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

Discounted Cash Flow Analysis
Investor-owned Rate Regulated Water Utility

Periods 1 through 19 & 20 to perpetuity

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Deferred Tax

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

	(14)	Accumulated PW of Cashflows	Sum (13)	666,664	1,271,938	1,818,573	2,311,541	3,049,846	3,743,991	4,350,343	4,918,235	5,629,999	6,364,154	7,055,896	7,705,423	8,460,381	9,173,062	9,902,621	10,658,715	11,344,655	11,964,891	12,523,773		22,424,662				
	(13)	PW of A Cashflow	(11)*(12)	666,664	605,274	546,635	492,968	738,305	694,145	606,352	567,892	711,764	734,155	691,742	649,527	754,958	712,681	729,559	756,094	685,940	620,236	558,882		688'006'6				
	(12) Period	Present Worth Factor (PW)		0.966	0.903	0.843	0.788	0.736	0.687	0.642	0.600	0.560	0.523	0.489	0.456	0.426	0.398	0.372	0.347	0.324	0.303	0.283		4.765				
	(11)	Net Cash Flows	(3)-(4)-(8)-(9)- (10)	690,128	670,292	648,440	625,594	1,003,132	1,010,400	944,474	946,486	1,271,007	1,403,738	1,414,606	1,424,402	1,772,203	1,790,655	1,961,181	2,178,944	2,117,098	2,046,984	1,974,849		2,077,836				
	(10)	Change in Working Capital	<u> </u>	1,198	146	147	147	2,993	359	366	373	2,668	1,302	461	470	2,874	537	1,642	1,450	ì	í	ì		1,217	19.5	N 26.4	18.051	4.765
	(6)	Capital Expenditures		322,714	327,557	332,482	337,490	342,584	347,764	429,390	437,917	446,631	455,537	464,640	473,942	483,451	493,169	503,103	421,370	427,883	434,505	441,242		448,095				
	(8)	State and Federal Taxes @ 28.89%	(7) *28.89%	22,094	11,148	(302)	(12,285)	139,433	138,367	130,953	128,213	257,215	306,590	306,440	305,962	443,534	445,120	509,624	579,079	548,570	522,151	494,941		532,135				
	(7)	Taxable Income before State & Federal Taxes	(9)-(9)	76,477	38,589	(1,057)	(42,523)	482,636	478,946	453,281	443,796	890,325	1,061,232	1,060,713	1,059,059	1,535,252	1,540,741	1,764,015	2,004,429	1,898,824	1,807,376	1,713,190		1,841,935				
	(9)	T Cash Flow from Operations	(3)-(4)	1,036,134	1,009,143	980,764	950,946	1,488,142	1,496,890	1,505,183	1,512,989	1,977,521	2,167,167	2,186,147	2,204,776	2,702,062	2,729,481	2,975,550	3,180,843	3,093,551	3,003,640	2,911,032		3,059,283				
	(5)	Tax (Depreciation		959,657	970,554	981,821	993,469	1,005,506	1,017,944	1,051,902	1,069,193	1,087,196	1,105,935	1,125,434	1,145,717	1,166,810	1,188,740	1,211,535	1,176,414	1,194,727	1,196,264	1,197,842		1,217,348				
7.06%	(4)	O&M Expenses		1,867,980	1,924,012	1,981,723	2,041,166	2,102,392	2,165,455	2,230,409	2,297,315	2,366,226	2,437,205	2,510,312	2,585,612	2,663,173	2,743,059	2,825,342	2,910,094	2,997,386	3,087,297	3,179,905		3,275,291 50.191,354			4	/ Factor _(19.5)
	(3)	Revenues (2,904,114	2,933,155	2,962,487	2,992,112	3,590,534	3,662,345	3,735,592	3,810,304	4,343,747	4,604,372	4,696,459	4,790,388	5,365,235	5,472,540	5,800,892	6,090,937	6,090,937	6,090,937	6,090,937		6,334,574	٠	nt Ratel(Age)	W (ABC) = 1/(1.03500mm (ABC)) PW to Pernetuity = 1/Canitalization Rate	PW (20and Beyond) = PW to Perpetuity * PW Factor (19.5)
te: n Rate:	(2)	Age		0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5	12.5	13.5	14.5	15.5	16.5	17.5	18.5		19.5		//1+Discour	$t_{\text{LII}} = 1/C$	id) = PW to
Discount Rate:	(1)	Period		1	2	3	4	2	9	7	∞	6	10	11	12	13	14	15	16	17	18	19	20 and	beyond	Age	DIM/(Age) - 1//1+Discount Bate (Age)	PW to Perne	PW _{(20and Beyon}

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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)

(17)	Seturn on Fauitv	10)/(16)	%60.0	0.01%	-0.05%	-0.10%	2.33%	2.40%	2.46%	2.51%	4.39%	5.02%	4.93%	4.83%	6.31%	%60.9	6.52%	6.74%	6.13%	2.60%	5.14%	5.25%
(16)	Rei Net Fauity F		16,521,040	16,291,548	16,060,757	5,829,060	15,992,611	16,178,787	16,387,346	16,615,698	17,187,432	17,909,396	18,657,932	19,431,831	20,570,246	21,739,194	3,096,999	24,611,294	26,069,364	27,474,023	28,826,440	30,291,369
(15)	Return on Rate Base N		%		-	-	2.78% 1	2.88% 1	2.97% 1	3.06% 1	4.78% 1	5.57% 1	5.76% 1	5.94%	7.96% 2	8.23% 2	9.39% 2	10.45% 2	10.32% 2	10.19% 2	10.05% 2	10.96% 3
(14)	Rate Base	11)+(12)+(13)	23,443,606	22,952,655	22,468,628	21,993,367	21,523,081	21,055,844	20,664,531	20,279,495	19,902,200	19,531,655	19,166,422	18,806,710	18,454,003	18,103,989	17,763,232	17,352,431	16,938,770	16,533,618	16,140,434	15,749,115
(13)	Accumulated Deferred Income Taxes (ADIT)	_	(58,727)	(120,439)	(187,540)	(260,901)	(337,947)	(420,251)	(514,230)	(614,316)	(720,388)	(833,753)	(953,841)	(1,080,632)	(1,213,998)	(1,354,370)	(1,503,280)	(1,642,747)	(1,786,438)	(1,931,519)	(2,079,367)	(2,232,619)
(12)	Working In		14,520	14,666	14,813	14,960	17,953	18,312	18,678	19,051	21,719	23,021	23,482	23,952	26,826	27,363	29,005	30,455	30,455	30,455	30,455	31,672
(11)	Net Plant		23,487,813	23,058,428	22,641,355	22,239,308	21,843,075	21,457,783	21,160,083	20,874,760	20,600,869	20,342,387	20,096,781	19,863,390	19,641,175	19,430,996	19,237,507	18,964,723	18,694,753	18,434,682	18,189,346	17,950,062
(10)	Net (Equity) Income	(9) - (6)	15,220	1,749	(7,258)	(15,615)	372,429	388,092	403,745	417,032	754,124	898,275	918,970	938,652	1,297,676	1,322,901	1,506,625	1,658,155	1,597,134	1,539,089	1,482,365	1,590,544
(6)	Net Operating Income	(7)-(8)+(6)	273,572	251,489	234,158	217,753	598,018	606,162	614,546	620,806	951,106	1,088,691	1,103,038	1,116,585	1,469,678	1,489,169	1,667,351	1,813,523	1,747,324	1,684,272	1,622,709	1,726,210
(8)	State and Federal Taxes @ 28.89%	(7) *28.89%	6,183	711	(2,949)	(6,344)	151,307	157,671	164,031	169,428	306,379	364,944	373,351	381,348	527,209	537,457	612,100	673,661	648,871	625,289	602,243	646,193
(2)	Book Taxable Income (Current 6 + Deferred)	(3)-(4)-(5)-(6)	21,403	2,460	(10,207)	(21,959)	523,736	545,763	922,776	586,460	1,060,503	1,263,219	1,292,321	1,320,000	1,824,885	1,860,358	2,118,725	2,331,816	2,246,005	2,164,378	2,084,608	2,236,737
(9)	Ratemaking Interest Ir Expense		258,352	249,740	241,416	233,368	225,589	218,070	210,801	203,774	196,982	190,416	184,068	177,933	172,002	166,268	160,726	155,368	150,190	145,183	140,344	135,666
(5)	Book Depreciation		756,379	756,943	749,555	739,537	738,817	733,057	726,606	722,755	720,036	713,532	709,758	706,843	705,175	702,855	660'969	693,660	697,356	694,079	080'989	088,880
(4)	O&M Expenses		1,867,980	1,924,012	1,981,723	2,041,166	2,102,392	2,165,455	2,230,409	2,297,315	2,366,226	2,437,205	2,510,312	2,585,612	2,663,173	2,743,059	2,825,342	2,910,094	2,997,386	3,087,297	3,179,905	3,275,291
(3)	Revenues		2,904,114	2,933,155	2,962,487	2,992,112	3,590,534	3,662,345	3,735,592	3,810,304	4,343,747	4,604,372	4,696,459	4,790,388	5,365,235	5,472,540	5,800,892	6,090,937	6,090,937	6,090,937	6,090,937	6,334,574
(2)	Age		0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5	12.5	13.5	14.5	15.5	16.5	17.5	18.5	19.5
(1)	Period		1	2	3	4	2	9	7	00	6	10	11	12	13	14	15	16	17	18	19	20

