

**Pennsylvania-American Water Company's
Utility Valuation Experts' (UVE) Valuation of
Steelton Borough (Water) Authority
Dauphin County, Pennsylvania**

**Appraisal Work Papers
As of July 2018**

Valuation Summary

**AUS Consultants
Suite 201
8555 West Forest Home Avenue
Greenfield, Wisconsin 53228
Office Telephone: 414-529-5755
J. Weinert's Cell: 414-698-8371
J. Weinert's E-Mail: weinertj@auswest.net**

Pennsylvania-American Water Company
Steelton Borough (Water) Authority
Water System
Investor-Owned Utility
As of July 1, 2018

Fair Market Value Appraisal

Appraisal Approach	Investor-owned Utility	Weight	Wtd Valuation Indications
Cost Approach			
Depreciated Replacement Cost New	\$ 23,921,473		
Cost Approach Conclusion	23,921,473	50%	11,960,736
Income Approach			
	22,424,662		
Income Approach Conclusion	22,424,662	40%	8,969,865
Market Approach			
Market Approach Conclusion	22,911,987	10%	2,291,199
Appraisal Conclusion	\$ 23,221,800	100%	23,221,800
Conclusion (cost approach)	\$ 23,921,473		

**Pennsylvania-American Water Company's
Utility Valuation Experts' (UVE) Valuation of
Steelton Borough (Water) Authority
Dauphin County, Pennsylvania**

**Appraisal Work Papers
As of July 2018**

Cost Approach

**AUS Consultants
Suite 201
8555 West Forest Home Avenue
Greenfield, Wisconsin 53228
Office Telephone: 414-529-5755
J. Weinert's Cell: 414-698-8371
J. Weinert's E-Mail: weinertj@auswest.net**

Pennsylvania-American Water Company
 Steelton Borough (Water) Authority
 Water System
 Investor-Owned Utility
 As of July 1, 2018

Cost Approach Summary

Account	Account Description	Investment	(2)	(4)	(5a)	(5b)	(5a)	(5f)	(5g)	(5h)	(6)	(7)	(8)	
					Reproduction Cost New to Replacement Cost New (RCN)	Replacement Cost New (COR)	Age at July 1, 2018 Appraisal Date	Normal Remaining Life	Total Life Expectancy	Condition	Preliminary Cost Approach (RCN less Normal Depreciation)	Economic Obsolescence	Fair Market Value	
					Reproduction Cost New (RCN)	Replacement Cost New (COR)					% of Preliminary Cost Approach	Date Value \$s		
OC \$s	Input	Input	OC \$s	-	RCN \$s	COR \$s	years	years	years	% of COR	COR LD \$s			
Input	Input	Input	Steelton's Engineers' Assessment Data	Steelton's Engineers' Assessment Data	Calculation	Input	Calculation	Calculation	Calculation	Calculation	Calculation	Input	Calculation	
			Col (3b) / (3a)	Col (2) * (3c)	AUS Input	Col (4) * (5a)	2018-06-(1)+0.5	(5b)* (5e)	(1a)+(5f)	(5f)/(5g)	(4)* (5h)	Economic Analysis	(6) * [1.00-(7)]	
303 Land		32,244	6,000	193,451	1,000	193,451	46.00	0.00	100.0%	193,451	0.0%	193,451		
304 Treatment		7,580,743	1,478	11,205,461	1,000	11,205,461	7.25	33.16	64.1%	7,180,295	0.0%	7,180,295		
311 Booster Station		896,330	7,060	6,338,090	1,000	6,338,090	45.00	6.59	51.59	12.8%	808,337	0.0%	808,337	
330 Storage		977,752	8,200	8,017,566	1,000	8,017,566	45.00	20.85	65.85	31.7%	2,538,592	0.0%	2,538,592	
331.1 Interconnection		-	-	-	-	-	0.00	0.00	0.0%	-	0.0%	-	-	
331.2 Distribution		10,252,837	2,545	26,092,200	1,000	26,092,200	16.79	31.00	69.17	50.6%	13,200,798	0.0%	13,200,798	
Total		19,739,906	2,626	51,836,769	1,000	51,836,769	35.00	26.80	61.80	46.2%	23,921,473	0.00%	23,921,473	

