VOLUME 15

PENNSYLVANIA-AMERICAN WATER COMPANY

2020 GENERAL BASE RATE CASE
R-2020-3019369 (WATER)
R-2020-3019371 (WASTEWATER)

EXHIBITS NO. 11-U, 11-V, 11-W, 11-X
DEPRECIATION STUDY

WASTEWATER CSS SCRANTON OPERATIONS
AS OF DECEMBER 31, 2019, 2020, 2021, 2022

EXHIBIT NO. 11-U - DEPRECIATION STUDY

WASTEWATER CSS SCRANTON OPERATIONS

AS OF DECEMBER 31, 2019

Exhibit No. 11-U
Witness: J. J. Spanos

PENNSYLVANIA-AMERICAN WATER COMPANY

MECHANICSBURG, PENNSYLVANIA

WASTEWATER CSS SCRANTON OPERATIONS

2019 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WASTEWATER PLANT AS OF DECEMBER 31, 2019

Prepared by:

Gannett Fleming

Excellence Delivered ***As Promised***

Exhibit No. 11-U
Witness: J. J. Spanos

PENNSYLVANIA-AMERICAN WATER COMPANY

Mechanicsburg, Pennsylvania

WASTEWATER CSS SCRANTON OPERATIONS

2019 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WASTEWATER PLANT AS OF DECEMBER 31, 2019

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

Camp Hill, Pennsylvania

Gannett Fleming

Excellence Delivered As Promised

April 22, 2020

Pennsylvania-American Water Company
852 Wesley Drive
Mechanicsburg, PA 17055

Attention: Ashley E. Everette
Director, Rates & Regulatory

Ladies and Gentlemen:

Pursuant to your request, we have determined the annual depreciation accruals applicable to wastewater plant as of December 31, 2019. Summaries of the original cost, annual accruals and the book depreciation reserve are presented in Tables 1 through 3, beginning on page I-3 of the attached report.

A description of the methods and procedures upon which the study was based, as well as support for the service life estimates, is set forth in a companion report "2020 Depreciation Study - Calculated Annual Depreciation Accruals Related to Wastewater Plant as of December 31, 2020".

Respectfully submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC

John J. Spanos

JOHN J. SPANOS
President

JJS:mle

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PENNSYLVANIA-AMERICAN WATER COMPANY

WASTEWATER CSS SCRANTON OPERATIONS

DEPRECIATION STUDY

PART I. RESULTS OF STUDY

DESCRIPTION OF SUMMARY TABULATIONS

Table 1 presents the development of net original cost used in the study. The net original cost is the original cost of wastewater plant less advances and contributions. The results of the depreciation study are summarized in Table 2, which sets forth the book reserve and the calculated annual depreciation related to net original cost as of December 31, 2019, and the annual amortization of net negative salvage. Table 3 presents the calculation of the amortization of experienced net salvage by account, based on the five-year period, 2015-2019.

DESCRIPTION OF DETAILED TABULATIONS

The supporting data for the depreciation calculations are presented in account sequence in the section beginning on page II-6. The original cost, calculated accrued depreciation, allocated book reserve, future accruals, remaining life and annual accrual are shown for each vintage of each account or subaccount. The amounts of regular retirements, gross salvage, and cost of removal are set forth by account for the years 2015 through 2019, on pages III-2 and1 III-3.