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20 perpetuity	0.0%	4.0%	.20.22% 0.0% 4.0%	6,334,574	1,615,371 3.0% 1,436,745	3.0%	3.0%	611 30,572,334 0.002%	686,880 3,962,171 62.5% 3,275,291 2,372,403	135,666 3.60% 135,666.00	2,236,737 646,193 28.89%	1,590,544	3,059,283	2,236,737 (666,880) (1,217,348) (530,468) 1,706,269 28,89% 492,941 1,213,328 (1,33,52) (2,232,619)	1,590,544 (153,252) 135,666 1,879,462
19 per	0.0%		.18.17% 0.0% 0.0%	6,090,937	1,568,321 3.0% 1.394.898	3.0%	3.0%	604 30,206,608 0.002%	686,080 3,865,985 63,5% 3,179,905 2,224,952	140,344 3.60% 140,344.00	2,084,608 602,243 28.89%	1,482,365	2,911,032	2,084,608 (686,080) (1,197,842) (511,762) 1,572,846 28,89% 454,395 1,118,451 (1,178,481) (2,079,367)	1,482,365 (147,848) 140,344 1,770,557
18	%0.0		.19.11% 0.0% 0.0%	6,090,937	1,522,642 3.0% 1,354,270	3.0%	3.0%	597 29,846,720 0.002%	. 694,079 3,781,376 62.1% 3,087,297 2,309,561	145,183 3.60% 145,183.00	2,164,378 625,289 28.89%	1,539,089	3,003,640	2,164,378 (694,079) (1,196,264) (502,185) 1,662,193 28,89% 480,208 1,181,985 (145,081) (1,31,519)	1,539,089 (145,081) 145,183 1,829,353
71	0:0%		.20.07% 0.0%	6,090,937	1,478,293 3.0% 1.314.825	3.0%	3.0%	590 29,492,568 0.002%	697,356 3,694,742 60.7% 2,997,386 2,396,195	150,190 3.60% 150,190.00	2,246,005 648,871 28.89%	1,597,134	3,093,551	2.246,005 (697,356) (1,194,727) (497,371) 1,748,634 28.89% 505,180 1,243,454 (143,691) (1,786,438)	1,597,134 (143,691) 150,190 1,891,015
16	%0:0		.21.09% 5.0% 5.0%	6,090,937	1,435,236 3.0% 1,276,529	3.0%	3.0%	583 29,144,059 0.002%	693,660 3,603,754 59.2% 2,910,094 2,487,184	155,368 3.60% 155,368.00	2,331,816 673,661 28.89%	1,658,155	3,180,843	2,331,816 (693,660) (1,176,414) (482,755) 1,849,061 28,89% 534,194 1,314,867 (1,34,867) (1,642,747)	1,658,155 (139,467) 155,368 1,952,990
15	2.0%	4.0%	.18.07% 0.0% 6.0%	5,800,892	1,393,433 3.0% 1,239,349	3.0%	3.0%	574 28,712,737 0.002%	696,099 3,521,441 60.7% 2,825,342 2,279,451	160,726 3.60% 160,726.00	2,118,725 612,100 28.89%	1,506,625	2,975,550	2,118,725 (696,099) (1,211,535) (5,15,436) 1,603,289 78,89% 463,190 1,140,099 (146,910) (1,503,280)	1,506,625 (148,910) 160,726 1,816,261
14	2.0%		.14.11% 0.0% 2.0%	5,472,540	1,352,848 3.0% 1,203,251	3.0%	3.0%	566 28,290,294 0.002%	702,855 3,445,914 63.0% 2,743,059 2,026,626	166,268 3.60% 166,268.00	1,860,358 537,457 28.89%	1,322,901	2,729,481	1,860,358 (702,855) (1,188,740) (485,885) 1,374,473 28,89% 397,085 977,388 (140,372) (1,354,370)	1,322,901 (140,372) 166,268 1,629,541
13	2.0%		.13.38% 10.0% 12.0%	5,365,235	1,313,445 3.0% 1.168,205	3.0%	3.0%	558 27,876,535 0.002%	705,175 3,368,348 62.8% 2,663,173 1,996,887	172,002 3.60% 172,002.00	1,824,885 527,209 28.89%	1,297,676	2,702,062	1,824,885 (705,175) (1,166,810) (461,635) 1,363,550 28,89% 393,843 969,407 (133,366) (1,213,998)	1,297,676 (133,366) 172,002 1,603,044
12	2.0%		4.06% 0.0% 2.0%	4,790,388	1,275,189 3.0% 1,134,180	3.0%	3.0%	549 27,471,272 0.002%	706,843 3,292,455 68.7% 2,585,612 1,497,933	177,933 3.60% 177,933.00	1,320,000 381,348 28.89%	938,652 1,116,585	2,204,776	1,320,000 (706,843) (1,145,717) (438,873) 881,126 28,89% 254,557 (206,569 (126,791)	938,652 (126,791) 177,933 1,243,376
п	2.0%		-3.15% 0.0% 2.0%	4,696,459	1,238,048 3.0% 1,101,146	3.0%	3.0%	541 27,074,317 0.002%	709,758 3,220,070 68.6% 2,510,312 1,476,389	184,068 3.60% 184,068.00	1,292,321 373,351 28.89%	918,970 1,103,038	2,186,147	1,292,321 (709,758) (1,125,434) (415,675) 876,645 28,89% 253,263 (120,088) (953,841)	918,970 (120,088) 184,068 1,223,126
16 & beyond	0:0%				3%	3%	3%								
Periods: 6-15	2.0%				3%	3%	3, 3%								
1.5	1.0%				3%	3%	å å								
Base	%0'0	4.0%	typically 3 years Calculated in DCF Calculated in DCF Calculated	2,664,325	894,391	723,227		23,921,486		3.60%	28.89%				
. Income Statement	Revenues Amrual Revenue Growth rate Subscriber (Growth Rate (Annually) Pannole Subscriber Growth	Growth Penod for Penodic Growth	Rate Case Activities Periodic Rate Case (years) Required Rate Increase Proposed Rate Increase Total Revenue Adjustments	Base and Forecast	Operating Expenses Waste & Sewage Collection Waste & Sewage Collection Rale of Change Treatment	Treatment Rate of Change Sewer Administration	Sewer Admininstration Kate of Change Insurance & Benefits Rate of Channe	Property Taxes Begin Plant PT Rate % of beginning net plant	Book Depresation (Jased on Beginning Year Property Plant & Equipment) Total Operating Expenses Cotal Operation as % of Revenues (Calculation) Operating Expenses less Deprecation Operating Income	Nonoperating Revenues (Expenses) Interest Income Interest Expense Interest Expense Interest Expense Total nonoperating revenues (expenses)	income (loss) before State and Federal Taxes State and Federal Taxes State and Federal Tax Rate	income After Taxes income After Taxes plus interest	Earnings before Interest, Taxes, Deprecition, & Amortization	Income (loss) before State and Federal Taxes Book Deprecation Tax Deprecation Tax Deprecation Difference Tax over Book Deprecation Income Austed for Tax Deprecation Income Alex Base Income Alex Base Income Alex Base Accumulated Deferred Income Taxes	income After Taxes (Book Depreciation) Plus Deferred Taxes Plus Inferest After Tax Income Debt Free