**Pennsylvania-American Water Company
Steelton Borough (Water) Authority
Water System
Investor-Owned Utility
As of July 1, 2018**

(0)	(2)	(3c)	(4)	(5a)	(5b)
Account	Account Description	Investment	Cost Translator	Reproduction Cost New (RCN)	Reproduction Cost New to Replacement Cost New (COR)
Steelton's f	Steelton's Engineers' Assessment Data	Col (3b) / (3a)	Col (2) * (3c)	RCN \$s	COR \$s / RCN \$s
		Input Steelton's Engineers' Assessment Data	Calculation	Calculation	Input Calculation
1	3	9	13	14	15
303 Land	32,244	6	193,451	1.000	193,451
304 Treatment	7,580,743	1,478	11,205,461	1.000	11,205,461
311 Booster Station	896,330	7.06	6,328,090	1.000	6,328,090
330 Storage	977,752	8.2	8,017,566	1.000	8,017,566
331.1 Interconnection	-	0	-	0.000	-
331.2 Distribution	10,252,837	2,545	26,092,200	1.000	26,092,200
Total	19,739,906	2,626	51,836,769	1.000	51,836,769

Pennsylvania-American Water Company
 Steelton Borough (Water) Authority
 Water System
 Investor-Owned Utility
 As of July 1, 2018

(0)	(0.5)	(1a)	(4)	(5f)	(5g)	(5h)	(6)
Account	Description	Age at July 1, 2018 Appraisal Date	Replacement Cost New (RCN)	Normal Life Remaining Total Life Expectancy	Condition	RCN Weighted Age	RCN Weighted Normal Remaining Life Expectancy
Input	Exeter Data	2018-50- [(1)+0.5]	Col (4)	(5b)*(5e)	(1a)+(5f)	(5f)/(5g)	(4)*(5h)
Input	Exeter Data	19	21	22	28	29	30
18	303 Land	0.01	193,451	0.0000	1.0000	193,451	2,607
	304 Treatment	15.40	11,205,461	33.16	48.56	7,180,295	172,522,691
	311 Booster Station	45.00	6,328,090	6.59	51.59	808,337	284,764,041
	330 Storage	45.00	8,017,566	20.85	65.85	2,538,592	360,790,488
	331.1 Interconnection	0.00	-	0.0000	0.0000	-	167,166,259
	331.2 Distribution	38.18	26,092,200	31	69.17	13,200,798	996,111,649
35	51,836,769			26.8	61.8	46.15%	1,814,191,476
						23,921,473	1,389,222,002
							3,203,410,880
	Total						

**Pennsylvania-American Water Company
Steelton Borough (Water) Authority
Water System
Investor-Owned Utility
As of July 1, 2018**

(0)	(0.5)	(6)	(7)	(8)
Account	Description	Preliminary Cost Approach	Economic Obsolescence	Fair Market Value
		CORLD \$\$	% of Preliminary Cost Approach	Appraisal Date Value \$\$
		Calculation	Input	Calculation
		RCNL	Economic Obsolescence Analysis	(6) * [1.00-(7)]
	Exeter Data			
36		37	39	40
303 Land		193,451	0.00%	193,451
304 Treatment		7,180,295	0.00%	7,180,295
311 Booster Station		808,337	0.00%	808,337
330 Storage		2,538,592	0.00%	2,538,592
331.1 Interconnection		-	0.00%	-
331.2 Distribution		13,200,798	0.00%	13,200,798
Total		23,921,473	0.00%	23,921,473

Pennsylvania-American Water Company
 Steelton Borough (Water) Authority
Water System
Investor-Owned Utility
As of July 1, 2018