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 1. DEVELOPMENT OF NET ORIGINAL COST AS OF DECEMBER 31, 2019

DEPRCIABLE GROUP (1)	ORIGINAL COST AS OF DECEMBER 31, 2019 (2)	-	CUSTOMER ADVANCES (3)	-	CONTRIBUTIONS IN AID OF CONSTRUCTION (4)	-	EXCLUDED PROPERTY (5)	=	NET ORIGINAL COST AS OF DECMEBER 31, 2019 (6)
DEPRECIABLE PLANT									
354.20 STRUCTURES AND IMPROVEMENTS - COLLECTION	3,756,607.22								3,756,607.22
354.30 STRUCTURES AND IMPROVEMENTS - SPP	6,348,452.67								6,348,452.67
354.40 STRUCTURES AND IMPROVEMENTS - TDP	53,222,040.81				2,500,000.00				50,722,040.81
360.10 COLLECTION SEWERS - FORCE MAINS	355,954.70								355,954.70
361.10 COLLECTION SEWERS - GRAVITY MAINS	100,877,366.23				8,113,082.47				92,764,283.76
361.20 MANHOLES	16,922,779.39								16,922,779.39
363.00 SERVICES	10,633,172.28				841,466.15				9,791,706.13
364.00 FLOW MEASURING DEVICES	1,168,413.58								1,168,413.58
371.00 PUMPING EQUIPMENT	4,212,927.32								4,212,927.32
380.00 TREATMENT EQUIPMENT	15,005,510.89								15,005,510.89
382.00 OUTFALL SEWER LINES	1,554,032.48								1,554,032.48
389.10 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES	4,286,815.38								4,286,815.38
390.00 OFFICE FURNITURE AND EQUIPMENT	1,007,993.82								1,007,993.82
391.00 TRANSPORTATION EQUIPMENT	5,033,208.24								5,033,208.24
393.00 TOOLS, SHOP AND GARAGE EQUIPMENT	1,024,131.12								1,024,131.12
394.00 LABORATORY EQUIPMENT	150,892.37								150,892.37
395.00 POWER OPERATED EQUIPMENT	718,831.76								718,831.76
396.00 COMMUNICATION EQUIPMENT	442,161.18								442,161.18
397.00 MISCELLANEOUS EQUIPMENT	330,887.22								330,887.22
TOTAL DEPRECIABLE PLANT	**227,052,178.66**		**0.00**		**11,454,548.62**		**0.00**		**215,597,630.04**
NONDEPRECIABLE PLANT									
353.20 LAND AND LAND RIGHTS - COLLECTION	599,222.68								599,222.68
353.30 LAND AND LAND RIGHTS - SPP	43,570.00								43,570.00
353.40 LAND AND LAND RIGHTS - TDP	110,019.50								110,019.50
TOTAL NONDEPRECIABLE PLANT	**752,812.18**		**0.00**		**0.00**		**0.00**		**752,812.18**
TOTAL UTILITY PLANT	**227,804,990.84**		**0.00**		**11,454,548.62**		**0.00**		**216,350,442.22**

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 2. SUMMARY OF ESTIMATED SURVIVOR CURVE, ORIGINAL COST, BOOK RESERVE, AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WASTEWATER PLANT AS OF DECEMBER 31, 2019