Income Approach

All Periods			4,470,145					780,383	2,013,655
Average Period 1-6			3,076,480					73,305	1,093,026
Period 1			2,904,114					15,220	1,036,134
16 & beyond	%0.0			3% %6	3%				
Periods: 6-15	2.0%			% %	3.0%				
1.5	1.0%			% %	3%				
Base	0.0%	5 typically 3 years Calculated in DCF Calculated in DCF Calculated	2,664,325	795,490		23.921.486 0.002%	3.60%	28.89%	
income Statement Roverius		Perod for	Base and Forecast Operating Expenses Waste & Sewage Collection	Vvaste & Sewage Collection Kale of Change Treatment Treatment Rate of Change Sewer Administration	Sever Administration Rate of Change Insurance & Benefits Insurance & Benefits Rate of Change	Property Taxes Began Pliant Bed Depresident (Jased on Beginning Year Property Plant & Equipment) Total Operation Expension Cost of Operation as % of Revenues (Calculation) Operating Expenses less Depreciation	Nonoperating Revenues (Expenses) Interest Income Interest Expense, or Obet Interest Expense, or Obet Total nonoperating revenues (expenses) Income (loss) before State and Federal Taxes	State and Federal Taxes State and Federal Tax Rate Income After Taxes Income After Taxes plus Interest	Earnings before Interest, Taxes, Deprecition, & Amortization

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

Income After Taxes (Book Depreciation)
Plus Deferred Taxes
Plus Interest
After Tax Income Debt Free

income (loss) before State and Faderal Taxes Book Depreciation
Tax Depreciation
Difference Tax over Book Depreciation
Income Tax over Book Depreciation
Income Tax State
Income Tax State
Income Taxes
Accumulated Deferred Income Taxes

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DCF Investor Owned

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Pennsylvania-American Water Company Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018									
	Base		Periods:						
Balance Statement		1-5	6-15	16 & beyond	Н	2	8	4	S
Liabilities									
Current Liabilities	10000								
Current Ladmines CL as % of Revenues	39,965 1.50%	1.50%	1.50%	1.50%	43,562 1.50%	43,997 1.50%	44,437 1.50%	44,882 1.50%	53,858 1.50%
Noncurrent Liabilities									
Long Term Debt, Notes payable, net of current portion Begin	7,176,443.83				7,176,443.83	6,937,228.83	6,705,987.83	6,482,454.83	6,266,372.83
Debt Repayment					(239.215)	. (731 741)	(223 533)	(500 315)	(020 000)
Debt Repayment years	30.00				30.00	30.00	30.00	30.00	30.00
End Long Term Debt, Notes payable, net of current portion End Total noncurrent liabilities					6,937,228.83	6,705,987.83	6,482,454.83	6,266,372.83	6,057,493.83
Deferred Tax Liabilities									
Begin Balance						58,727	120,439	187,540	260,901
Additions to Deferred Asset					58,727	61,712	67,101	73,361	77,046
Total Deferred Tax Liability					58,727	120,439	187,540	260,901	337,947
Total Liabilities					7,039,517.83	6,870,423.83	6,714,431.83	6,572,155.83	6,449,298.83
Equity									
Proportion of Capital	%02								
Beginning Equity Capital	16,745,035				16,745,035	16,521,040	16,291,548	16,060,757	15,829,060
Additions to Equity (Retained Earnings)					(223,995)	(229,492)	(230,791)	(231,697)	163,550
Deductions form Equity	0				0	0	0	0	0
Ending Equity Capital					16,521,040	16,291,548	16,060,757	15,829,060	15,992,611
Operating Income Return On Equity					279,755	252,200	231,209	211,409	749,325 4.69%
C C C C C C C C C C C C C C C C C C C									
l otal Liabilities & Stockholders Equity					23,560,557	23,161,972	22,775,189	22,401,216	22,441,909
Assets less Liabilities & Stockholders Equity					(14,662)	(44,881)	(74,584)	(102,066)	(527,023)

DCF Investor Owned

\\server-aus-sbs\shared\water industry\PA American Steelton\PA American - Steelton Water Utility Valuation Created 11-6-2018

Pennsylvania-American Water Company Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018									
Balance Statement Liabilities	Base	1-5	Periods: 6-15	16 & beyond	g	7	∞	6	10
Current Liabilities Current Liabilities CL as % of Revenues	39,965	1.50%	1.50%	1.50%	54,935 1.50%	56,034 1.50%	57,155 1.50%	65,156 1.50%	69,066
Noncurrent Liabilities Long Term Debt, Notes payable, net of current portion Begin Additional Debt Debt Repayment Debt Repayment years End Long Term Debt, Notes payable, net of current portion End Total noncurrent liabilities	7,176,443.83				6,057,493.83 - (201,916) 30.00 5,855,577.83	5,855,577.83 - (195,186) 30.00 5,660,391.83	5,660,391.83 - (188,680) 30.00 5,471,711.83	5,471,711.83 (182,390) 30.00 5,289,321.83	5,289,321.83 - (176,311) 30.00 5,113,010.83
Deferred Tax Liabilities Begin Balance Additions to Deferred Asset Total Deferred Tax Liability Total Liabilities					337,947 82,304 420,251 6,330,763.83	420,251 93,979 514,230 6,230,655.83	514,230 100,086 614,316 6,143,182.83	614,316 106,072 720,388 6,074,865.83	720,388 113,365 833,753 6,015,829.83
Equity Proportion of Capital Beginning Equity Capital Additions to Equity (Retained Earnings) Deductions form Equity Ending Equity Capital Operating Income Return On Equity	70% 16,745,035 0				15,992,611 186,176 0 16,178,787 763,833	16,178,787 208,559 16,387,346 778,577 4.75%	16,387,346 228,352 0 16,615,698 790,234 4.76%	16,615,698 571,734 0 17,187,432 1,257,485	17,187,432 721,964 0 17,909,396 1,453,635 8,12%
Total Liabilities & Stockholders Equity Assets less Liabilities & Stockholders Equity					22,509,551 (978,521)	22,618,002 (1,383,207)	22,758,881 (1,807,915)	23,262,298 (2,574,554)	23,925,226

DCF Investor Owned

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Pennsylvania-American Water Company Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018									
Balance Statement Liabilities	Base	1-5	Periods: 6-15	16 & beyond	11	12	13	14	15
Current Liabilities CLas % of Revenues	39,965 1.50%	1.50%	1.50%	1.50%	70,447	71,856 1.50%	80,479	82,088 1.50%	87,013 1.50%
Noncurrent Liabilities Long Term Debt, Notes payable, net of current portion Begin Additional Debt Debt Repayment Debt Repayment years End Long Term Debt, Notes payable, net of current portion End Total noncurrent liabilities	7,176,443.83				5,113,010.83 - (170,434) 30.00 4,942,576.83	4,942,576.83 - (164,753) 30.00 4,777,823.83	4,777,823.83 - (159,261) 30.00 4,618,562.83	4,618,562.83 - (153,952) 30.00 4,464,610.83	4,464,610.83 - (148,820) 30.00 4,315,790.83
Deferred Tax Liabilities Begin Balance Additions to Deferred Asset Total Deferred Tax Liability Total Liabilities					833,753 120,088 953,841 5.966.864.83	953,841 126,791 1,080,632 5.930,311.83	1,080,632 133,366 1,213,998 5,913,039,83	1,213,998 140,372 1,354,370 5.901.068.83	1,354,370 148,910 1,503,280 5,906,083,83
Equity Proportion of Capital Beginning Equity Capital Additions to Equity (Retained Earnings) Deductions form Equity Ending Equity Capital Operating Income Return On Equity	70% 16,745,035				17,909,396 748,536 0 18,657,932 1,476,389 7.91%	18,657,932 773,899 0 19,431,831 1,497,933 7.71%	19,431,831 1,138,415 0 20,570,246 1,996,887 9.71%	20,570,246 1,168,949 0 21,739,194 2,026,626	21,739,194 1,357,805 0 23,096,999 2,279,451 9,87%
Total Liabilities & Stockholders Equity Assets less Liabilities & Stockholders Equity					24,624,797 (4,434,087)	25,362,143	26,483,286 (6,734,806)	27,640,263	29,003,083 (9,649,558)