Determination of the Depreciated Original Cost

(1)	(2)	(3)	(4)	(6a)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	
Account	Description	Earliest Year	Trend	Original Costs	Age at July 1, 2018 Appraisal Date	Normal Remaining Life	Total Life Expectancy	Theoretical Reserve Percent	Theoretical Reserve	Depreciated Original Cost	OC Weighted Age	OC Weighted Total Life	
	Input	Input	Input	Input									
	Exeter Data	Exeter Data	(4)* (5)	Exeter Data	2018-00-[1]-0-0.5]	(6)* (9)	(6a)*-(10)	(1-0)-(1-0)*(10)*(11)	(4)*(12)	(4)-(13)	(4)*(6a)	(4)*(10)	
43		44	45	46	49	53	54	55	56	57	58	59	
303 Land				32,244	46	0	0	-	32,244	1,483,145	-	60	
304 Treatment				7,580,743	7.25	44.92	52.17	0.1504	1,140,472	6,440,271	54,929,623	340,537,745	
311 Booster Station				896,330	45	6.59	51.59	0.8723	781,833	114,497	40,334,850	5,906,815	
330 Storage				977,752	45	20.85	65.85	0.6834	668,166	309,586	43,998,840	20,386,129	
331.1 Interconnection				-	0	0	0	-	-	-	-	-	
331.2 Distribution				10,252,837	16.79	44.49	61.28	0.2311	2,368,927	7,536,837	172,159,313	456,139,635	
Total				19,739,906	15.85	41.69	57.47	0.2512	4,959,398	14,433,435	312,905,771	822,970,324	1,134,392,950

**Pennsylvania-American Water Company's
Utility Valuation Experts' (UVE) Valuation of
Steelton Borough (Water) Authority
Dauphin County, Pennsylvania**

**Appraisal Work Papers
As of July 2018**

Income Approach

**AUS Consultants
Suite 201
8555 West Forest Home Avenue
Greenfield, Wisconsin 53228
Office Telephone: 414-529-5755
J. Weinert's Cell: 414-698-8371
J. Weinert's E-Mail: weinertj@auswest.net**

**Pennsylvania-American Water Company
Steelton Borough (Water) Authority
Water System**
Potential Purchaser: Investor-Owned Utility
As of July 1, 2018
Discounted Cash Flow Analysis