	DEPRECIABLE GROUP	SURVIVOR CURVE	ORIGINAL COST AS OF DECEMBER 31, 2019	BOOK RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)=(6)/(3)	(8)
	DEPRECIABLE PLANT							
354.20	STRUCTURES AND IMPROVEMENTS - COLLECTION	45-R3	3,756,607.22	49,455	3,707,152	99,469	2.65	37.3
354.30	STRUCTURES AND IMPROVEMENTS - SPP	55-S0	6,348,452.67	906,914	5,441,539	168,802	2.66	32.2
354.40	STRUCTURES AND IMPROVEMENTS - TDP	55-S0	50,722,040.81	11,850,211	38,871,829	1,250,684	2.47	31.1
360.10	COLLECTION SEWERS - FORCE MAINS	75-R3	355,954.70	158,612	197,342	4,686	1.32	42.1
361.10	COLLECTION SEWERS - GRAVITY MAINS	80-R2.5	92,764,283.76	25,599,690	67,164,593	1,339,111	1.44	50.2
361.20	MANHOLES	50-S2.5	16,922,779.39	7,996,107	8,926,672	343,137	2.03	26.0
363.00	SERVICES	47-R3	9,791,706.13	5,201,384	4,590,322	223,232	2.28	20.6
364.00	FLOW MEASURING DEVICES	15-L2.5	1,168,413.58	106,410	1,062,003	106,128	9.08	10.0
371.00	PUMPING EQUIPMENT	30-S0.5	4,212,927.32	539,899	3,673,028	197,122	4.68	18.6
380.00	TREATMENT EQUIPMENT	35-S1.5	15,005,510.89	2,563,845	12,441,666	632,210	4.21	19.7
382.00	OUTFALL SEWER LINES	50-R3	1,554,032.48	16,191	1,537,842	36,957	2.38	41.6
389.10	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES	20-S2.5	4,286,815.38	1,173,228	3,113,588	258,223	6.02	12.1
390.00	OFFICE FURNITURE AND EQUIPMENT	20-SQ	1,007,993.82	29,093	978,901	62,137	6.16	15.8
391.00	TRANSPORTATION EQUIPMENT	14-L4	5,033,208.24	1,924,636	3,108,572	349,042	6.93	8.9
393.00	TOOLS, SHOP AND GARAGE EQUIPMENT	20-SQ	1,024,131.12	(59,280)	1,083,412	69,028	6.74	15.7
394.00	LABORATORY EQUIPMENT	15-SQ	150,892.37	(17,102)	167,995	18,989	12.58	8.8
395.00	POWER OPERATED EQUIPMENT	22-R2	718,831.76	482,824	236,007	17,823	2.48	13.2
396.00	COMMUNICATION EQUIPMENT	15-SQ	442,161.18	10,040	432,121	32,779	7.41	13.2
397.00	MISCELLANEOUS EQUIPMENT	15-SQ	330,887.22	17,528	313,359	22,714	6.86	13.8
	TOTAL DEPRECIABLE PLANT		**215,597,630.04**	**58,549,687**	**157,047,943**	**5,232,273**	**2.43**	**30.0**
	NONDEPRECIABLE PLANT							
353.20	LAND AND LAND RIGHTS - COLLECTION		599,222.68					
353.30	LAND AND LAND RIGHTS - SPP		43,570.00					
353.40	LAND AND LAND RIGHTS - TDP		110,019.50					
	TOTAL NONDEPRECIABLE PLANT		**752,812.18**					
	AMORTIZATION OF NET SALVAGE					**264,046**		
	TOTAL UTILITY PLANT		**216,350,442.22**	**58,549,687**	**157,047,943**	**5,496,319**		

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 3. AMORTIZATION OF EXPERIENCED NET SALVAGE

ACCOUNT	2015 GROSS SALVAGE	- 2015 COST OF REMOVAL	+ 2016 GROSS SALVAGE	- 2016 COST OF REMOVAL	+ 2017 GROSS SALVAGE	- 2017 COST OF REMOVAL	+ 2018 GROSS SALVAGE	- 2018 COST OF REMOVAL	+ 2019 GROSS SALVAGE	- 2019 COST OF REMOVAL	= NET SALVAGE	SALVAGE ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)*	(13)=(12)/5
354.20								12,897			(12,897)	(2,579)
354.30								2,859		85,935	(88,794)	(17,759)
354.40						1,715		2,403		64,798	(68,917)	(13,783)
360.10								2,819		0	(2,819)	(564)
361.10						70,300		28,292		530,647	(629,238)	(125,848)
361.20										29,936	(29,936)	(5,987)
363.00					250	18,802		27,682		52,930	(99,164)	(19,833)
371.00								523		43,008	(43,531)	(8,706)
380.00						4,298		58,050		92,173	(154,520)	(30,904)
382.00								1,046		3,306	(4,352)	(870)
390.00								13,129			(13,129)	(2,626)
391.00								42,450		45,196	(87,646)	(17,529)
393.00								4,039		28,110	(32,149)	(6,430)
394.00										4,805	(4,805)	(961)
395.00										5,218	(5,218)	(1,044)
396.00										39,091	(39,091)	(7,818)
397.00										4,027	(4,027)	(805)
TOTAL	**0**	**0**	**0**	**0**	**250**	**95,114**	**0**	**196,189**	**0**	**1,029,179**	**(1,320,232)**	**(264,046)**

* Column (12) equals the summation of Columns (2) through (11).

