands of the system. PAWC proposes to install a station that can pump 550 gallons per minute (gpm). The Company estimates that the maximum day for the Hickory Area is 69,370 gallons per day (gpd) or 48.17

1 gpm. PAWC estimates that the peak hour is 4,335 gallons per hour (gph) or 72.25 gpm.  
2 Based on pumping rates, only 13.14% ( $[72.25/550] \times 100$ ) of the cost of the pumping  
3 station should be allocated to the applicants. Therefore, \$45,977 is allocated to CIAC  
4 and \$304,023 is allocated for future growth.

5  
6 Q. THE ABOVE COST ESTIMATE AND COST ALLOCATION TO CIAC WERE  
7 BASED ON INFORMATION PROVIDED BY PAWC. DID YOUR INVESTIGATION  
8 INDICATE THAT ANY CHANGES SHOULD BE MADE IN THE ESTIMATED  
9 COSTS OR THE NUMBER OF ESTIMATED CUSTOMERS?

10 A. Yes. Changes should be made to both the estimated costs and the number of estimated  
11 number of initial customers.

12  
13 Q. WHAT CHANGES SHOULD BE MADE TO THE ESTIMATED COSTS?

14 A. The Company did not include any costs for approximately 6,300 feet of 8-inch pipe in  
15 Washington Avenue. This will increase the estimated cost for Part Three by \$201,600 for  
16 the installation of that line, all of which is allocated to the CIAC.

17 Also, as a result of the consumer survey: (1) the \$153,345 cost of the pipeline along  
18 Donaldson Road can be removed since no one has shown interest in connecting to the  
19 water system along that road; (2) the length of the pipeline along Fort Cherry Road can  
20 be reduce by 800 feet reducing the cost of that line by approximately \$23,700; (3) the  
21 pipeline along McCarroll Road should be increase by 1,640 feet, increasing the cost of  
22 that line by approximately \$61,000; and (4) approximately 1,650 feet of pipeline should  
23 be installed along Westland Road, increasing the project cost by approximately \$58,000.

1 The above costs adjustments were based on PAWC's cost estimates for the same street,  
2 where applicable, or similar streets.

3 The above changes result in an increase in the Part Three project cost of approximately  
4 \$143,555 (\$136,962 allocated to CIAC & \$6,593 allocated to future customers).

5  
6 Q. WHAT CHANGES SHOULD BE MADE TO THE ESTIMATED NUMBER OF  
7 INITIAL CUSTOMERS?

8 A. My investigation included reviewing the responses on consumer survey forms filled out  
9 by Township residents. See Exhibit TLF-3, Page 1 of 1 for a tabulation of the responses  
10 in the project area. The responses to this survey indicate that approximately 194 potential  
11 customers (75% of the 258 responses) are willing to connect to the system as soon as it is  
12 available. Approximately 120 potential customers in the project area did not respond to  
13 the consumer survey. Assuming the same 75% of positive responses, another 90  
14 potential applicants may available. In order to be conservative, 194 applicants was used  
15 in the following estimate of CIAC. Also, following the procedure in PAWC's Response  
16 to OCA Set II-1, all applicants are assumed to be residential, even though it appears that  
17 there are fourteen potential commercial or other customers.

18  
19 Q. HOW DOES THE CHANGE IN NUMBER OF CUSTOMERS AFFECT THE  
20 AMOUNT ALLOCATED TO CIAC?

21 A. Since the average daily demand and peak hour pumping rate for 194 customers is less  
22 than for 362 customers, the CIAC allocation of the storage tank and booster pump station  
23 in Part Four and Part Five is reduced by \$180,771.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23

Q. HOW WOULD THE ABOVE CHANGES AFFECT THE CIAC?

A. Taking into account the changes in the estimated project cost and number of applicants, and using the same cost procedure for allocating the costs between CIAC and future growth, the CIAC would be (See Exhibit TLF-2, Page 2 for a tabulation):

Part One, Primerose to Southview, 11,800 feet of 16" DI, Project Total = \$523,143.

Amount allocated to DSIC = \$523,143.

Amount allocated to CIAC (customer contribution) = \$0.

Part Two, Rt. 50 and Rt. 18, 28,700 feet of 12" DI, Project Total = \$1,160,400.

Amount allocated to CIAC = \$1,150,672.

Amount allocated for future growth = \$9,728.

Part Three, Hickory Distribution, 7,302 feet of 12" DI, 30,718 feet of 8" DI, Project Total = \$1,272,642.

Amount allocated to CIAC = \$1,243,288.

Amount allocated for future growth = \$29,354.

Part Four, Tank, Pipe line, 4,800 feet of 12" DI, Project Total = \$1,014,066.

Amount allocated to CIAC = \$348,174.

Amount allocated for future growth = \$665,892.

Part Five, Booster Pump Station, Project Total = \$350,000.

Amount allocated to CIAC = \$24,640.

Amount allocated for future growth = \$325,360.

Total Allocated to CIAC, Parts 1 through 5 = \$2,766,773.

1 Q. WITH RESPECT TO YOUR RECOMMENDATION ABOUT PENNVEST FUNDING,  
2 HAVE YOU CALCULATED HOW THE LOWER COST FUNDING WOULD  
3 IMPACT THE COMPANY INVESTMENT PER CUSTOMER?

4 A. Yes. As previously mentioned, the tariff formula is intended to be a "break-even"  
5 analysis, showing what portion of the project is justified by the future revenue generated  
6 by the applicants once they become customers. The present Company Investment is  
7 \$5,655 per customer. Funding this project with a 1% PennVest loan changes the  
8 Company's "break-even" investment per applicant customer to \$14,689 (by using  
9 1.000% for the "weighted cost of debt" in the formula instead of 4.340%).  
10

11 Q. WHY SHOULD PAWC APPLY FOR THE PENNVEST LOAN INSTEAD OF THE  
12 MUNICIPALITY OR ITS AUTHORITY?

13 A. PAWC can serve the area without all customers being required to connect to the system.  
14 PennVest does not require public utilities to force all the residences adjacent to the lines  
15 to connect. However, where PennVest needs to assure itself that there will be sufficient  
16 funds to repay the loan, it does require municipalities to pass a mandatory tap-in  
17 ordinance as a condition of the loan approval. In the Hickory area, there are strong  
18 feelings both for and against installing public water supply mains. Many residents do not  
19 want to be forced to connect to a public water supply and, therefore, the Township does  
20 not want to pass a mandatory tap-in ordinance. For these reasons, the utility is the only  
21 entity that can take advantage of the lower cost financing available through PennVest.  
22

1 Q. WITH YOUR ALLOCATION RECOMMENDATIONS AS DETAILED, WHAT  
2 WOULD THE CIAC BE, WITH AND WITHOUT A PENNVEST LOAN?

3 A. Assuming that the costs are allocated to CIAC and future service as recommended herein,  
4 without a PennVest loan, the CIAC would be  
5  $\$2,766,773 - (194 \text{ applicants} \times \$5,655) = \$1,669,703$  or \$ 8,607 per applicant.

6  
7 Assuming that the costs are allocated to CIAC and future service as recommended herein  
8 with a PennVest loan, the CIAC would be  
9  $\$2,766,773 - (194 \text{ applicants} \times \$14,689) = \$0$  per applicant.

10  
11 Again, it should be kept in mind that the 194 applicants are those we know of to date, and  
12 we may continue to receive information that would increase that number.

13  
14 Q. DOES THIS COMPLETE YOUR WRITTEN DIRECT TESTIMONY?

15 A. Yes.

16  
17 66631

18

Cindy Parks

v.

Pennsylvania-American Water Company

Docket No. R-00015337

Appendix A

Background and Qualifications  
of Terry L. Fought

BACKGROUND AND QUALIFICATIONS

TERRY L. FOUGHT, P.E.

Education

Cleveland State University, Cleveland, Ohio, Bachelor of Civil Engineering, 1967

Professional Registrations

Professional Engineer, Pennsylvania, PE-023343-E, 1975

Professional Engineer, New Jersey, GE 25392, 1978

Professional Engineer, Virginia, 10850, 1979

Professional Land Surveyor, Pennsylvania, SU-000194-A, 1980

Employment

From March 1983 to date, I have been a self-employed consulting engineer engaged in providing consulting engineering services to water and wastewater utilities, both private and municipal.

From May 1969 to March 1983, I was employed by E. H. Bourquard & Associates, Inc. as a project engineer to water and wastewater clients. At the time I left the firm I was a vice-president.