Period	Age	Revenues	O&M Expenses	Tax	Depreciation	Cash Flow from Operations	Taxable Income before State & Federal Taxes	State and Federal Taxes @ 28.89%	Capital Expenditures	Change in Working Capital	Net Cash Flows	(12) Period Present Worth Factor (PW)	(13) PW of Cashflow	Accumulated PW of Cashflows
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	0.5	2,904,114	1,867,980	959,657	1,036,134	(6)-(5)	(7) * 28.89%	22,094	322,714	1,198	690,128	0.966	666,664	666,664
2	1.5	2,933,155	1,924,012	970,554	1,009,143	38,589	11,148	327,557	146	670,292	0.903	605,274	1,271,938	
3	2.5	2,962,487	1,981,723	980,764	(1,057)	(305)	(305)	332,482	147	648,440	0.843	546,635	1,818,573	
4	3.5	2,992,112	2,041,166	993,469	950,946	(42,523)	(12,285)	337,490	147	625,594	0.788	492,968	2,311,541	
5	4.5	3,590,534	2,102,392	1,005,506	1,488,142	482,636	139,433	342,584	2,993	1,003,132	0.736	738,305	3,049,846	
6	5.5	3,662,345	2,165,455	1,017,944	1,496,890	478,946	138,367	347,764	359	1,010,400	0.687	694,145	3,743,991	
7	6.5	3,735,592	2,230,409	1,051,902	1,505,183	453,281	130,953	429,390	366	944,474	0.642	606,352	4,350,343	
8	7.5	3,810,304	2,297,315	1,069,193	1,512,989	443,796	128,213	437,917	373	946,486	0.600	567,892	4,918,235	
9	8.5	4,343,747	2,366,226	1,087,196	1,977,521	890,325	257,215	446,631	2,668	1,271,007	0.560	711,764	5,629,999	
10	9.5	4,604,372	2,437,205	1,105,935	2,167,167	1,061,232	306,590	455,537	1,302	1,403,738	0.523	734,155	6,364,154	
11	10.5	4,696,459	2,510,312	1,125,434	2,186,147	1,060,713	306,440	464,640	461	1,414,606	0.489	691,742	7,055,896	
12	11.5	4,790,388	2,585,612	1,145,717	2,204,776	1,059,059	305,962	473,942	470	1,424,402	0.456	649,527	7,705,423	
13	12.5	5,365,235	2,663,173	1,166,810	2,702,062	1,555,252	443,534	483,451	2,874	1,772,203	0.426	754,958	8,460,381	
14	13.5	5,472,540	2,743,059	1,188,740	2,729,481	1,540,741	445,120	493,169	537	1,790,655	0.398	712,681	9,173,062	
15	14.5	5,800,892	2,825,342	1,211,535	2,975,550	1,764,015	509,624	503,103	1,642	1,961,181	0.372	729,559	9,902,621	
16	15.5	6,090,937	2,910,094	1,176,414	3,180,843	2,004,429	579,079	421,370	1,450	2,178,944	0.347	756,094	10,658,715	
17	16.5	6,090,937	2,997,386	1,194,727	3,093,551	1,898,824	548,570	427,883	-	2,117,098	0.324	685,940	11,344,655	
18	17.5	6,090,937	3,087,297	1,196,264	3,003,640	1,887,376	522,151	434,505	-	2,046,984	0.303	620,236	11,964,891	
19	18.5	6,090,937	3,179,905	1,197,842	2,911,032	1,713,190	494,941	441,242	-	1,974,849	0.283	558,882	12,523,773	
20 and beyond	19.5	6,334,574	3,275,291	1,217,348	3,059,283	1,841,935	532,135	448,095	1,217	2,077,836	4.765	9,900,889	22,424,662	
												8,371,466		
													19.5	
													0.264	
													18.051	
													4.765	
													Deferred Tax	

Age
 $PW(Age) = 1/(1+Discount\ Rate)^{Age}$
 PW to Perpetuity = 1/Capitalization Rate
 $PW_{(20 \text{ and Beyond})} = PW \text{ to Perpetuity} * PW \text{ Factor}^{(19.5)}$