DCF Investor Owned

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Pennsylvania-American Water Company Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018									
Balance Statement Liabilities Current Liabilities	Base	1-5	Periods: 6-15	16 & beyond	16	17	18	19	20
Current Liabilities CL as % of Revenues	39,965 1.50%	1.50%	1.50%	1.50%	91,364	91,364 1.50%	91,364	91,364	95,019 1.50%
Noncurrent Liabilities Long Term Debt, Notes payable, net of current portion Begin Additional Debt Debt Repayment Debt Repayment years End Long Term Debt, Notes payable, net of current portion End Total noncurrent liabilities	7,176,443.83				4,315,790.83 - (143,860) 30.00 4,171,930.83	4,171,930.83 - (139,064) 30.00 4,032,866.83	4,032,866.83 - (134,429) 30.00 3,898,437.83	3,898,437.83 - (129,948) 30.00 3,768,489.83	3,768,489.83 (125,616) 30.00 3,642,873.83
Deferred Tax Liabilities Begin Balance Additions to Deferred Asset Total Deferred Tax Liability Total Labilities					1,503,280 139,467 1,642,747 5,906,041.83	1,642,747 143,691 1,786,438 5,910,668.83	1,786,438 145,081 1,931,519 5,921,320.83	1,931,519 147,848 2,079,367 5,939,220.83	2,079,367 153,252 2,232,619 5,970,511.83
Equity Proportion of Capital Beginning Equity Capital Additions to Equity (Retained Earnings) Deductions form Equity Ending Equity Capital Operating Income Return On Equity	70% 16,745,035				23,096,999 1,514,295 0 24,611,294 2,487,184 10.11%	24,611,294 1,458,070 0 26,069,364 2,396,195 9.19%	26,069,364 1,404,660 0 27,474,023 2,309,561 8.41%	27,474,023 1,352,417 0 28,826,440 2,224,952	28,826,440 1,464,928 0 30,291,369 2,372,403 7,83%
Total Liabilities & Stockholders Equity Assets less Liabilities & Stockholders Equity					30,517,336	31,980,032 (13,163,460)	33,395,344 (14,838,843)	34,765,661 (16,454,496)	36,261,881 (18,185,128)

Pennsylvania-American Water Company	Steelton Borough (Water) Authority		Potential Purchaser: Investor-Owned Utility	.018	Base Periods:	1-5 6-15	ment		88	39,965	CL as % of Revenues 1.50% 1.50% 1.50%
<u>6</u>	η Borou	Water System	itial Purcl	As of July 1, 2018			Balance Statement	Liabilities	Current Liabilities	Current Liabilities	CL as % o

16 & beyond

	7,176,443.83	30.00			70% 16,745,035	0
Noncurrent Liabilities	Long Term Debt, Notes payable, net of current portion Begin Additional Debt Debt Repayment	Debt Repayment years End Long Term Debt, Notes payable, net of current portion End Total noncurrent liabilities	Deferred Tax Liabilities Begin Balance Additions to Deferred Asset Total Deferred Tax Liability	Total Liabilities Equity	Proportion of Capital Beginning Equity Capital	Additions to Equity (Retained Earnings) Deductions form Equity Ending Equity Capital Operating Income Return On Equity

Total Liabilities & Stockholders Equity

Assets less Liabilities & Stockholders Equity

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
Balance Statement Forecast - Assets
Investor-owned Rate Regulated Water Utility

Periods 1 through 19 & 20 to perpetuity

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DCF Investor Owned

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oach	water oystem Potential Purchaser: Investor-Owned Utility										
ı	As of July 1, 2018										
		Base		Periods:							
	Balance Statement		1-5	6-15	16 & beyond	1	2	ю	4	2	9
	Assets										
	Current Assets										
	Current Asset Balance	53,287				58,082	58,663	59,250	59,842	71,811	73,247
	CA as % of Revenues Balance Statement	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
	Property Plant & Equipment										
	Total PP&E										
	Begin Balance					23.921.478.83	24.184.872.83	24.452.450.83	24 724 285 83	25 000 448 83	25 281 015 83
	Additions					322,714.00	327,557.00	332,482.00	337,490.00	342,584.00	347,764.00
	Retirements					(00 000 03)	,				
						(00.028,880)	(00.878,86)	(60,647.00)	(61,327.00)	(62,017.00)	(62,719.00)
	End Balance	23,921,478.83				24,184,872.83	24,452,450.83	24,724,285.83	25,000,448.83	25,281,015.83	25,566,060.83
	End Balance Check Book Depreciation of Property, Plant, & Equipment					24,184,872.83	24,452,450.83	24,724,285.83	25,000,448.83	25,281,015.83	25,566,060.83
	Total Book Depreciation										
	Begin Balance						(697,059.41)	(1,394,023.10)	(2,082,930.88)	(2,761,140.53)	(3,437,940.34)
	Depreciation					(756,379.41)	(756,942.69)	(749,554.78)	(739,536.65)	(738,816.81)	(733,056.73)
	Retirements					59,320.00	59,979.00	60,647.00	61,327.00	62.017.00	62.719.00
	End Balance					(697,059.41)	(1,394,023.10)	(2,082,930.88)	(2,761,140.53)	(3,437,940.34)	(4,108,278.07)
	End Balance Check					(697,059.41)	(1,394,023.10)	(2,082,930.88)	(2,761,140.53)	(3,437,940.34)	(4,108,278.07)
	Net Plant										
	Begin Balance					23,921,478.83	23,487,813.42	23,058,427.73	22.641.354.95	22.239.308.30	21.843.075.49
	End Balance					23,487,813.42	23,058,427.73	22,641,354.95	22,239,308.30	21,843,075.49	21,457,782.76
	Total Assest					23,545,895.42	23.117.090.73	22.700.604.95	22.299.150.30	21 914 886 49	21 531 029 76
	Tax Depreciation of Property, Plant, & Equipment										
	Total MACRS Depreciation										
	Begin Balance					1		,	,	,	
	Depreciation					(959,656.91)	(970,553.75)	(981,821.15)	(993,468.63)	(1,005,506.35)	(1,017,944.15)

Pennsylvania-American Water Company Steelton Borough (Water) Authority Water System

Tax Book

End Balance Check Net Plant Begin Balance End Balance

Retirements End Balance

62,719.00 (955,225.15) (955,225.15)

62,017.00 (943,489.35) (943,489.35)

61,327.00 (932,141.63) (932,141.63)

60,647.00 (921,174.15) (921,174.15)

(910,574.75) (910,574.75)

59,320.00 (900,336.91) (900,336.91)

(970,553.75) 59,979.00 25,281,015.83 24,610,835.68

25,000,448.83 24,337,526.48

24,724,285.83 24,068,307.20

24,452,450.83 23,803,111.68

24,184,872.83 23,541,876.08

23,921,478.83 23,284,535.92

(1,017,944.15) (733,056.73) (284,887.42)

(1,005,506.35) (738,816.81) (266,689.54)

(993,468.63) (739,536.65) (253,931.98)

(981,821.15) (749,554.78) (232,266.37)

(970,553.75) (756,942.69) (213,611.06)

(959,656.91) (756,379.41) (203,277.50)