From 1962 to 1969, I was employed by the State of Ohio, Department of Highways and the Geauga County Ohio Sanitary Engineers Office as an engineer's assistant to assistant sanitary engineer with breaks in employment to attend college and 1½ years active duty military service.

Experience

I have prepared studies related to and designed water supply, treatment, transmission, distribution and storage facilities. I have provided services to the following private and municipal water suppliers: Amber Hill Mobile Home Park, Brockway Borough Municipal Authority, Dallas Water Company, Eastern Gas and Water Investment Company, Haddonfield Hills Development, Halifax Borough, Langhorne Spring Water Company, Mifflintown Municipal Authority, Neshaminy Water Resources Authority, Newberry Water Company, Pleasant View Mobil Home Park, H. B. Reese Candy Company, Shavertown Water Company, Smethport Water Company, Tunkhannock Water Company, and Watts Business Center.

I have prepared studies related to and designed wastewater collection and interceptor sewers, pumping stations and force mains, and treatment plants. I have provided services to the following private and municipal sewerage utilities: Brockway Glass Company, Central Dauphin School District, Clean Waste Technologies, Inc., Dauphin Borough, Dauphin Borough Municipal Authority, Halifax Area School District, Halifax Municipal Authority, Mercersburg Borough, Middle Paxton Township, Newberry Sewer Company, Newberry Township Municipal Authority, Park-a-way Park Family Campground, Reading Township Municipal Authority, Reynoldsville Borough, Saint Thomas Township, and Watts Business Center.

List of Public Utility cases which I have testified or provided substantial assistance.

<u>Docket Number</u>	<u>Company Name and Jurisdiction</u>
7712-1140	City of Trenton New Jersey Bureau of Public Utilities
787-847	Hackensack Water Company New Jersey Bureau of Public Utilities
814-119	City of Trenton New Jersey Bureau of Public Utilities

<u>Docket Number</u>	<u>Company Name and Jurisdiction</u>
R-850174	Philadelphia Suburban Water Company Pennsylvania Public Utility Commission
C-00924186, et al	Oneida Water Company Pennsylvania Public Utility Commission
C-00945867	Valley Utilities, Inc. Pennsylvania Public Utility Commission
8310-862	City of Trenton New Jersey Bureau of Public Utilities
I-840377	Pennsylvania Gas and Water Company Pennsylvania Public Utility Commission
	Shickshinny Water Company Pennsylvania Public Utility Commission
C-00923960	Spring Run Water Company Pennsylvania Public Utility Commission
C-00923959	Bradford Glen Water Company Pennsylvania Public Utility Commission
R-00932785	Meadows Water Company Pennsylvania Public Utility Commission
R-00963708 (Sewer) R-00963709 (Water)	Wynnewood Water & Sewer Corporation Pennsylvania Public Utility Commission
C-00968510	Eaton Water & Sewer Company Pennsylvania Public Utility Commission
A-211070F0006	Citizens Utility Water Company Pennsylvania Public Utility Commission
R-00984375C0006	City of Bethlehem Pennsylvania Public Utility Commission
R-984257C002 R-984257C-003	Consumers Pa. Water Company Pennsylvania Public Utility Commission
A-213955F0008 R-00994672	Superior Water Company Pennsylvania Public Utility Commission
C-00981448	United Water Pennsylvania, Inc. Pennsylvania Public Utility Commission
R-00984334	National Utilities, Inc. Pennsylvania Public Utility Commission

Docket Number

Company Name and Jurisdiction

C-00992270

Redstone Water Company  
Pennsylvania Public Utility Commission

C-00003337

Scott Water Company  
Pennsylvania Public Utility Commission

R-00005031

Penn Estates Utilities, Inc.  
Pennsylvania Public Utility Commission

R-00005050

Emporium Water Company  
Pennsylvania Public Utility Commission

R-00005997

Jackson Sewer Corporation  
Pennsylvania Public Utility Commission

C-00957224 (Water)  
C-00967956 (Water)  
C-00968365 (Water)  
C-00970869 (Water)  
C-00971010 (Water)  
C-00981517 (Water)  
C-00981949 (Water)  
C-00992167 (Water)  
C-00992268 (Water)  
C-00003200 (Water)  
C-00003636 (Water)  
R-00005212 (Sewer)

Pennsylvania-American Water Company  
Pennsylvania Public Utility Commission

Cindy Parks

v.

Pennsylvania-American Water Company

Docket No. R-00015337

Appendix B

Exhibit TLF-1 PaDEP Water Quality  
Studies

Exhibit TLF-2 Allocation of Cost  
Estimate for Revised  
Project Scope

Exhibit TLF-3 Summary of Customer  
Survey Responses by  
Street

Cindy Parks

v.

Pennsylvania-American Water Company

Docket No. R-00015337

Exhibit TLF-1 PaDEP Water Quality  
Studies

November 28, 2001

RECEIVED

NOV 29 2001

Diane,

OFFICE OF  
CONSUMER ADVOCATE

A couple of notes for you while reviewing these reports:

- This was one of the first surveys we did so our methods have become a *little* more refined since then. For instance, the sample represents only 10% of the homes in the service area. If we were doing this survey today we would try to get at least 25%.
- We do not sample roof collection cisterns or springs because the design of these systems does not prevent contamination by surface waters. Today, we would count such systems as "CONTAMINATED".
- Since there are many roof collection cisterns in this area, the percentage of contaminated supplies would probably be considerably higher than the 44% found in 1989.

Good Luck!

Kay Frederick  
724-942-7243  
mafrederic@state.pa.us



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL RESOURCES  
BUREAU OF COMMUNITY ENVIRONMENTAL CONTROL  
3913 Washington Road  
McMurray, Pennsylvania 15317  
(412) 941-7100

November 12, 1987

Mount Pleasant Township  
Board of Supervisors  
ATTN: John Caldwell  
PO Box 128  
Hickory, PA 15340

Dear Mr. Caldwell:

Our Department recently completed a water quality survey in Mt. Pleasant Township. Drinking water samples were collected randomly from businesses and private homes in the Hickory area. Eighteen samples were collected on October 27, 1987. Data from two additional water systems are included in our report because the owners routinely test the drinking water as part of their restaurant operation.

The samples were tested for coliform bacteria. Coliform bacteria includes many varieties of bacteria which are commonly found in the intestinal tract of warm-blooded animals. Therefore, the presence of coliform bacteria in a water supply indicates disease-causing bacteria may also be present.

Our survey represents approximately ten percent of the water supplies in the area. Forty percent of these supplies indicated coliform contamination.

In light of these findings, it must be noted that thirteen of the twenty wells checked are considered improperly constructed according to current construction standards for individual water supplies. Thus, these thirteen supplies are not properly protected from sources of contamination.

Assuming that other homes throughout the proposed service area have the same types of water supplies as in the survey, it can be said that a public health hazard exists. The extension of a public water supply to the area would eliminate the hazard. However, the installation of public water is not the only means of eliminating the problem. The health hazard can also be eliminated on an individual basis by either reconstruction of the water supplies or the installation of permanent disinfection devices.

During the course of our survey, many homeowners indicated problems with high sulphur levels in their water. Also, many of the systems had to be supplemented with a cystem supply indicating seasonal water shortages.

Hopefully our survey has answered your questions regarding individual water supplies in the Hickory area. Should you have any further questions or need clarification on this survey, please call me at 941-7100.

Sincerely,

Kay Frederick  
Sanitarian

KF/bp

cc: File

MT. PLEASANT TOWNSHIP  
ON-LOT DRINKING WATER SURVEY

<u>Location</u>	<u>Total Coliform (10/87)</u>	<u>Fecal Coliform (10/89)</u>
1. Kehn's Korner, Main Street	>16	0
2. Eleanor Road	>16	2
3. Watson Residence, Allison Road	3	2
4. Advanced Telephone, Main Street	89	2
5. Municipal Building	8	3
6. Cliff's TV, Main Street	12	1
7. Caldwell Residence, Washington Street	0	Not Tested
8. Young Residence, Main Street	0	Not Tested
9. Post Office, Main Street	0	Not Tested
10. William Kelley, Grandview	0	Not Tested
11. Clyde Kelley, Grandview	0	Not Tested
12. Mobile Station, Main Street	0	Not Tested
13. Lewis Residence, McCarrell Road	0	Not Tested
14. Goughnour Residence, Main Street	0	Not Tested
15. Phillips Residence, Wabash Street	0	Not Tested
16. Miller Residence, Main Street	0	Not Tested
17. Bedillion Residence, Washington Street	0	Not Tested
18. Tustin Residence, Washington Street	0	Not Tested
19. McCarrell Road	Not Tested	0



Regulated public water supplies required to monitor for total coliform bacteria quarterly. These results can be included in our survey.