**Pennsylvania-American Water Company
Steelton Borough (Water) Authority
Water System**
Potential Purchaser: Investor-Owned Utility
As of July 1, 2018
Calculated Rates of Return on Rate Base and Equity
(Years 1 through 20)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Period	Age	Revenues	O&M Expenses	Book Depreciation	Ratemaking Interest Expense	Book Taxable Income (Current + Deferred)	State and Federal Taxes @ 28.89%	Operating Income	Net (Equity) Income	Net Plant	Working Capital	Accumulated Deferred Income Taxes (ADIT)	Rate Base	Return on Rate Base	Net Equity	Return on Equity
1	0.5	2,904,114	1,867,980	756,379	258,352	(3)(4)-(5)-(6)	(7)*28.89%	(7)(8)+(6)	(9) - (6)	15,220	23,487,813	14,520	(58,727)	(9)/(14)	(10)/(16)	
2	1.5	2,933,155	1,924,012	756,943	249,740	2,460	711	273,572	1,749	23,058,428	14,666	(120,439)	23,443,606	1,17%	16,521,040	
3	2.5	2,962,487	1,981,723	749,555	241,416	(10,207)	(2,949)	234,158	(7,258)	22,641,355	14,813	(187,540)	22,468,628	1,04%	16,060,757	
4	3.5	2,992,112	2,041,166	739,537	233,358	(21,959)	(6,344)	217,753	(15,615)	22,239,308	14,960	(260,901)	21,993,367	0.99%	15,829,060	
5	4.5	3,590,534	2,102,392	738,817	225,589	523,736	151,307	598,018	372,429	(337,947)	17,953	(21,523,081)	21,843,075	2.78%	15,992,611	
6	5.5	3,662,345	2,165,455	733,057	218,070	545,763	157,671	606,162	388,092	21,457,783	18,312	(420,251)	21,055,844	2.88%	16,178,787	
7	6.5	3,735,592	2,230,409	726,606	210,801	567,776	164,031	614,546	403,745	21,160,083	18,678	(514,230)	20,664,531	2.97%	16,387,346	
8	7.5	3,810,304	2,297,315	722,755	203,774	586,460	169,428	620,806	417,032	20,874,760	19,051	(614,316)	20,279,495	3.06%	16,615,698	
9	8.5	4,343,747	2,366,226	720,036	196,982	1,060,503	306,379	951,106	754,124	20,600,869	21,719	(720,388)	19,902,200	4.78%	17,187,432	
10	9.5	4,604,372	2,437,720	713,532	190,416	1,263,219	356,944	1,088,691	898,275	20,342,387	23,021	(833,753)	19,531,655	5.57%	17,909,396	
11	10.5	4,696,459	2,510,312	709,758	184,068	1,292,321	373,351	1,103,038	918,970	20,096,781	23,482	(953,841)	19,166,422	5.76%	18,657,932	
12	11.5	4,790,388	2,585,612	706,843	177,933	1,320,000	381,348	1,116,585	938,652	19,863,390	23,952	(1,080,632)	18,806,710	5.94%	19,431,831	
13	12.5	5,365,235	2,663,173	705,175	172,002	1,824,885	527,209	1,469,678	1,297,676	19,641,175	26,826	(1,213,988)	18,454,003	7.96%	20,570,246	
14	13.5	5,472,540	2,743,059	702,855	166,268	1,860,358	537,457	1,489,169	1,322,901	19,430,996	27,363	(1,354,370)	18,103,989	8.23%	21,739,194	
15	14.5	5,800,892	2,825,342	696,099	160,726	2,118,225	612,100	1,667,551	1,506,625	19,237,507	29,005	(1,503,280)	17,763,232	9.39%	23,096,399	
16	15.5	6,090,937	2,910,094	693,660	155,368	2,311,816	673,661	1,813,523	1,658,155	18,964,723	30,455	(1,642,747)	17,352,431	10.45%	24,611,294	
17	16.5	6,090,937	2,997,386	697,356	150,190	2,246,005	648,871	1,747,324	1,597,134	18,694,753	30,455	(1,786,438)	16,938,770	10.32%	26,069,364	
18	17.5	6,090,937	3,087,297	694,079	145,183	2,164,378	625,289	1,684,272	1,539,089	18,434,682	30,455	(1,931,519)	16,533,618	10.19%	27,474,023	
19	18.5	6,090,937	3,179,905	686,080	140,344	2,084,608	602,243	1,622,709	1,482,365	18,189,346	30,455	(2,079,367)	16,140,434	10.05%	28,826,440	
20	19.5	6,334,574	3,275,291	686,880	135,666	2,236,737	646,193	1,726,210	1,590,544	17,950,062	31,672	(2,232,619)	15,749,115	10.96%	30,291,369	

Deferred Tax

**Pennsylvania-American Water Company's
Utility Valuation Experts' (UVE) Valuation of
Steelton Borough (Water) Authority
Dauphin County, Pennsylvania**

**Appraisal Work Papers
As of July 2018**

Market Approach

**AUS Consultants
Suite 201
8555 West Forest Home Avenue
Greenfield, Wisconsin 53228
Office Telephone: 414-529-5755
J. Weinert's Cell: 414-698-8371
J. Weinert's E-Mail: weinertj@auswest.net**