DCF Investor Owned

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Pennsylvania-American Water Company Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018 Balance Statement	Base	1-5	Periods: 6-15	16 & beyond		60	ø	0	, 11	12
Current Assets Current Asset Balance CA as % of Revenues Balance Statement Property Plant & Equipment	53,287 2.00%	2.00%	2.00%	2.00%	74,712 2.00%	76,206	86,875 2.00%	92,087	93,929	95,808
Total PP&E Begin Balance Additions Retirements					25,566,060.83 429,390.00 - (63,915.00)	25,931,535.83 437,917.00 (64,828.00)	26,304,624.83 446,631.00	26,685,493.83 455,537.00 (66,714.00)	27,074,316.83 464,640.00 - (67,685.00)	27,471,271.83 473,942.00 - (68,679.00)
End Balance End Balance Check Book Depreciation of Property, Plant, & Equipment	23,921,478.83				25,931,535.83 25,931,535.83	26,304,624.83 26,304,624.83	26,685,493.83 26,685,493.83	27,074,316.83 27,074,316.83	27,471,271.83 27,471,271.83	27,876,534.83 27,876,534.83
Total Book Depreciation Begin Balance Depreciation					(4,108,278.07) (726,605.59)	(4,771,452.66) (722,755.02)	(5,429,864.68) (720,036.08)	(6,084,624.76) (713,532.01)	(6,731,929.77) (709,758.27)	(7,374,491.04) (706,843.15)
Retirements End Balance End Balance Check					63,431.00 (4,771,452.66) (4,771,452.66)	64,343.00 (5,429,864.68) (5,429,864.68)	65,276.00 (6,084,624.76) (6,084,624.76)	66,227.00 (6,731,929.77) (6,731,929.77)	67,197.00 (7,374,491.04) (7,374,491.04)	68,189.00 (8,013,145.19) (8,013,145.19)
Net Plant Begin Balance End Balance					21,457,782.76 21,160,083.17	21,160,083.17 20,874,760.15	20,874,760.15	20,600,869.07	20,342,387.06 20,096,780.79	20,096,780.79
Total Assest Tax Depreciation of Property, Plant, & Equipment Total MACRS Depreciation Begin Balance					21,234,795.17	20,950,966.15	20,687,744.07	20,434,474.06	20,190,709.79	19,959,197.64
Peprediation Retirements End Balance End Balance Check					(487,986.99) (987,986.99) (987,986.99)	(1,069,192.87) 64,828.00 (1,004,364.87) (1,004,364.87)	(1,087,196.03) 65,762.00 (1,021,434.03) (1,021,434.03)	(1,105,934.51) 66,714.00 (1,039,220.51) (1,039,220.51)	(1,125,433.55) 67,685.00 (1,057,748.55) (1,057,748.55)	(1,145,716.51) 68,679.00 (1,077,037.51) (1,077,037.51)
Net Plant Begin Balance End Balance					25,566,060.83 24,943,548.84	25,931,535.83 25,300,259.96	26,304,624.83 25,664,059.80	26,685,493.83 26,035,096.32	27,074,316.83 26,413,523.28	27,471,271.83 26,799,497.32
Tax Book					(1,051,901.99) (726,605.59) (325,296.40)	(1,069,192.87) (722,755.02) (346,437.85)	(1,087,196.03) (720,036.08) (367,159.95)	(1,105,934.51) (713,532.01) (392,402.50)	(1,125,433.55) (709,758.27) (415,675.28)	(1,145,716.51) (706,843.15) (438,873.36)

DCF Investor Owned

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15 16 17	116,018 121,819 121,819 2.00% 2.00% 2.00%
14	109,451
13	107,305
Periods: 6-15 16 & beyond	2.00% 2.00%
Per 6-3	2.00%
1-5	2.0
Base 1-5	53,287 2.00% 2.0

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

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Pennsylvania-American Water Company Steetton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018	Base	ż. <u>1</u>	Periods: 6-15	16 & bevond	19	99	Average
Balance Statement Assets Current Asset Balance CA as % of Revenues Balance Statement Property Plant & Equipment	53,287 2.00%	2.00%	2.00%	2.00%	121,819	2.00%	
Total PP&E Begin Balance Additions Retirements					30,206,607.83 441,242.00 (75,516.00)	30,572,333.83 448,095.00 (76,431.00)	
End Balance End Balance Check Book Depreciation of Property, Plant, & Equipment	23,921,478.83				30,572,333.83 30,572,333.83	30,943,997.83 30,943,997.83	
Total Book Depreciation Begin Balance Depreciation					(11,771,925.56) (686,080.00)	(12,382,987.56) (686,879.68)	
Retirements End Balance End Balance Check					75,018.00 (12,382,987.56) (12,382,987.56)	75,931.00 (12,993,936.24) (12,993,936.24)	
Net Plant Begin Balance End Balance					18,434,682.27 18,189,346.27	18,189,346.27 17,950,061.59	
Total Assest Tax Depreciation of Property, Plant, & Equipment					18,311,165.27	18,076,752.59	
Total MACRS Depreciation Begin Balance Depreciation					(1,197,842.31)	(1,217,347.59)	
Retirements End Balance End Balance Check Net Plant Bagin Balance End Balance					75,516.00 (1,122,326.31) (1,122,326.31) 30,206,607.83 29,450,007.52	76,431.00 (1,140,916.59) (1,140,916.59) 30,572,333.83 29,803,081.24	
Tax Book					(1,197,842.31) (686,080.00) (511,762.31)	(1,217,347.59) (686,879.68) (530,467.91)	

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
Cash Flow Forecast
Investor-owned Rate Regulated Water Utility

Periods 1 through 19 & 20 to perpetuity

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DCF Investor Owned

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Pennsylvania-American Water Company Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018									
Capital Expenditures and Changes in Working Capital	Base	1-5	Periods: 6-15	16 & beyond	ਜ	7	ю	4	s
Capital Experiorures					322,714.00	327,557.00	332,482.00	337,490.00	342,584.00
Changes to Working Capital Current Assets	53,287				58,082	58,663	59,250	59,842	71,811
Current Liabilities	39,965				43,562	43,997	44,437	44,882	53,858
Working Capital	13,322				14,520	14,666	14,813	14,960	17,953
Changes to Working Capital					1,198	146	147	147	2,993
CASH FLOW									
Income from Operations					273,572	251,489	234,158	217,753	598,018
Non Cash Expense (depreciation)					756,379	756,943	749,555	739,537	738,817
Capital Expenditures					322,714	327,557	332,482	337,490	342,584
Change in Working Capital					1,198	146	147	147	2,993
Net Cash Flows					706,039	680,729	651,084	619,653	991,258
Period					0.5	1.5	2.5	3.5	4.5
PW Factor									
Discount Rate with growth	7.06%				7.06%	7.06%	7.06%	7.06%	7.06%
Discount Rate without growth	5.54%				5.54%	5.54%	5.54%	5.54%	5.54%
Period Present Worth Factor (PW)					0.966	0.903	0.843	0.788	0.736
PW of Cashflow					682,034	614,698	548,864	488,287	729,566
Accumulated PW of Cashflows	21,473,865				682,034	1,296,732	1,845,596	2,333,883	3,063,449

DCF Investor Owned

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Pennsylvania-American Water Company Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018									
Canital Expanditures and Change in Working Canital	Base 1	P 1-5	Periods: 6-15	16 & beyond	9	7	∞	ø.	10
Capital Expenditures					347,764.00	429,390.00	437,917.00	446,631.00	455,537.00
Changes to Working Capital Current Assets	53.287				73.247	74 712	76 206	26 875	780.00
Current Liabilities	39,965				54,935	56,034	57,155	65,156	69,066
Working Capital	13,322				18,312	18,678	19,051	21,719	23,021
Changes to Working Capital					359	366	373	2,668	1,302
CASH FLOW					57,000				
Non Cash Expense (depreciation)					733.057	514,546 726.606	620,806	951,106	1,088,691
Capital Expenditures					347,764	429,390	437,917	446,631	455,537
Change in Working Capital					359	366	373	2,668	1,302
Net Cash Flows					991,096	911,396	905,271	1,221,843	1,345,384
Period					5.5	6.5	7.5	8.5	9.5
PW Factor	9				į				
Discount Rate with growth	/.06%				2.06%	7.06%	7.06%	7.06%	7.06%
Discount Rate without growth	5.54%				5.54%	5.54%	5.54%	5.54%	5.54%
Period Present Worth Factor (PW)					0.687	0.642	9.0	0.56	0.523
PW of Cashflow					680,883	585,116	543,163	684,232	703,636
Accumulated PW of Cashflows	21,473,865				3,744,332	4,329,448	4,872,611	5,556,843	6,260,479

DCF Investor Owned

\server-aus-sbs\shared\water industry\PA American Steelton\PA American - Steelton Water Utility Valuation Created 11-6-2018