<u>Name</u>	<u>Coliform Detected</u>
1. Village Green	June, 1986
2. Mt. Pleasant VFD	September, 1990
3. Mt. Pleasant Community Center	March, 1993
4. Ole Hickory Inn	June, 1989/September, 1990
5. United Presbyterian Church	January, 1986/September, 1990
6. Hickory Auction	October 1985
7. Hickory Hollow Restaurant	None
8. Hickory Junction Tavern	February, 1988

Cindy Parks

v.

Pennsylvania-American Water Company

Docket No. R-00015337

Exhibit TLF-2 Allocation of Cost  
Estimate for Revised  
Project Scope

**PARKS v PAWC, Docket No. C-00015377**

**Allocation of PAWC's Cost Estimate & Project Scope**

<b>PART ONE - PRIMEROSE TO SOUTHVIEW</b>						
Item	Project Scope Length	Cost	DSIC	CIAC	Future Growth	
16-inch DI	11,800	\$ 523,143	\$ 523,143	\$ -	\$ -	-
<b>PART TWO - RT. 50 AND RT 18</b>						
Rt 50 & 18	12-inch DI	28,700	\$ 1,160,400			
Rt 50	12-inch DI	26,280		\$ 1,150,672		
Rt 18	8-inch DI	2,420			\$ 9,728	
<b>PART THREE - HICKORY DISTRIBUTION</b>						
Walbash	12-inch DI	1,421	\$ 81,550		75,837.58	
adjust for	8-inch DI	1,421				5,712
McCarrell	12-inch DI	4,241	\$ 157,675		140,626.18	
adjust for	8-inch DI	4,241				17,049
Allison	8-inch DI	720	\$ 25,656		\$ 25,656	
Casey	8-inch DI	3,393	\$ 91,960		\$ 91,960	
Dire	8-inch DI	1,440	\$ 48,607		\$ 48,607	
Donaldson	8-inch DI	4,476	\$ 153,345		\$ 153,345	
Grandview	8-inch DI	2,270	\$ 81,001		\$ 81,001	
Johnson	8-inch DI	2,300	\$ 74,490		\$ 74,490	
Pleasant	8-inch DI	4,536	\$ 140,942		\$ 140,942	
Eleanor	8-inch DI	415	\$ 17,000		\$ 17,000	
Ft Cherry	8-inch DI	1,662	\$ 49,431		\$ 49,431	
Hornhead	8-inch DI	6,832	\$ 207,430		\$ 207,430	
<b>Totals</b>			\$ 1,129,087		\$ 1,106,326	\$ 22,761
<b>PART FOUR - TANK &amp; PIPELINE</b>						
Tank, gal	300,000	\$ 850,000				
Fire, gal	180,000					
Total Dom, gal	120,000					
Customers	362					
Applicants, gal	48,500					
% Applicants	40.42%			\$ 343,542		
% Future	59.58%				\$ 506,458	
12-inch DI	4,800	\$ 164,066		\$ 164,066		
				\$ 507,608		
<b>PART FIVE - BOOSTER PUMP STATION</b>						
Pump, gpm	550	\$ 350,000				
Applicants, gpm	72.25					
% Applicants	13.14%			\$ 45,977		
% Future	86.86%				\$ 304,023	
<b>TOTALS</b>		\$ 4,176,696	\$ 523,143	\$ 2,810,582	\$ 842,971	

**PARKS v PAWC, Docket No. C-00015377**

**Allocation of Cost Estimate for Revised Project Scope**

<b>PART ONE - PRIMEROSE TO SOUTHVIEW</b>						
Item	Project Scope Length	Cost	DSIC	CIAC	Future Growth	
16-inch DI	11,800	\$ 523,143	\$ 523,143	\$ -	\$ -	
<b>PART TWO - RT. 50 AND RT 18</b>						
Rt 50 & 18	12-inch DI	28,700	\$ 1,160,400			
Rt 50	12-inch DI	26,280		\$ 1,150,672		
Rt 18	8-inch DI	2,420			\$ 9,728	
<b>PART THREE - HICKORY DISTRIBUTION</b>						
Walbash	12-inch DI	1,421	\$ 81,550		75,837.58	
adjust for	8-inch DI	1,421				5,712
McCarrell	12-inch DI	5,881	\$ 218,675		195,033.38	
adjust for	8-inch DI	5,881				23,642
Allison	8-inch DI	720	\$ 25,656		\$ 25,656	
Casey	8-inch DI	3,393	\$ 91,960		\$ 91,960	
Dire	8-inch DI	1,440	\$ 48,607		\$ 48,607	
Donaldson						
Grandview	8-inch DI	2,270	\$ 81,001		\$ 81,001	
Johnson	8-inch DI	2,300	\$ 74,490		\$ 74,490	
Pleasant	8-inch DI	4,536	\$ 140,942		\$ 140,942	
Eleanor	8-inch DI	415	\$ 17,000		\$ 17,000	
Ft Cherry	8-inch DI	862	\$ 25,731		\$ 25,731	
Washington	8-inch DI	6,300	\$ 201,600		\$ 201,600	
Westland	8-inch DI	1,650	\$ 58,000		\$ 58,000	
Hornhead	8-inch DI	6,832	\$ 207,430		\$ 207,430	
<b>Totals</b>			<b>\$ 1,272,642</b>		<b>\$ 1,243,288</b>	<b>\$ 29,354</b>
<b>PART FOUR - TANK &amp; PIPELINE</b>						
Tank, gal	300,000	\$ 850,000				
Fire, gal	180,000					
Total Dom, gal	120,000					
Customers	194					
Applicants, gal	25,992					
% Applicants	21.66%			\$ 184,108		
% Future	78.34%				\$ 665,892	
12-inch DI	4,800	\$ 164,066		\$ 164,066		
				\$ 348,174		
<b>PART FIVE - BOOSTER PUMP STATION</b>						
Pump, gpm	550	\$ 350,000				
Applicants, gpm	38.72					
% Applicants	7.04%			\$ 24,640		
% Future	92.96%				\$ 325,360	
<b>TOTALS</b>		<b>\$ 4,320,251</b>	<b>\$ 523,143</b>	<b>\$ 2,766,773</b>	<b>\$ 1,030,335</b>	

Cindy Parks

v.

Pennsylvania-American Water Company

Docket No. R-00015337

Exhibit TLF-3 Summary of Customer  
Survey Responses by  
Street

**PARKS v PAWC**  
**Summary of Customer Survey Responses by Street**

<u>Street Name</u>	<u>Total Buildings</u>	<u>Survey Responses in Proposed Service Area</u>			<u>Remarks</u> <u>Yes Response Includes</u>
		<u>Total</u>	<u>Yes</u>	<u>No</u>	
Allison Avenue	6	5	5		
Avella Road	4	4	3	1	
Casey Road	16	12	10	1	1
Dire Drive	23	15	13	2	
Eleanor Drive	4	4	4		
Fort Cherry Road	1	1	1		
Grandview Ave	22	14	11	3	
Henderson Road	10	7	7		C&S Metals
Hornhead Road	10	10	4	6	
Johnson Road	5	5	5		
Main Street	108	67	50	15	2
McCarroll Road	21	15	12	3	Township Bldg & Rec Area
Millers Run Road	45	31	18	12	1
Pleasant Road	12	9	7	2	
Primrose Road	17	9	9		
Skyline Drive	6	5	2	2	1
Walbash Avenue	22	16	11	3	2
Washington Avenue	34	26	21	4	1
Westland Avenue	<u>12</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>1</u>
<b>Totals</b>	<b>378</b>	<b>258</b>	<b>194</b>	<b>55</b>	<b>9</b>

Note 1 - Convience Store, Church, Battery Specialists, A Storage Place, Integrity Auto, R H Carbide & ?, Mt Pleasant Twp Fire Co, Chucks Lawn Service, Speakman & Associates, Hickory Junction Tavern, Post Office, & Pizza Restrauant

Cindy Parks

v.