**Pennsylvania-American Water Company
Steelton Borough (Water) Authority
Water System
Investor-Owned Utility
As of July 1, 2018**

Market Approach Summary

		Purchase Price to Depreciated Original Cost (Book Value)	Indicated Market Value
Comparable Sales	Book Ratios		
Depreciated Original Cost (AUS Consultants) OCLD	14,433,434.76	1.5793	22,794,724
Replacement Cost New less Depreciation RCNLD	23,921,472.83	0.9556	22,859,359
Average			22,827,042
Use (RCNLD)			22,859,359
Financial Markets	Market Value per Share to Book Value per Share		
Market to Book (equity)		2.61	
Market to Book (equity and debt)		1.77	
Use (equity and debt)		1.77	
Market Conclusion	Investor Purchaser Owned Value to Depreciated Original Cost (Book Value)		
Steelton Borough (Water) Authority	Steelton Borough (Water) Authority		
AUS Depreciated Original Cost		14,433,435	1.77 25,547,180
Market Value		Indicated Value \$	
Minimum		22,794,724	
Mean		23,733,754	
Median		22,859,359	
Maximum		25,547,180	
Use (RCNLD)			22,859,359

Pennsylvania-American Water Company
 Steelton Borough (Water) Authority
 Water System
 Investor-Owned Utility
 As of July 1, 2018

Comparable Sales Approach

Market Sales Basis

Description	New Garden Wastewater System	McKeesport Wastewater System	Limerick Wastewater System	East Bradford Wastewater Collection System	Sadsbury Wastewater Collection System	Simple Average / Standard Deviation	Remove Outliers Simple Average / Standard Deviation	Weighted Average	Remove Outliers Weighted Average / Standard Deviation	Use
System Description										
Type of System	Wastewater Collection & Treatment	Wastewater Collection & Treatment	Wastewater Collection & Treatment	Wastewater Collection Only	Wastewater Collection Only					
System Attributes										
Purchase Price	29,500,000	159,000,000	75,100,000	5,000,000	9,250,000				277,850,000	272,850,000
Acquirer Date	Aqua-PA	PA-American	Aqua-PA	Aqua-PA		100%				
Customers										
Original Cost										
Depreciated Original Cost (AUS Consultants) OCLD	18,567,728	101,915,080	46,153,867	5,383,591	6,128,876				178,149,142	172,765,551
Purchase Price to OCLD	1.5888	1.5601	1.6272	0.9287	1.5092	1.4428	1.5713	1.5596	1.5793	1.5793
Variance to Simple Mean	0.146	0.1173	0.1844	-0.5141	0.0664	0.2599	0.043			
Variance to Wtd Mean	0.0292	0.0005	0.0676	-0.6309	-0.0504				0.0168	
Replacement Cost New less Depreciation RCNLD	30,615,410	160,301,491	86,086,756	9,236,581	8,517,587				294,757,825	285,521,244
Purchase Price to RCNLD	0.9636	0.9919	0.8724	0.5413	1.086	0.891	0.9785	0.9426	0.9556	0.9556
Variance to Simple Mean	0.0726	0.1009	-0.0186	-0.3497	0.195	0.1877				
Variance to Wtd Mean	0.021	0.0493	-0.0702	-0.4013	0.1434				0.0263	
						0.2098	0.088			

Pennsylvania-American Water Company
 Steelton Borough (Water) Authority
 Water System
 Investor-Owned Utility
 July 1, 2018