Pennsylvania-American Water Company Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018									
Capital Expenditures and Changes in Working Canital	Base	1-5	Periods: 6-15	16 & beyond	. 11	12	13	14	15
Capital Expenditures					464,640.00	473,942.00	483,451.00	493,169.00	503,103.00
Changes to Working Capital	700 63				0	6			:
Current Liabilities	39,965				70,447	95,808 71.856	107,305	109,451	116,018
Working Capital	13,322				23,482	23,952	26,826	27,363	29,005
Changes to Working Capital					461	470	2,874	537	1,642
CASH FI OW									
Income from Operations					1,103,038	1,116,585	1,469,678	1,489,169	1,667,351
Non Cash Expense (depreciation)					709,758	706,843	705,175	702,855	660'969
Capital Expenditures					464,640	473,942	483,451	493,169	503,103
Change in Working Capital					461	470	2,874	537	1,642
Net Cash Flows					1,347,695	1,349,016	1,688,528	1,698,318	1,858,705
Period					10.5	11.5	12.5	13.5	14.5
PW Factor									
Discount Rate with growth	7.06%				7.06%	7.06%	7.06%	7.06%	7.06%
Discount Rate without growth	5.54%				5.54%	5.54%	5.54%	5.54%	5.54%
Period Present Worth Factor (PW)					0.489	0.456	0.426	0.398	0.372
PW of Cashflow					659,023	615,151	719,313	675,931	691,438
Accumulated PW of Cashflows	21,473,865				6,919,502	7,534,653	8,253,966	8,929,897	9,621,335

DCF Investor Owned

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Pennsylvania-American Water Company Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018									
Capital Expenditures and Changes in Working Capital	Base	1-5	Periods: 6-15	16 & beyond	16	17	18	19	20
Capital Expenditures					421,370.00	427,883.00	434,505.00	441,242.00	448,095.00
Changes to Working Capital Current Assets	53 287				121 810	918 161	010 101	0,00	2000
Current Liabilities	396'68				91,364	91,364	91,364	91,364	95.019
Working Capital	13,322				30,455	30,455	30,455	30,455	31,672
Changes to Working Capital					1,450		•	•	1,217
CASH FLOW									
Income from Operations					1,813,523	1,747,324	1,684,272	1,622,709	1,726,210
Non Cash Expense (depreciation)					693,660	952'329	694,079	080'989	686,880
Capital Expenditures					421,370	427,883	434,505	441,242	448,095
Change in Working Capital					1,450		•		1,217
Net Cash Flows					2,084,362	2,016,797	1,943,846	1,867,547	1,963,778
Period					15.5	16.5	17.5	18.5	19.5
PW Factor									
Discount Rate with growth	2.06%				7.06%	7.06%	7.06%	7.06%	7.06%
Discount Rate without growth	5.54%				5.54%	5.54%	5.54%	5.54%	5.54%
Constant Total Model Control								;	18.051
Period Present Worth Factor (PW)					0.347	0.324	0.303	0.283	0.264
A Commission DIM of Contributions	720 554 55				477777	653,442	588,985	528,51b	9,358,313
Acculidated T vv of Castriows	77,473,805				10,344,609	10,998,051	11,587,036	12,115,552	21,473,865

Average

Pennsylvania-American water Company Steetton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018	Base Capital Expenditures and Changes in Working Capital Capital Expenditures	Changes to Working Capital 53,287 Current Liabilities 39,965 Working Capital 13,322 Changes to Working Capital	CASH FLOW Income from Operations Non Cash Expense (depreciation) Capital Expenditures Change in Working Capital Net Cash Flows	Period PVV Factor Discount Rate with growth Discount Rate without growth 5.54%	Period Present Worth Factor (PW) PW of Cashilow Accumulated PW of Cashilows
	Periods: 1-5 6-15 16 & beyond				

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
Cash Flow Forecast - 2
Investor-owned Rate Regulated Water Utility

Periods 1 through 19 & 20 to perpetuity

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Income Approach Page 25 of 39

\\server-aus-sbs\shared\water industry\PA American Steelton\PA American - Steelton Water Utility Valuation Created 11-6-2018

١٨		182,786	(1,005,506)	342,584	2,993	842,715	4.5	7.06%	5.54%	0.736 620,238 2,318,460
4		(196,186)	(993,469)	337,490	147	459,646	3.5	7.06%	5.54%	0.788 362,201 1,698,222
m		(172,423)	(981,821)	332,482	147	476,769	2.5	7.06%	5.54%	0.843 401,916 1,336,021
2		(150,150)	(970,554)	327,557	146	492,701	1.5	7.06%	5.54%	0.903 444,909 934,105
н		(129,331)	(959,657)	322,714	1,198	506,414	0.5	7.06%	5.54%	0.966 489,196 489,196
16 & beyond										
Periods: 6-15										
1-5										
Base								7.06%	5.54%	20,399,693
	CASH FLOW	Income from Opertations	Depreciation	Capital Expenditures	Change in Working Capital	Net Cash Flows	Period PW Factor	Discount Rate with growth	Discount Rate without growth	Period Present Worth Factor (PW) PW of Cashflow Accumulated PW of Cashflows

Pennsylvania-American Water Company Steetton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018

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	Base	1-5	Periods: 6-15	16 & beyond	v	7	. 00	თ	10
CASH FLOW									
Income from Opertations					185,509	172,428	170,680	493,036	619,237
Depreciation					(1,017,944)	(1,051,902)	(1,069,193)	(1,087,196)	(1,105,935)
Capital Expenditures					347,764	429,390	437,917	446,631	455,537
Change in Working Capital					359	366	373	2,668	1,302
Net Cash Flows					855,330	794,574	801,583	1,130,933	1,268,333
Period DW Farter					5.5	6.5	7.5	8.5	9.5
Discount Rate with growth	7.06%				7.06%	7.06%	7.06%	7.06%	7.06%
Discount Rate without growth	5.54%				5.54%	5.54%	5.54%	5.54%	5.54%
Period Present Worth Factor (PW) PW of Cashilow Accumulated PW of Cashilows	20,399,693				0.687 587,612 2,906,072	0.642 510,117 3,416,189	0.6 480,950 3,897,139	0.56 633,322 4,530,461	0.523 663,338 5,193,799

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

DCF Investor Owned

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	Base	Periods:						
	1-5	5 6-15	16 & beyond	11	12	13	14	ń
CASH FLOW			•	1	l		;	3
Income from Opertations				623,382	656,569	969.407	977.388	1 140 099
Depreciation				(1,125,434)	(1,145,717)	(1.166.810)	(1.188.740)	(1,211,535)
Capital Expenditures				464,640	473,942	483,451	493,169	503,103
Change in Working Capital				461	470	2.874	537	1.642
Net Cash Flows				1,283,715	1,297,874	1,649,892	1,672,422	1,846,889
Period				10.5	11.5	12.5	13.5	7 7 2
PW Factor							1) T
Discount Rate with growth	7.06%			7.06%	7.06%	7.06%	7.06%	7.06%
Discount Rate without growth	5.54%			5.54%	5.54%	5.54%	5.54%	5.54%
Period Present Worth Factor (PW)				0.489	0.456	0.426	0.398	0.372
PW of Cashflow				627,737	591,831	702,854	665,624	687,043
Accumulated PW of Cashflows	20,399,693			5,821,536	6.413.367	7.116.221	7.781.845	8 468 888

Pennsylvania-American Water Company Steetton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018

DCF Investor Owned

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Pennsylvania-American Water Company Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018									
	Base	ر- ب	Periods:	76.8. Howon	,	Ĺ	0	Ç	ć
CASH FLOW		1		DIO 600	27	77	0	ΣŢ	07
Income from Opertations					1,314,867	1,243,454	1.181.985	1.118.451	1,213,328
Depreciation					(1,176,414)	(1,194,727)	(1.196.264)	(1.197.842)	(1 217 348)
Capital Expenditures					421,370	427,883	434,505	441.242	448.095
Change in Working Capital					1,450	, '		! '	1,217
Net Cash Flows					2,068,461	2,010,298	1,943,744	1,875,051	1,981,364
Period					15.5	16.5	17.5	18.5	19.5
PW Factor									
Discount Rate with growth	7.06%				2.06%	7.06%	7.06%	2.06%	7.06%
Discount Rate without growth	5.54%				5.54%	5.54%	5.54%	5.54%	5.54%
Period Present Worth Factor (PW)					0.347	0.324	0.303	0.283	0.264
PW of Cashflow Accumulated PW of Cashflows	20,399,693				717,756 9,186,644	651,337	588,954	530,639	9,442,119
							222/221/22		0000000

Income Approach Page 29 of 39

Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018			
	Base	L	Periods:
CASH FLOW		I-5	6-15
Income from Opertations			
Depreciation			
Capital Expenditures			
Change in Working Capital			
Net Cash Flows			
Period			
PW Factor			
Discount Rate with growth	7.06%		
Discount Rate without growth	5.54%		
Period Present Worth Factor (PW)			
PW of Cashflow			
Accumulated PW of Cashflows	20,399,693		