Pennsylvania-American Water Company

Docket No. R-00015337

## Appendix C

### Interrogatory Responses

PAWC Response to OCA Set I-13

PAWC Response to OCA Set II-1

PAWC Response to OCA Set II-13

PAWC Response to OCA Set II-18

PAWC Response to OCA Set II-24

Cindy Parks v. Pennsylvania-American Water Company  
Docket No. C-00015377  
Interrogatories of Office of Consumer Advocate  
Interrogatories, Set I

**OCA-13**

Please provide calculations that indicate what minimum size pipes are necessary on each segment of the water main extension to provide adequate water supply service and fire protection to the Hickory residents. Include calculations proving that the next smaller size pipes will not be adequate.

**Response:**

All calculations were based on a fire flow of 750 gpm coming from the proposed tank. Computer simulation was used to determine pressures at different nodes during a fire demand. Pipe size was determined based on maintaining 20 psi pressure and/or a velocity under 5 fps. The following table lists the results.

Junction where fire demand was placed	Road Name	Minimum Size to Meet Conditions
J-10	SR 50	12
J-11	SR4039, Casey, Hornhead	8
J-14	Johnston	8
J-15	Fort Cherry	8
J-16	Washington	8
J-17	Wabash	8
J-18	Dire	8
J-20	Donaldson*	6
J-21	Grandview	8
J-23	Eleanor	8

\* Although 6 inch would maintain the require parameters, 8-inch will be installed to help maintain fire flows if the 12-inch on SR 50 is shut down or if the main on Donaldson is shut down and a fire occurs along the road thus increasing the velocity in a 6-inch main to over 8 fps.

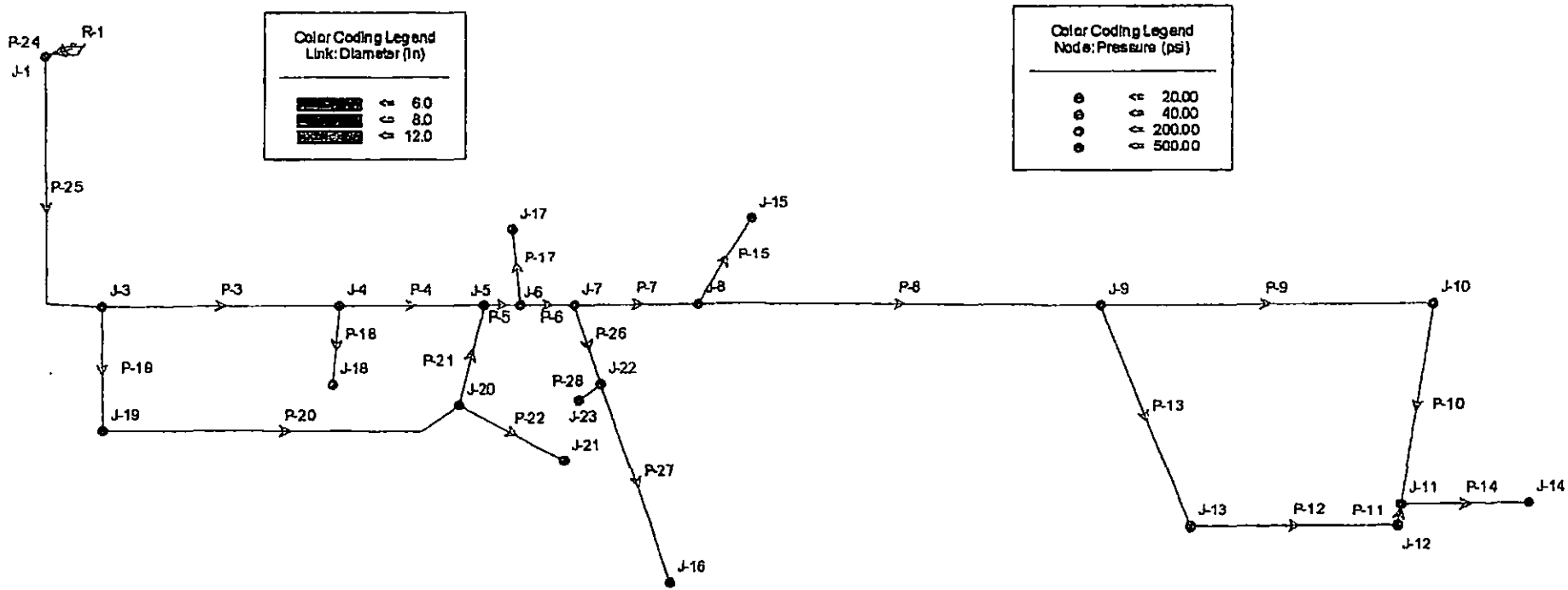
The area where service to Hickory would be provided from, Southview, is hydraulically weak. Computer models show a 20 psi pressure loss in Southview during max day conditions in Hickory. To eliminate this problem, a 16-inch main will be installed in Primrose Road from the existing 16-inch main in Primrose to the existing system in

Southview. This main will provide adequate reinforcement to the Southview area so that service to Hickory can be provided.

RESPONSIBLE WITNESS: Jerry Hankey, Engineering Manager

# Scenario: Base

07/23/01 MON 14:39 FAX 412 343 4311



Cindy Parks v. Pennsylvania-American Water Company  
Docket No. C-00015377  
Interrogatories of Office of Consumer Advocate  
Interrogatories, Set II

OCA-1

The worksheets provided by the Company in response to OCA Set I, OCA-1, are incomplete in regard to the amount of 8-inch pipe and number of customers included in Part Three. The sheet titled "Mt. Pleasant Twp. Overview" refers to 22,259 feet of 8-inch pipe and 164 customers. The submitted worksheets total 19,135 feet of 8-inch pipe and 145 customers. Please provide the worksheets for the missing streets.

Response:

Three side streets of 8-inch waterline were inadvertently not included in the original breakdown. They are attached. As a result, the totals for the 8-inch waterline, for both footage and total cost, have increased. The following are the worksheets given for Part 3 of the original breakdown:

**Sheets included:**

Allison Road	720 feet of 8"	7 homes
Casey Road	3,393 feet of 8"	16 homes
Dire Road	1,440 feet of 8"	27 homes
Donaldson Road	4,476 feet of 8"	5 homes
Grandview Road	2,270 feet of 8"	23 homes
Johnson Road	2,300 feet of 8"	9 homes
Pleasant Road	<u>4,536 feet of 8"</u>	<u>12 homes</u>
<b>Subtotal:</b>	19,135 feet of 8"	99 homes

**Sheets missing:**

Hornhead Road	6,832 feet of 8"	11 homes
Eleanor Street	415 feet of 8"	4 homes
Ft. Cherry Road	<u>1,667 feet of 8"</u>	<u>4 homes</u>
<b>Subtotal:</b>	8,914 feet of 8"	19 homes

<b>Totals</b>	28,049 feet of 8"	118 homes
---------------	-------------------	-----------

*See Attachments*

RESPONSIBLE WITNESS: Jay Lucas, Operations Manager

August 20, 2001

# Mt Pleasant Twp Overview

## Part One

## Customers

Primerose to Southview project total:	11,800 feet of 16"DI \$523,143	14
--	-----------------------------------	----

---

## Part Two

Rt 50 and Rt 18 project total:	28,700 feet of 12"DI \$1,160,400	176
-----------------------------------	-------------------------------------	-----

---

## Part Three

Hickory Distribution project total:	5,662 feet of 12", 28,049 feet of 8 \$1,129,087	164
--	--	-----

---

## Part Four

Tank	\$850,000	
Pipe line 4,800' of 12"	\$164,066	8
	\$1,014,066	

---

## Part Five

Booster project total:	\$350,000	
---------------------------	-----------	--

Cost of Distribution project:	\$2,976,696	
Cost of Tank and Booster project:	<u>\$1,200,000</u>	
Total:	\$4,176,696	362
PAWC Investment (@ \$5655/Customer)	<u>\$2,047,110</u>	
Difference:	\$2,129,586	

2001 Eleanor Rd Mt Pleasant  
A- .1

Units	Description	Estimated Cost	Unit Cost
415	8" DICL pipe	2,577	6.21
420	8" polywrap	109	0.26
1	8" gatevalves	191	191
1	valve box	51	51
4	8" 45 bends	216	54
6	8" 22 bends	324	54
2	blowoffs	100	50
1	8" x 8" solid sleeves	57	57
1	8" plugs	17	17
415	Contract Installation	5,188	12.5
100	extra dept	100	1
200	rock	250	1.25
170	2rc stone	2,040	12
8	concrete blocking	1,080	135
200	paving	3,800	19
0	stream crossing	0	125
1	Pawc labor	750	750
1	permits	150	150
	subtotal	17,000	