Comparable Sales Approach

Financial Basis¹

	American & Aqua Industry Averages	American States Averages	American Water	Aqua America	California Water	Connecticut Water	Middlesex Water	SJW Corp	York
Price per Share		39.23	69.05	31.39	26.59	43.81	31.05	36.41	29.87
Book value per share		12.77	28.25	9.78	13.41	20.02	12.74	18.83	8.52
Market to Book Equity Ratio		3.07	2.44	3.21	1.98	2.19	2.44	1.93	3.51
Minimum	1.93	2.44							
Mean	2.60	2.825		2.44	3.21				
Standard Deviation	0.56	0.385							
Weighted Market to Debt Ratio	2.61		5,396.12	46,004.33	23,553.34	3,614.75	2,316.09	1,583.17	2,131.69
Median	2.44	2.825							
Maximum	3.51	3.21							
Debt (Total) \$s millions		325.8	6,544.0	1,795.9	552.5	180.5	144.9	418.9	87.3
Outstanding Shares (millions)		36.50	178.28	176.54	47.88	20.02	16.23	18.83	12.81
Debt per share		8.93	36.71	10.17	11.54	9.02	8.93	22.25	6.81
Equity (Total) \$s millions		1,431.90	12,310.23	5,541.59	1,273.13	877.08	503.94	685.60	382.63
Total Capital (Debt + Equity)		1,757.70	18,854.23	7,337.49	1,825.63	1,057.58	648.84	1,104.50	469.93
	0.05	0.57	0.22	0.06	0.03	0.02	0.03	0.01	0.99
Market Value per Share (Equity+Debt)		48.16	105.76	41.56	38.13	52.83	39.98	58.66	36.68
Book Value per Share (Equity+Debt)		21.7	64.96	19.95	24.95	29.04	21.67	41.08	15.33
Market to Book (Total Capital) Ratio		2.22	1.63	2.08	1.53	1.82	1.84	1.43	2.39
Minimum	1.43	1.63							
Mean	1.87	1.855		1.63	2.08				
Standard Deviation	0.32	0.225							
Weighted Market to Book (Debt&Equity) Ratio	1.77		3,902.08	30,732.40	15,261.98	2,793.21	1,924.79	1,193.87	1,579.44
Variance to Wtd Mean	0.0817		0.45	(0.14)	0.31	(0.24)	0.05	0.07	(0.34)
Median	1.83	1.855							
Maximum	2.39	2.08							

1. Value Line Investment Survey July 13, 2018

Pennsylvania-American Water Company
Steelton Borough (Water) Authority
Water System
Investor-Owned Utility
As of July 1, 2018

Comparable Sales Approach

Market Sales Basis

Description	New Garden Wastewater System	McKeesport Wastewater System	Limerick Wastewater System	East Bradford Wastewater Collection System	Sadisbury Wastewater Collection System	Simple Average / Standard Deviation	Remove Outliers Simple Average / Standard Deviation	Weighted Average / Standard Deviation	Remove Outliers Weighted Average / Standard Deviation	Use
System Description										
Type of System										
System Attributes										
Purchase Price	29,500,000	159,000,000	75,100,000	5,000,000	9,250,000				277,850,000	272,850,000
Acquirer Date	Aqua-PA	PA-American	Aqua-PA	Aqua-PA						
Customers										
Original Cost										
Depreciated Original Cost (AUS Consultants) OCLD	18,567,728	101,915,080	46,153,867	5,383,591	6,128,876				178,149,142	172,765,551
Purchase Price to OCLD	1.5888	1.5601	1.6272	0.9287	1.5092	1.4428	1.5713	1.5596	1.5793	1.5793
Variance to Simple Mean	0.146	0.1173	0.1844	-0.5141	0.0664	0.2599	0.043			
Variance to Wtd Mean	0.0292	0.0005	0.0676	-0.0309	-0.0504				0.0168	
Replacement Cost New less Depreciation RCNL	30,615,120	160,301,491	86,086,756	9,236,581	8,517,587				294,757,825	285,521,244
Purchase Price to RCNL	0.9636	0.9919	0.8724	0.5413	1.086	0.891	0.9785	0.9426	0.9556	0.9556
Variance to Simple Mean	0.0726	0.1009	-0.0186	-0.3497	0.195	0.1877				
Variance to Wtd Mean	0.021	0.0493	-0.0702	-0.4013	0.1434				0.0263	
									0.2098	0.088