Average

16 & beyond

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
Rate Case Scenarios and Forecast
Investor-owned Rate Regulated Water Utility

Periods 1 through 19 & 20 to perpetuity

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Income Approach Page 31 of 39

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Pennsylvania-American Water Company Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018										
Rate Case Forecasts	Base 1-5		п	2	т	4	S	9	7	
Rate Base Plant In Service Accumulated Book Depreciation		Rate Base Plant in Service Accumulated Book Depreciation	24,184,872.83 (697,059.41)	24,452,450.83 (1,394,023.10)	24,724,285.83 (2,082,930.88)	25,000,448.83 (2,761,140.53)	25,281,015.83 (3,437,940.34)	25,566,060.83 (4,108,278.07)	25,931,535.83 (4,771,452.66)	
Working Capital Accumulated Deferred Income Tax Rate Base		Working Capital Accumulated Deferred Income Tax Rate Base	14,520.00 (58,727) 23,443,606.42	14,666.UU (120,439) 22,952,654.73	14,813.00 (187,540) 22,468,627.95	14,960.00 (260,901) 21,993,367.30	21,523,00 (337,947) 21,523,081.49	(420,251) (420,251) 21,055,843.76	(514,230) (50,664,531.17	
		Revenues O&M Expenses	2,904,114.00	2,933,155.00 1,924,012.00	2,962,487.00 1,981,723.00	2,992,112.00 2,041,166.00	3,590,534.00 2,102,392.00	3,662,345.00 2,165,455.00	3,735,592.00 2,230,409.00	
		Book Depreciation Ratemaking Interest Expense	756,379.41	756,942.69 249,740.00	749,554.78 241,416.00	739,536.65 233,368.00	738,816.81 225,589.00	733,056.73 218,070.00	726,605.59 210,801.00	
		Book Income (Current+Deferred)	21,402.59	2,460.31	(10,206.78)	(21,958.65) (6,344.00)	523,736.19	545,763.27	567,776.41 164,031.00	
		Net Operating Income	273,571.59	251,489.31	234,158.22	217,753.35	598,018.19	606,162.27	614,546.41	
Income from Operations		Income from Operations	273,572	251,489	234,158	217,753	598,018	606,162	614,546	
Return on Rate Base		Return on Rate Base	1.17%	1.10%	1.04%	%66:0	2.78%	7.88%	2.5.7%	
Required Return	6.93%	Required Return	6.93%	6.93%	6.93%	6.93%	6.93%	6.93%	6.93% 1.432.052	
Authorized Return		Authorized Keturn	1,624,642	1,390,619	0/0'/cc'T	1,324,140	000,104,1	011,011,1	100 100 100	
After-tax Net Income		After-tax Net Income	15,220 6 183	1,749	(7,258)	(15,615) (6,344)	372,429 151,307	388,092 157,671	403,745 164,031	
Taxes Pre-tax Net Income		Pre-tax Net Income	21,403	2,460	(10,207)	(21,959)	523,736	545,763	567,776	
Interest Expense		Interest Expense	(258,352)	(249,740)	241,416	233,368	225,589	218,070	210,801	
Operating Income		Operating Income	279,755	252,200	231,209	2.780.703	749,325 2,841.209	763,833	2,957,015	
Operating Expenses Revenue Requirement		Operating Experises Revenue Achieved)	2,904,114	2,933,155	2,962,487	2,992,112	3,590,534	3,662,345	3,735,592	
Required Return		Required Return	1,624,642	1,590,619	1,557,076	1,524,140	1,491,550	1,459,170	1,432,052	
Operating Expenses		Operating Expenses	2,624,359	2,680,955	2,731,278	2,780,703	2,841,209	2,898,512	2,957,015	
Revenue Requirement		Revenue Requirement	4,249,001	4,271,574	4,288,354	4,304,843	4,332,759	4,357,682	4,389,007	
Required Rate Increase		required hate increase Period	1	2	ю	4	ιΩ	9	7	
Proposed Rate Increase		Proposed Rate Increase Rate Increase	%8	%0	%	%0	15%	%0	%0 0	
		Scenario 6	8%	%0	%0	0%	15%	%0 9	%0 7	
		6% 9eriod 1, No Rate Increases	•	ı	ı					
	00 633 868 66		%9	%	%0	%0	%0	%0	%0	
	00:300(+3+(33	No Rate Increas								
		5	90.9	0.0%	0.0%	0.0%	%0.9	0.0%	0.0%	
		Modest Rate Inc 5 Required Rate								
		Increase (Input 6) 6	8.0%	0.0%	0.0%	%0:0	15.0%	%0.0	0.0%	
		Required Rate Ir 7								

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Pennsylvania-American Water Company									
Steelton Borough (Water) Authority Water System Potential Purchaser: Investor-Owned Utility As of July 1, 2018									
Rate Case Forecasts	Base 1-5	Periods: 6-15 16 & beyond Rate Case Forecasts	œ	ō	10	н	12	13	14
rate base Plant In Service Accumulated Book Depreciation		rate base Plant In Service Accumulated Book Depreciation	26,304,624.83 (5,429,864.68)	26,685,493.83 (6,084,624.76)	27,074,316.83 (6,731,929.77)	27,471,271.83 (7,374,491.04)	27,876,534.83 (8,013,145.19)	28,290,293.83 (8,649,119.28)	28,712,736.83 (9,281,740.63)
Working Capital Accumulated Deferred Income Tax		Working Capital Accumulated Deferred Income Tax	19,051.00 (614,316)	21,719.00 (720,388)	23,021.00 (833,753)	23,482.00 (953,841)	23,952.00 (1,080,632)	26,826.00 (1,213,998)	27,363.00 (1,354,370)
Rate Base		Rate Base Revenues	20,279,495.15 3,810,304.00	19,902,200.07 4,343,747.00	19,531,655.06 4,604,372.00	19,166,421.79 4,696,459.00	18,806,709.64 4,790,388.00	18,454,002.55 5,365,235.00	18,103,989.20 5,472,540.00
		O&M Expenses Book Depreciation	2,297,315.00	2,366,226.00	2,437,205.00	2,510,312.00	2,585,612.00	2,663,173.00	2,743,059.00
		Ratemaking Interest Expense	203,774.00	196,982.00	190,416.00	184,068.00	177,933.00	172,002.00	166,268.00
		Book Income (Current+Deferred) State & Federal Taxes @ 28.89%	586,459.98 169.428.00	306.379.00	1,263,218.99 364,944.00	1,292,320.73	1,319,999.85	1,824,884.91	1,860,357.65
		Net Operating Income	620,805.98	951,105.92	1,088,690.99	1,103,037.73	1,116,584.85	1,469,677.91	1,489,168.65
Income from Operations		Income from Operations	620,806	951,106	1,088,691	1,103,038	1,116,585	1,469,678	1,489,169
Return on Rate Base		Return on Rate Base	3.06%	4.78%	5.57%	2.76%	5.94%	7.96%	8.23%
Required Return	6.93%	Required Return	6.93%	6.93%	6.93%	6.93%	6.93%	6.93%	6.93%
Authorized Return		Authorized Return	1,405,369	1,379,222	1,353,544	1,328,233	1,303,305	1,278,862	1,254,606
After-tax Net Income		After-tax Net Income	417,032	754,124	898,275	918,970	938,652	1,297,676	1,322,901
Pre-tax Net Income		Pre-tax Net Income	159,428 586.460	305,379	364,944	3/3,351	381,348	527,209	537,457
Interest Expense		Interest Expense	203,774	196,982	190,416	184,068	177,933	172,002	166,268
Operating Income		Operating Income	790,234	1,257,485	1,453,635	1,476,389	1,497,933	1,996,887	2,026,626
Operating Expenses Revenue Requirement		Operating Expenses Revenue Achieved)	3,020,070 3,810,304	3,086,262 4,343,747	3,150,/3/ 4,604,372	3,220,070 4,696,459	3,292,455 4,790,388	3,368,348 5,365,235	3,445,914 5,472,540
Required Return		Required Return	1,405,369	1,379,222	1,353,544	1,328,233	1,303,305	1,278,862	1,254,606
Operating Expenses		Operating Expenses	3,020,070	3,086,262	3,150,737	3,220,070	3,292,455	3,368,348	3,445,914
Required Rate Increase		Reversione Requirement Required Rate Increase	4,425,439	4,455,484	4,504,281	4,548,303	4,595,760	4,647,210	4,700,520
		Period	80	6	10	11	12	13	14
Proposed Rate Increase		Proposed Rate Increase Rate Increase	%	12%	%0	%0	%0	10%	%0
		Scenario 6	%0 *	12%	0%	0%	9%	10%	%0
		6% 9eriod 1, No Rate		n		;	;		;
	27 878		è	è	è	òò	è	è	è
	22,424,002.00	No Rate Increas	%n	% 0	% <u>0</u>	% 5	80	%n	%0
		Modest Rate Increase (Input							
		4)	%0:0	%0.9	%0:0	%0.0	%0.0	%0:9	%0.0
		Required Rate							
		(9) (1) (1) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	0.0%	12.0%	0.0%	%0:0	%0:0	10.0%	%0:0
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Page 33 of 39 Income Approach