4 Apps @ \$5655=\$22,620

2001 Ft Cherry  
A- .1

Units	Description	Estimated Cost	Unit Cost
1667	8" DICL pipe	10,352	6.21
1800	8" polywrap	468	0.26
2	8" gatevalves	382	191
2	valve box	102	51
4	8" 45 bends	216	54
6	8" 22 bends	324	54
2	blowoffs	100	50
1	8" x 8" solid sleeves	57	57
1	8" plugs	17	17
1667	Contract Installation	20,838	12.5
200	extra dept	200	1
500	rock	625	1.25
400	2rc stone	4,800	12
10	concrete blocking	1,350	135
400	paving	7,600	19
0	stream crossing	0	125
1	Pawc labor	1,500	1500
1	permits	500	500
	subtotal	49,431	

4 Apps @ \$5655=\$22,620

2001 Hornhead Rd Mt Pleasant  
A- .1

Units	Description	Estimated Cost	Unit Cost
6832	8" DICL pipe	42,427	6.21
7591	8" polywrap	1,974	0.26
7	8" gate valves	1,337	191
7	valve box	357	51
4	8" 45 bends	216	54
6	8" 22 bends	324	54
5	blowoffs	100	50
3	8" x 8" solid sleeves	171	57
0	8" plugs	0	17
6832	Contract Installation	85,400	12.5
300	extra dept	300	1
4000	rock	5,000	1.25
3000	2rc stone	36,000	12
15	concrete blocking	2,025	135
1200	paving	22,800	19
0	stream crossing	0	125
1	Pawc labor	6,000	6000
1	permits	3,000	3000
	subtotal	207,430	

11 Apps @ \$5655=\$62,205

Cindy Parks v. Pennsylvania-American Water Company  
Docket No. C-00015377  
Interrogatories of Office of Consumer Advocate  
Interrogatories, Set II

**OCA-13**

What is the estimated maximum day water demand for the 362 customers for the proposed main extension?

**Response:**

The estimated maximum day water demand for the 362 customers is 69,370 gpd.

RESPONSIBLE WITNESS: Jerry Hankey, Engineering Manager

Cindy Parks v. Pennsylvania-American Water Company  
Docket No. C-00015377  
Interrogatories of Office of Consumer Advocate  
Interrogatories, Set II

**OCA-18**

Please indicate on a copy of the Company's distribution map, the entire service area that would benefit with pressure stabilization by the installation of the 16-inch main between Primrose and Southview.

**Response:**

See attached map.

RESPONSIBLE WITNESS: Jerry Hankey, Engineering Manager

Cindy Parks v. Pennsylvania-American Water Company  
Docket No. C-00015377  
Interrogatories of Office of Consumer Advocate  
Interrogatories, Set II

**OCA-24**

The pipe flow network and pipe size calculations provided by the Company in response to OCA Set I, OCA-13 do not include the flow from the proposed booster pumping station. Please provide similar data with 1 booster pump running. Please provide similar data with 2 booster pumps running.

**Response:**

The flow from the booster station was not originally included because the system was analyzed with the initial fire flow being provided from the tank while the booster pumps are off. Unless the fire demand occurs while the pumps are filling the tank, the pumps will not turn on until the tank has reached a preset level.

The difference in pressures between one pump running and two pumps running ranged from 2 psi to 7 psi and did not change any results. The chart below will show only one column for pumps running.

The computer simulation assumed a fire flow of 750 gpm at various nodes in the system. Pipe size was determined based on maintaining 20 psi pressure and/or a velocity under 5 fps. The following table lists the results.

Junction where fire demand was placed	Road Name	Minimum Size to Meet Conditions	Minimum Size to Meet Conditions with Pumps Running
J-10	SR 50*	12	8
J-11	SR4039, Casey, Hornhead**	8	6
J-14	Johnston	8	8
J-15	Fort Cherry	8	8
J-16	Washington	8	8
J-17	Walbash	8	8
J-18	Dire	8	8
J-20	Donaldson***	6	6
J-21	Grandview	8	8
J-23	Eleanor	8	8

\* Although 8 inch will satisfy the require parameters with the booster pumps running, it will not when the tank is providing all the flow, therefore 12 inch will be installed.

\*\* Although 6 inch would maintain the require parameters, 8-inch will be installed to help maintain fire flows if the 12-inch on SR 50 is shut down or if the main on either of these roads is shut down and a fire occurs along the road thus increasing the velocity in a 6-inch main to over 8 fps.

\*\*\* Although 6 inch would maintain the require parameters, 8-inch will be installed to help maintain fire flows if the 12-inch on SR 50 is shut down or if the main on Donaldson is shut down and a fire occurs along the road thus increasing the velocity in a 6-inch main to over 8 fps.

Walbash Ave. and Henderson Rd. have also been sized to provide future service to areas beyond the end of the proposed mains. Normally 8-inch would be installed, however, in these cases, 12-inch will be installed.

RESPONSIBLE WITNESS: Jerry Hankey, Engineering Manager

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

CINDY PARKS	:	
	:	
Complainant	:	
	:	
v.	:	
	:	Docket No. C-00015377
PENNSYLVANIA-AMERICAN WATER	:	
COMPANY,	:	
Respondent	:	

**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served a true copy of the foregoing document, Pennsylvania-American Water Company's Response to Office of Consumer Advocate's Interrogatories Set II, upon the participants listed below, in accordance with the requirements of §1.54:

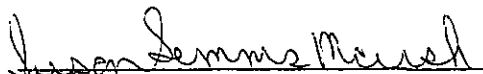
VIA UPS OVERNIGHT DELIVERY

Dianne E. Dusman, Esquire  
Senior Assistant Consumer Advocate  
Office of Consumer Advocate  
555 Walnut Street, 5<sup>th</sup> Floor  
Forum Place  
Harrisburg, PA 17101-1923

Ms. Cindy Parks  
447 Fort Cherry Road  
McDonald, PA 15057

Terry Fought  
Consulting Engineer  
780 Cardinal Drive  
Harrisburg, PA 17111

Dated this 27th day of August, 2001.

  
Susan Simms Marsh  
Pennsylvania-American Water Company  
800 West Hershey Park Drive, P. O. Box 888  
Hershey, Pennsylvania 17033-0888  
(717) 533-5000

RECEIVED

02 DEC 19 PM 1:43

OCA STATEMENT 2

12/3/02

*1105 Jan*

BEFORE THE  
PA. P. PENNSYLVANIA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

CINDY PARKS

v.

PENNSYLVANIA-AMERICAN  
WATER COMPANY

C-00015377

Docket No. ~~G-00015337~~

**DOCKETED**

JAN 14 2003

DOCUMENT  
FOLDER

DIRECT TESTIMONY

OF

MARILYN J. KRAUS

ON BEHALF OF

THE PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

DECEMBER 7, 2001

DIRECT TESTIMONY OF MARILYN J. KRAUS

1 Q. PLEASE STATE YOUR NAME AND ADDRESS FOR THE RECORD.

2  
3 A. My name is Marilyn J. Kraus. My business address is Forum Place, 5th Floor, 555  
4 Walnut Street, Harrisburg, PA 17101. I am a certified public accountant currently  
5 employed by the Pennsylvania Office of Consumer Advocate (“OCA”) as a Senior  
6 Regulatory Analyst.

7  
8 Q. PLEASE DESCRIBE YOUR BACKGROUND AND QUALIFICATIONS IN THE  
9 UTILITY REGULATORY FIELD.

10  
11 A. Appendix I, attached to this testimony, describes my background and qualifications in the  
12 utility regulatory field and lists the proceedings in which I have participated.

13  
14 Q. WHAT WAS YOUR ASSIGNMENT IN THIS PROCEEDING?

15  
16 A. My assignment in this proceeding was to review and evaluate the Complaint filed by  
17 Cindy Parks against Pennsylvania-American Water Company (“PAWC” or “Company”).  
18 Specifically, Ms. Parks is requesting that water utility service be extended to her as well  
19 as other residents of the community of Hickory in Mt. Pleasant Township, Washington

DIRECT TESTIMONY OF MARILYN J. KRAUS

1 County, Pennsylvania. OCA witness Terry L. Fought has performed a review and  
2 presented recommendations related to the Company's construction project design and  
3 cost estimates in OCA Statement 1. My testimony focuses on the application of the  
4 provisions of PAWC's Distribution System Improvement Charge ("DSIC") and Main  
5 Extension tariffs to this case, in conjunction with the recommendations made by Mr.  
6 Fought.

7  
8 Q. PLEASE DESCRIBE THE GENERAL NATURE OF THIS CASE.