Pennsylvania-American Water Company
Steelton Borough (Water) Authority
Water System
Investor-Owned Utility
July 1, 2018

Comparable Sales Approach

Financial Basis¹

	American & Aquatic Averages	American States Water	American Water	Aqua America	California Water	Connecticut	Middlesex Water	SIW Corp	York
Price per Share		39.23	69.05	31.39	26.59	43.81	31.05	36.41	29.87
Book value per share		12.77	28.25	9.78	13.41	20.02	12.74	18.83	8.52
Market to Book Equity Ratio		3.07	2.44	3.21	1.98	2.19	2.44	1.93	3.51
Minimum	1.93	2.44							
Mean	2.60	2.825	2.44	3.21					
Standard Deviation	0.56	0.385							
Weighted Market to Debt Ratio	2.61		5,396.12	46,004.33	23,553.34	3,614.75	2,316.09	1,583.17	2,131.69
Median	2.44	2.825							1,649.47
Maximum	3.51	3.21							86,248.96
Debt (Total) \$s millions			325.8	6,544.0	1,795.9	552.5	180.5	144.9	418.9
Outstanding Shares (millions)			36.50	178.28	176.54	47.88	20.02	16.73	18.83
Debt per share			8.93	36.71	10.17	11.54	9.02	8.93	12.81
Equity (Total) \$s millions			1,431.90	12,310.23	5,541.59	1,273.13	877.08	503.94	685.60
Total Capital (Debt + Equity)			1,757.70	18,854.23	7,337.49	1,825.63	1,057.58	648.84	1,104.50
Market Value per Share (Equity+Debt)			48.16	105.76	41.56	38.13	52.83	39.98	58.66
Book Value per Share (Equity+Debt)			21.7	64.96	19.95	24.95	29.04	21.67	41.08
Market to Book (Total Equity+Debt) Ratio			2.22	1.63	2.08	1.53	1.82	1.84	1.43
Minimum	1.43	1.63							
Mean	1.87	1.855	1.63	2.08					
Standard Deviation	0.32	0.225							
Weighted Market to Book (Debt+Equity) Ratio	1.77		3,902.08	30,732.40	15,261.98	2,793.21	1,924.79	1,193.87	1,579.44
Variance to Wtd Mean	0.0817		0.45	(0.14)	0.31	(0.24)	0.05	0.07	(0.34)
Median	1.83	1.855							
Maximum	2.39	2.08							

1. Value Line Investment Survey July 13, 2018

Pennsylvania-American Water Company
Steelton Borough (Water) Authority
Water System
Investor-Owned Utility
As of July 1, 2018

Market Approach Summary

	Purchase Price to Depreciated Original Cost (Book Ratios)	Indicated Market Value (Book Value)
Comparable Sales		
Depreciated Original Cost (AUS Consultants) OCLD	14,433,444.76	1.5793
Replacement Cost New less Depreciation RCNL	23,921,472.83	0.9556
Average		22,827,042
Use (RCNL)		22,859,359
Financial Markets		
Market to Book (equity)	2.61	
Market to Book (equity and debt)	1.77	
Use (equity and debt)	1.77	
Investor Purchaser Owned Value to Depreciated Original Cost (Book Value)		
Steelton Borough (Water) Authority AUS Depreciated Original Cost	14,433,435	1.77
Market Conclusion		
Steelton Borough (Water) Authority AUS Depreciated Original Cost	14,433,435	1.77
Market Value		
Indicated Value \$s		
Steelton Borough (Water) Authority AUS Depreciated Original Cost	14,433,435	1.77
Market Value		
Minimum	22,794,724	
Mean	23,733,754	
Median	22,859,359	
Maximum	25,547,180	
Use (RCNL)		22,859,359