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Periods: 6-15 Rate Case Forecasts Rate Base Plant in Service Accumulated Book Depreciation Working Capital Accumulated Deferred Income Tax Rate Base Revenues OaM Expenses Book Depreciation Ratemaking Interest Expense Book Income Current+Deferred) State & Federal Taxes @ 28.89% Net Operating Income	Income from Operations Return on Rate Base Required Return Authorized Return Atter-tax Net Income Taxes Pre-tax Net Income Interest Expense Operating Expenses Revenue Achieved)	Required Return Operating Expenses Revenue Requirement Required Rate Increase Period Proposed Rate Increase Scenario 6 6% Beriod 1, No Rate Increases afterward (input 2) No Rate Increas Amodest Rate Increase (input 4) Modest Rate Increase (input 6) Required Rate Inc Required Rate Increase (input 6) Required Rate Inc Required Rate Increase (input 7
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Rate Case Forecasts Rate Base Plant in Service Accumulated Book Depreciation Working Capital Accumulated Deferred income Tax Rate Base	Income from Operations Return on Rate Base Required Return Authorized Return Atter-tax Net Income Taxes Pre-tax Net Income Interest Expense Operating Income Operating Expenses Revenue Requirement	Required Return Operating Expenses Revenue Requirement Required Rate Increase Proposed Rate Increase

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

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
DCF Forecast Parameters
Private Rate Regulated Water Utility
Period 1 through 19 & 20 to perpetuity

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J. Weinert's E-Mail: weinertj@auswest.net

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1964.335 1964.335 15.0	Forecast Parameters for Periods 1,564,315 1,564,315 1,504,	Forecast Parameters for Personal 2,664,315 1-3	Forecast Parameters to Percent 2,664,215 1.56	Figure F	1,045,135 1,04	1,64,715 1,00 to the first above 1,00	1942) 1942	1,04,150 1.3 1.5	144.15 1.5 1	1,00,10 1,0	Facility 1-	Facility 1985 198	March 13 13 13 13 13 13 13 1	Section 1
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	arn area organization		rarecast Parameters to 1-5	6-15 14	16-beyond		DCE Calculatore
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End Balance - Calculated		2,538,592					
SSLI - Fiterconnection Begin Balance		331.1	331.1 Input Account				
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Sos - Not Used Begin Balance		163	Input Account				
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Addition Rate		1.00%	1.25%	1.00%	ď	Input Positive or Zero	
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364 - Not Used		364	364 Input Account				
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371 - Not Used		1 12	371 logut Account				
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380 · Not Used		380	380 Input Account				
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Retirements			201.0	0.50		DIST ID SAILED I	
Retirement Rate		-0.25%	0.25%	.0.25%	ndul	Input Negative or Zero	
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Begin Balance							
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Retirement Rate		9500	-0.05%	0.05%	ndul	Input Negative or Zero	
392 - Not Used		392	392 Input Account				
Begin Balance							
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Retirement Rate		0.00%	0.00%	0.00%	ndul	Input Negative or Zero	
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Begn Balance			man man				
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Retrements		60.1	1.00%	1.00%	Z.	input Positive or Zero	
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End Balance - Calculated		- 360	2 200 Januar Assessmen				
Begin Balance		267	allege property				
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Retirement Rate		9,000	0.00%	9,000	ndu	Input Negative or Zero	
End Balance - Calculated			1				
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Retirement Rate		9600'0	90000	0.00%	ndul	Input Negative or Zero	
397 - Not Used		397	397 Input Account				
Bogin Balance							
Addition Rate		1.00%	1.00%	1.00%	noul	Input Positive or Zero	
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Income Approach

DCF Calculated		or Zero		or Zero		or Zera		or Zero		or Zero		Or Zero				or Zero		ar Zera		or Zero			ar Zero		ar Zero			ar Zera		or Zero			nr Jorn
16-beyond		Input Positive or Zero		Input Positive or Zero		Input Positive or Zero		Input Positive or Zero		Input Positive or Zero		Input Positive or Zero				Input Positive or Zero		Input Positive or Zero		Input Positive or Zero			Input Positive or Zero		Input Positive or Zero			Input Positive or Zero		Input Positive or Zero		Input Positive or Zero	The second secon
rs for Periods 6-15		3.23%		3.23%		3.23%		3.23%		3.23%		3.23%				0.00%		9,000		0.00%			0.00%		0.00%			0.00%		4.00%		4.00%	
Forecast Parameters for Periods 1-5 6-15	391 Input Account	3.23%	392 Input Account	3.23%	393 Input Account	3.23%	396 Input Account	3.23%	397 Input Account	3.23%	398 Input Account	3.23%			353 Input Account	9,000	354.3 Input Account	0.00%	354.4 Input Account	0.00%	355 Input Account		0.00%	360 Input Account	0.00%	361 Input Account		0.00%	363 Input Account	4.00%	364 Input Account	4.00%	
ase	39	3.23%	390	3.23%	36	3.23%	16E	3.23%	39	3.23%	366	. 3.23%		e .	385	%0000	354.2	%00'0	354.6	9000	355		%0000	39E	*600'0	361		9,000	362	4,00%	79E	4.00%	
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forecast Base	Book Depreciation Life 31 yrs		Book Depreciation Life 31 yrs		Book Depredation Life 31 yrs		Book Depreciation Life 31 yrs		Book Depreciation Life 31 yrs		Book Depredation Life 31 yrs				Book Depreciation Life Not Used yrs		Book Depreciation Life Not Used yrs		Book Depredation Life Not Used yrs		Book Depredation Life Not Used yrs			Book Depreciation Life Not Used yrs		Book Depreciation Life Not Used yrs			Book Depreciation Life 25 yrs		Book Depredation Life 25 yrs		
	end Balance - Calculated 391 - Not Used Begin Balance	Depreciation Depreciation Rate Retirements Calculated in Plant	End Balance - Cakulated 392 - Not Used Begin Balance	Depreciation Depreciation Rate Retirements Calculated in Plant	End Balance - Cakulated 393 - Not Used Reene Ralance	Depreciation Depreciation Rate	netitemens Calculated End Balance - Calculated 396 - Not Used Begin Balance	Depreciation Depreciation Rate Retirements Calculated in Plant	End Balance - Calculated 397 - Not Used Begin Balance	Depreciation Depreciation Rate Retirements Calculated in Plant	End Balance - Calculated 398 - Not Used Begin Balance	Deprecation Depreciation Rate Retirements Calculated in Plant End Balance - Calculated	Depreciation - MACRS	Use Deprecation Life MACRS (1)	353 - Distribution Begin Balance	Depreciation Depreciation Rate Retirements Calculated in Plant	End Balance - Cakulated 354.3 - Distribution Begin Balance	Depreciation Depreciation Rate Retirement Calculated in Plant	End Balance - Cakulated 354.4 - Distribution Begin Balance	Depreciation Depreciation Rate Retirements Calculated in Plant	End Balance - Calculated 355 - Distribution	Begin Balance Depreciation	Depreciation Rate Retirements Calculated in Plant End Balance Calculated	360 - Distribution Begin Balance	Deprecation Depreciation Rate Retirements Calculated in Plant	End Balance - Cakulated 361 - Distribution	Begin Balance Depreciation	Depreciation Rate Retirements Calculated in Plant	End Balance - Calculated 363 - Not Used Begin Balance	Depreciation Depreciation Rate Retirement Calculated in Plant	End Balance - Calculated 364 - Not Used	Begin Balance Depreciation Depreciation Rate	

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