9  
10 A. As stated above, Ms. Parks filed a Complaint with the Commission related to obtaining  
11 water utility service from PAWC for herself and other residents of the Hickory area.  
12 Many of these residents are currently using private wells and cisterns and are  
13 experiencing problems such as high levels of bacteria and shortage of supply. As  
14 discussed in more detail by Mr. Fought on pages 2 and 3 of OCA Statement 1, there is a  
15 public need for water service in this area.

16  
17 In response to OCA Interrogatory Set II, No. 1, PAWC outlined the construction project  
18 which it indicates would be necessary to serve 362 residents in the area. The total cost of  
19 this project, which is detailed by five separate parts, is estimated by the Company to be

DIRECT TESTIMONY OF MARILYN J. KRAUS

1           \$4,176,696. PAWC has indicated that it would construct this project under the main  
2           extension provisions of its tariff.

3  
4           Q.    PLEASE DESCRIBE THE PROVISIONS OF PAWC'S CURRENT MAIN  
5           EXTENSION TARIFF.

6  
7           A.    Under the current main extension tariff, the Company is required to pay for the cost of the  
8           construction project only to the extent that such expenditures are justified by the revenues  
9           to be generated by the project. In making this determination, a "break-even" formula is  
10          applied, whereby the justified Company investment equals the average annual revenues to  
11          be generated by the potential customers minus the operation and maintenance expenses  
12          ("O&M") associated with the new customers, divided by a factor comprised of the  
13          depreciation rate on the new facilities plus the weighted cost of debt. In this manner, the  
14          Company determines how much of the annual O&M, depreciation expense and carrying  
15          costs associated with the new construction will be covered by the annual revenues of the  
16          new customers. To the extent that such costs are not covered by the annual revenues, the  
17          prospective customers are required by PAWC to pay a Contribution in Aid of  
18          Construction ("CIAC") as a condition of obtaining service. Using this formula, average  
19          annual residential revenues of \$397, annual O&M expense per customer of \$90, the

DIRECT TESTIMONY OF MARILYN J. KRAUS

1 depreciation rate for mains of 1.09% and the weighted cost of debt of 4.34%, the  
2 Company has determined that its current justified investment per customer is \$5,655.

3  
4 Q. WHAT WOULD THE PAWC-CALCULATED CIAC BE FOR POTENTIAL  
5 APPLICANTS FOR SERVICE IN THE HICKORY AREA?

6  
7 A. If this project is constructed in the manner outlined by PAWC and the formula applied as  
8 set forth above, each customer would be required to pay CIAC of \$5,883 as a condition of  
9 getting service. This amount is calculated using the total project cost of \$4,176,696 as  
10 estimated by the Company, subtracting from that amount the “justified Company  
11 investment” of \$2,047,110 ( $\$5,655 \times 362$ ) and dividing the difference of \$2,129,586 by  
12 the 362 customers which PAWC claims the project will serve.

13  
14 Q. HAS THE OCA EVALUATED THE NUMBER OF CUSTOMERS WHO WOULD  
15 WANT SERVICE IF WERE AVAILABLE IN THE HICKORY AREA?

16  
17 A. Yes. Information received to date indicates that approximately 194 residents would be  
18 willing to connect to the new water system if it became available without a CIAC  
19 requirement (see OCA Statement 1, page 12). It should be noted that if this project were

DIRECT TESTIMONY OF MARILYN J. KRAUS

1 constructed assuming only these 194 new customers, the CIAC that would be required  
2 from each customer would be \$15,874 ( $\$4,176,696 - [\$5,655 \times 194] / 194$ ).<sup>1</sup>  
3

4 Q. IS THE OCA MAKING RECOMMENDATIONS REGARDING THE TOTAL  
5 PROJECT COST THAT AFFECT THE AMOUNT OF CIAC WHICH WOULD BE  
6 REQUIRED FROM THE HICKORY AREA RESIDENTS?  
7

8 A. Yes. As discussed by Mr. Fought on pages 7 through 10 of OCA Statement 1, PAWC  
9 has included the cost of facilities larger than needed to serve the Hickory area residents in  
10 its project estimates. Additionally, the Company has included the cost of a project (Part 1  
11 of the Company's project outline) that will improve service to existing customers. These  
12 costs should not be included in the total project amount upon which CIAC that will be  
13 charged to the Hickory area residents is calculated.  
14

15 Q. WHAT PORTION OF PAWC'S ESTIMATED PROJECT COST HAS MR. FOUGHT  
16 DETERMINED TO BE RELATED TO FACILITIES LARGER THAN NEEDED TO  
17 SERVE THE HICKORY AREA RESIDENTS?

---

<sup>1</sup>The OCA continues to explore whether customers in addition to the 194 of which it is currently aware would become PAWC customers without a CIAC requirement.

DIRECT TESTIMONY OF MARILYN J. KRAUS

1 A. As outlined on Exhibit TLF-2, page 1, Mr. Fought has determined that \$842,971 of  
2 PAWC's project cost estimate are related to the installation of facilities larger than those  
3 needed to serve Hickory area residents in order to accommodate future growth. Pursuant  
4 to the Company's tariff, the cost of those facilities required to provide adequate service to  
5 a particular applicant or group of applicants for service should be used in determining  
6 CIAC, if any, that will be charged to the applicant(s) (Tariff Water - PA P.U.C. No. 4, 3<sup>rd</sup>  
7 Revised Page 71, Paragraph 27.1 [B]). Thus, the \$842,971 determined by Mr. Fought to  
8 be related to over sizing facilities for future growth should be removed from the total  
9 project cost in this case.

10  
11 Q. UNDER PAWC'S TARIFF, WHAT HAPPENS IF, IN A REVERSE SITUATION, A  
12 SERVICE APPLICANT REQUESTS FACILITIES OTHER THAN THOSE  
13 REQUIRED TO PROVIDE ADEQUATE SERVICE?

14  
15 A. According to the Company's tariff, if an applicant requests facilities other than those that  
16 are necessary to provide adequate service, the facilities requested by the applicant "will  
17 be installed by, owned by, maintained by, and will become the sole responsibility of the  
18 Bona Fide Service Applicant." (Tariff Water - PA P.U.C. No. 4, 3<sup>rd</sup> Revised Page 71,  
19 Paragraph 27.1 [B].) Since, in this case, it is PAWC that has opted to install plant larger

DIRECT TESTIMONY OF MARILYN J. KRAUS

1 than necessary to provide adequate service to the Hickory residents, PAWC should be  
2 financially responsible for the additional cost that results.

3  
4 Q. HOW SHOULD THE COSTS OF PROJECTS THAT WILL IMPROVE SERVICE TO  
5 EXISTING CUSTOMERS BE TREATED WITH RESPECT TO RECOVERY BY THE  
6 COMPANY?

7  
8 A. Rather than adding the costs of such construction to a main extension project that may be  
9 partially funded through customer CIAC, projects that will improve service to existing  
10 customers should be performed and recovery sought under the provisions of the  
11 Company's DSIC tariff.

12  
13 Q. PLEASE DESCRIBE THE PROVISIONS OF PAWC'S DSIC TARIFF.

14  
15 A. In its Order in Docket No. P-00961031, the Commission approved the Distribution  
16 System Improvement Charge in order to provide water utilities a vehicle by which the  
17 fixed costs (i.e., depreciation expense and pre-tax return) of certain non-revenue  
18 producing, non-expense reducing distribution system improvement projects completed  
19 and placed in service between base rate cases could be recovered. The DSIC is calculated

DIRECT TESTIMONY OF MARILYN J. KRAUS

1 using the depreciation rate on the facilities installed plus the pre-tax rate of return (as  
2 approved in the last prior rate case) applied to the original cost of qualifying projects,  
3 divided by the total sales revenues.  
4

5 Q. WHY WAS THE DSIC APPROVED BY THE COMMISSION?  
6

7 A. The DSIC was approved by the Commission to enable water utilities to accelerate the  
8 replacement of aging water distribution infrastructure, allow water utilities to comply  
9 with regulatory requirements and promote solutions to regional water supply problems.  
10 Projects eligible for recovery under the DSIC include replacements of mains and valves,  
11 services, meters and hydrants, main extensions installed to eliminate dead ends and to  
12 implement solutions to regional water supply problems that exist with respect to current  
13 customers, main cleaning and relining projects and highway relocation projects. PAWC  
14 added the DSIC provisions, as approved by the Commission, into its tariff in 1997 (Tariff  
15 Water - PA P.U.C. No. 4, Original Pages 12B - 12B3).  
16

17 Q. WHAT PORTION OF THE COST OF THE HICKORY AREA MAIN EXTENSION  
18 PROJECT HAS MR. FOUGHT DETERMINED TO BE RELATED TO  
19 CONSTRUCTION THAT WILL IMPROVE SERVICE TO EXISTING CUSTOMERS?

DIRECT TESTIMONY OF MARILYN J. KRAUS

1 A. As discussed on pages 8-9 of OCA Statement 1, Mr. Fought has determined that Part One  
2 of the Hickory area main extension project, specifically, the Primerose to Southview  
3 11,800' main extension project totaling \$523,143 per the Company's response to OCA-II-  
4 1, is actually a project that will improve service to existing customers. He states that the  
5 proposed 16" main will benefit customers as far back as 2.7 miles into the existing  
6 distribution system and eliminate an existing dead-end main. As such, this project meets  
7 the eligibility requirements for recovery under PAWC's DSIC tariff, as described above.  
8 Therefore, this project should be separated from the Hickory area main extension project.  
9 Upon completion of this 11,800 main extension, recovery should be sought through the  
10 DSIC.

11  
12 Q. HAS MR. FOUGHT MADE ANY OTHER RECOMMENDATIONS THAT IMPACT  
13 THE TOTAL PROJECT COST AS ESTIMATED BY PAWC?

14  
15 A. Yes. As discussed on page 11 of OCA Statement 1 and outlined on Exhibit TLF-2, page  
16 2, Mr. Fought has recommended some modifications to the scope of the Hickory area  
17 main extension project. First, he has allocated an additional \$180,771 portion of the costs  
18 of Parts Four and Five of the project to those costs related to future growth. This  
19 adjustment is related to the reduction in the number of customers to be initially served by

DIRECT TESTIMONY OF MARILYN J. KRAUS

1 the project from 362 to 194. Additionally, Mr. Fought has recommended adjustments to  
2 the lengths of main as proposed by the Company. These adjustments increase the total  
3 cost of the project by \$143,555, with a \$6,593 portion allocated to future growth. These  
4 recommendations increase the project costs related to future growth from \$842,970 to  
5 \$1,030,334

6  
7 Q. WHAT IMPACT DOES THE ELIMINATION OF THE CONSTRUCTION COSTS  
8 RELATED TO FUTURE GROWTH AND THE PROJECT THAT WILL BENEFIT  
9 EXISTING CUSTOMERS HAVE ON THE AMOUNT OF CIAC THAT THE  
10 COMPANY HAS INDICATED WOULD BE REQUIRED FROM THE HICKORY  
11 AREA RESIDENTS?

12  
13 A. As indicated above, assuming 194 customers would connect to the Hickory area main  
14 extension as proposed by the Company, the per-customer CIAC would be \$15,874. That  
15 is, the 194 customers would share the balance of \$3,079,626 after the "justified Company  
16 investment" of \$1,097,070 ( $\$5,655 \times 194$ ) is subtracted from the Company's projected  
17 project cost of \$4,176,696. If that balance of \$3,079,626 is reduced by the costs related to  
18 future growth of \$1,030,334 and the costs related to existing customers of \$523,143, and  
19 increased by the cost of the project scope modification of \$143,555, as recommended by

DIRECT TESTIMONY OF MARILYN J. KRAUS

1 Mr. Fought in this case, the per-customer CIAC would be \$8,607 ( $\$3,079,626 -$   
2  $[\$1,030,334 + \$523,143 - \$143,555] = \$1,669,704$ ;  $\$1,669,704 / 194 = \$8,607$ ).

3  
4 Q. WHAT IMPACT WOULD THE PROCUREMENT OF A PENNVEST LOAN FOR  
5 THE HICKORY AREA MAIN EXTENSION PROJECT, AS DISCUSSED BY MR.  
6 FOUGHT ON PAGE 15 OF OCA Statement 1, HAVE ON THE AMOUNT OF CIAC  
7 TO BE PAID BY THE HICKORY RESIDENTS?

8  
9 A. The procurement of a PennVest loan by PAWC for the Hickory area project would  
10 substantially reduce the amount of CIAC to be paid by the Hickory residents. This is  
11 because the "justified Company investment" per customer is higher when the PennVest  
12 financing rate, currently 1%, is used in place of the Company's weighted cost of debt in  
13 the formula used to calculate Company investment and CIAC.

14  
15 Q. HOW DOES THE PAWC "JUSTIFIED COMPANY INVESTMENT" CALCULATED  
16 USING THE 1% PENNVEST RATE COMPARE TO THAT CALCULATED USING  
17 THE WEIGHTED COST OF DEBT?

18  
19 A. As indicated previously, the "justified Company investment" per customer of \$5,655 was

DIRECT TESTIMONY OF MARILYN J. KRAUS

1 calculated by PAWC using average annual residential revenues of \$397, annual O&M  
2 expense per customer of \$90, the depreciation rate for mains of 1.09% and the weighted  
3 cost of debt of 4.34% ( $[\$397 - \$90] / [1.09\% + 4.34\%]$ ). If the 1% PennVest rate is used  
4 in place of the 4.34% weighted cost of debt, the "justified Company investment" per  
5 customer increases to \$14,689 ( $[\$397 - \$90] / [1.09\% + 1.0\%]$ ).

6  
7 Q. HOW DOES THE USE OF THE PENNVEST RATE IMPACT THE CIAC TO BE PAID  
8 BY THE HICKORY RESIDENTS IN THIS CASE?

9  
10 A. Assuming 194 customers would connect to the new system, the "justified Company  
11 investment" using the PennVest rate in this case would be \$2,849,666 ( $\$14,689 \times 194$ ).  
12 Based on the Company's estimated total project cost of \$4,176,696, the per customer  
13 CIAC would be \$6,840 ( $\$4,176,696 - \$2,849,666 = \$1,327,030$ ;  $\$1,327,030 / 194 = \$6,840$ ).  
14 This compares to the per customer CIAC of \$15,874 calculated using the Company's  
15 weighted cost of debt, as noted above. If the total project cost is reduced by the  
16 \$1,409,922 amount related to future growth (reduction of \$1,030,334), existing customers  
17 (reduction of \$523,143) and project scope modifications (increase of \$143,555), as  
18 recommended by the OCA in this case, no CIAC would be paid by the Hickory residents.  
19 That is, the "justified Company investment" of \$2,849,666 is higher than the adjusted

DIRECT TESTIMONY OF MARILYN J. KRAUS

1 project cost of \$2,766,774 (\$4,176,696 - \$1,409,922).

2  
3 Q. DO YOU AGREE THAT PENNVEST FINANCING SHOULD BE SOUGHT IN THIS  
4 CASE?

5  
6 A. Yes, I do. The PennVest Authority was formed in order to provide Pennsylvania residents  
7 with the means to acquire safe, adequate water supplies for a reasonable cost. PennVest  
8 is able to offer low-cost loans for water and sewer projects due to taxpayer-provided  
9 funding. Therefore, any opportunity which the Company has to procure this taxpayer-  
10 supported PennVest financing should be taken so that its customers can receive the  
11 benefits of these low-cost loans instead of paying for water facilities with their personal  
12 funds. In this case, based on the total project cost as recommended by Mr. Fought, the  
13 Hickory residents could receive safe, adequate water supplies from PAWC without  
14 paying CIAC.

15  
16 Q. DOES THAT CONCLUDE YOUR TESTIMONY?

17  
18 A. Yes, it does.

19 00066629.wpd;l

APPENDIX I

BACKGROUND AND QUALIFICATIONS

MARILYN J. KRAUS, C.P.A.

## Education

Madonna College, Livonia, Michigan, Bachelor of Science Degree in accounting, 1984.

Passed C.P.A. examination in 1986 and certified in 1987.

Larkin & Associates Staff Training Seminar in the application of Lotus 1-2-3 software package to financial analysis of utilities and to tax and financial planning and projections.

## Experience

I am currently employed by the Pennsylvania Office of Attorney General, Office of Consumer Advocate in the capacity of Senior Regulatory Analyst. My responsibilities include the review of utility filings related to base rate requests, fuel adjustment clauses and other petitions and applications, as well as the analysis of other regulatory matters handled by the Office of Consumer Advocate. My duties also include appearing as a witness on behalf of the OCA at hearings related to regulatory matters to present the results of my analyses and recommendations for the disposition of such matters with regard to generally accepted accounting and ratemaking principles.

From April 1985 to October 1989, I was employed by Larkin & Associates, a firm of certified public accountants and utility regulatory consultants. At Larkin & Associates, my assignments included: analysis of expense and balance sheet accounts; testing of accounting systems for compliance with management policies and standards; the evaluation of accounting systems for their effectiveness; the preparation and review of financial statements and tax returns; preaudit interviews with management including submitting bids for engagements; preparation of management letters and the advice and training of client personnel in the maintenance of proper accounting records.

In the utility regulatory area, I was involved in the review of rate case testimonies, exhibits, responses to discovery requests and commission orders and in the analysis of financial data for various rate cases. I was responsible for the preparation of rate case testimony, exhibits and briefs, and evaluations of commission orders.

During my employment with this firm, I worked on the analysis of the New England Power Company's request for a change in the treatment of abandoned plant losses before the Federal Energy Regulatory Commission. I also performed analyses, interviewed Company employees, attended various hearings and assisted in cross examination of utility witnesses, prepared workpapers, exhibits and testimony concerning the rate increase requests of United Telephone Company of Missouri, El Paso Electric Company, Central Maine Power Company, Pennsylvania Power Company, Southern California Edison Company, Carolina Power & Light Company, St. Augustine Shores Utilities, Pennsylvania Gas and Water Company and Orange Osceola Utilities.

I was involved in the analyses of the effects of the provisions of the Tax Reform Act of 1986 on regulated utilities which were performed generically for the California Public Utilities Commission and for the Hawaiian Electric Company before the Hawaii Public Utilities Commission on behalf of the Department of the Navy. I also actively participated in the budget audit of the Georgia Power Company on behalf of the Staff of the Georgia Public Service Commission, and the management audit of the Anchorage Water and Wastewater Utility on behalf of the Staff of the Alaska Public Utilities Commission.

Prior to my employment with Larkin & Associates, I worked for Michigan Consolidated Gas Company, a major utility in Detroit, Michigan, as an accounting clerk. My duties included: preparation of financial statements and supporting statements; preparing journal vouchers for monthly entries, including support data; handling accounts receivable billings and cost allocations; assisting in preparation of entries for year-end closing; and special assignments in other departments, including Payroll and Internal Auditing. I was also assigned to a special project group initiated to implement a new general ledger computer system.

Previously, I had worked at Northland Underwriters, Inc. as a full-charge bookkeeper. There, I was responsible for an entire accounting system through trial balance, including accounts receivable and payable, payroll and income taxes.

List of cases in which I have testified or provided substantial assistance:

<u>Docket Number</u>	<u>Company Name and Jurisdiction</u>
9283	Kentucky American Water (Kentucky Public Service Commission)
Tr-85-179	United Telephone Company of Missouri (Missouri Public Service Commission)
6350	El Paso Electric Company (Public Utility Commission of Texas)
U-8091/U-8239	Consumers Power Company-Gas-Refunds (Michigan Public Service Commission)
85-212	Central Maine Power Company (Maine Public Service Commission)

ER-85646001 & ER-85647001	New England Power Company (Federal Energy Regulatory Commission)
R-850267	Pennsylvania Power Company (Pennsylvania Public Utility Commission)
R-850267 (Rebuttal)	Pennsylvania Power Company (Pennsylvania Public Utility Commission)
R-860378 (Surrebuttal)	Duquesne Light Company - OCA Statement No. 2D (Pennsylvania Public Utility Commission)
87-01-03	Connecticut Natural Gas (Department of Public Utility Control)
86-12-047	Southern California Edison Company (California Public Utilities Commission)
86-11-019	Tax Reform Act of 1986 Commission Investigation (California Public Utilities Commission)
5740	Hawaiian Electric Company Tax Reform Act of 1986 (Hawaii Public Utilities Commission)
3673-U	Georgia Power Company - Budget Audit (Georgia Public Service Commission)
7460	El Paso Electric Company (Public Utility Commission of Texas)
8747	Anchorage Water & Wastewater Utility - Management Audit (Alaska Public Utilities Commission)
U-8924	Consumers Power Company - Gas (Michigan Public Service Commission)
E-2, Sub 537	Carolina Power & Light Company (North Carolina Utilities Commission)

870980-WS	St. Augustine Shores Utilities, Inc. (Florida Public Service Commission)
870853	Pennsylvania Gas and Water Company (Pennsylvania Public Utility Commission)
871134-WS	Orange Osceola Utilities, Inc. (Florida Public Service Commission)
R-881084 et al	Pocono Water Company, et al. (National Utilities, Inc.) (Pennsylvania Public Utility Commission)
881503-WS	Poinciana Utilities, Inc. (Florida Public Service Commission)
	Pennsylvania Public Utility Commission:
R-891364	Philadelphia Electric Company
R-891473	Pennsylvania Water Co.-Sayre Division
R-891557	Arrowhead Public Service Corporation
R-901625	Roaring Creek Water Company
R-901663	Citizens Utilities Water Company of Pennsylvania
R-901664	Citizens Utilities Home Water Company
C-903013	Waymart Water Company
C-902815	GTE North, Inc.
R-911918	Clean Treatment Sewage Company
C-892706	
C-892531	
A-211770 et al	L.P. Water and Sewer Co.

R-911963	Roaring Creek Water Company
R-912060	Shenango Valley Water Company
R-912000	Dauphin Consolidated Water Co.
R-912064	Bloomsburg Water Company
R-912114	Lemont Water Company
R-912117	Fawn Lake Forest Water Company
A-230013	Broad Run Sewer Co.
C-913749	North Penn Gas Company
R-922209	Citizens Utilities Home Water Co.
R-922319	Glen Alsace Water Company
R-922326 et al	Dallas Water Company, et al
R-00922372	Lake Heritage Utilities, Inc.
R-00922502	Mechanicsburg Water Company
R-00922493	L.P. Water and Sewer Company - Sewer Division
A-210025F002	Public Service Water Company
A-230026	MPW Utilities, Inc.
R-00932604	Dauphin Consolidated Water Supply Company
R-00932795	General Waterworks of Pennsylvania, Inc.
R-00932673	Lemont Water Company
R-00932681	Kane Gas Light and Heating Company

L-00930089	Advance Notice of Proposed Rulemaking RE: Line Extensions
R-00932670	Pennsylvania-American Water Company
R-00932866	The Peoples Natural Gas Company
R-00932873	Blue Mountain Consolidated Water Company
R-00932828	National Utilities, Inc.
R-00943124	City of Bethlehem - Bureau of Water
R-00943152	General Waterworks of PA, Inc.
R-00943157	Newtown Artesian Water Company
C-00946402	North Penn Gas Company
R-00943245	North Penn Gas Company
R-00953346	Harrisburg Steam Works, Ltd.
R-00953300	Citizens Utilities Water Company of Pennsylvania
C-00945867, et al.	Valley Utilities Company, Inc., et al.
C-00957205, et al	Four Seasons Water Company, Inc. Four Seasons Sewer Company, Inc.
R-00943155	Pennsylvania-American Water Company
R-00963856	Western Utilities, Inc.
R-00973947	United Water Pennsylvania, Inc.
C-00968442	Linda Fenske, et al. v. GTE North, Inc.
R-00974150	Pike County Power & Light Company
C-00970643, et al.	Andrew J. Koban, et al. v. GTE North, Inc.

C-00970430	Haines Twp., et al. v. Bell Atlantic PA
R-00984567	City of Lancaster - Water Fund
C-00981941	Keith R. McCall, et al. v. Bell Atlantic PA
C-00981878, et al.	Vincent Golden, et al. v. Bell Atlantic PA & GTE North, Inc.
C-00992270, et al.	Susan Balla, et al. v. Redstone Water Company
A-212285F0071	Pennsylvania-American Water Company
R-00005212	Pennsylvania-American Water Company, Wastewater Operations
R-00005050	Emporium Water Company
C-00992980	Lois A. Norton, et al. v. Bell Atlantic PA, Inc.
R-00005997	Jackson Sewer Company
R-00005945	Emporium Water Company
C-00004254	Harry and Loretta Thomas v. Verizon PA, Inc.
R-00016297	City of Lancaster - Water Fund
R-00016236	The York Water Company

### Affiliations

I am a certified public accountant licensed in the state of Pennsylvania and registered in the state of Michigan. I am a member of the Michigan Association of Certified Public Accountants and the Pennsylvania Institute of CPA'S. I am also a member of the Tax and Accounting Committee of the National Association of State Utility Consumer Advocates.