PART II. DETAILED DEPRECIATION CALCULATIONS

CUMULATIVE DEPRECIATED ORIGINAL COST

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

CUMULATIVE DEPRECIATED ORIGINAL COST BY YEAR INSTALLED
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	DEPRECIATED ORIGINAL COST AMOUNT (2) - (3) (4)	CUMULATIVE AMOUNT (5)	PCT OF COL 4 TOTAL (6)
1918	3,534,159	3,182,279	351,880	351,880	0.2
1938	1,296,279	1,125,003	171,276	523,156	0.3
1945	278,177	227,104	51,073	574,229	0.4
1950	1,125,468	869,601	255,867	830,096	0.5
1955	602,612	455,001	147,611	977,707	0.6
1960	1,142,106	813,615	328,491	1,306,198	0.8
1965	851,845	583,931	267,914	1,574,112	1.0
1968				1,574,112	1.0
1969				1,574,112	1.0
1970	1,006,555	650,563	355,992	1,930,104	1.2
1971				1,930,104	1.2
1972	30,887,974	18,139,582	12,748,392	14,678,496	9.3
1973	943,170	629,056	314,114	14,992,610	9.5
1974	748,753	480,843	267,910	15,260,520	9.7
1975	2,923,115	1,770,664	1,152,451	16,412,971	10.5
1976				16,412,971	10.5
1977	561,119	350,614	210,505	16,623,476	10.6
1978	1,486,622	916,655	569,967	17,193,443	10.9
1979	1,554,018	940,638	613,380	17,806,823	11.3
1980	1,723,106	994,736	728,370	18,535,193	11.8
1981	1,211,707	709,297	502,410	19,037,603	12.1
1982	933,875	541,017	392,858	19,430,461	12.4
1983	669,743	379,053	290,690	19,721,151	12.6
1984	769,194	426,040	343,154	20,064,305	12.8
1985	3,609,716	1,806,983	1,802,733	21,867,038	13.9
1986	1,407,727	750,025	657,702	22,524,740	14.3
1987	2,811,471	1,255,663	1,555,808	24,080,548	15.3
1988	1,150,018	499,677	650,341	24,730,889	15.7
1989	4,136,774	1,992,375	2,144,399	26,875,288	17.1
1990	4,740,184	2,213,602	2,526,582	29,401,870	18.7
1991	1,989,164	918,930	1,070,234	30,472,104	19.4
1992	3,106,631	1,320,352	1,786,279	32,258,383	20.5
1993	469,067	186,360	282,707	32,541,090	20.7
1994	484,074	193,918	290,156	32,831,246	20.9
1995	249,211	91,260	157,951	32,989,197	21.0
1996	370,453	143,495	226,958	33,216,155	21.2
1997	472,756	181,388	291,368	33,507,523	21.3
1998	2,804,566	1,033,226	1,771,340	35,278,863	22.5
1999	1,101,043	365,292	735,751	36,014,614	22.9
2000	315,888	86,474	229,414	36,244,028	23.1
2001	7,500	7,298	202	36,244,230	23.1
2002	114,592	27,786	86,806	36,331,036	23.1
2003	2,475,560	714,261	1,761,299	38,092,335	24.3
2004	6,566,596	1,632,066	4,934,530	43,026,865	27.4
2005	2,476,050	630,832	1,845,218	44,872,083	28.6

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

CUMULATIVE DEPRECIATED ORIGINAL COST BY YEAR INSTALLED
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

			DEPRECIATED ORIGINAL COST		
YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	AMOUNT (2) - (3) (4)	CUMULATIVE AMOUNT (5)	PCT OF COL 4 TOTAL (6)
2006	5,286,523	1,339,393	3,947,130	48,819,213	31.1
2007	1,162,893	259,189	903,704	49,722,917	31.7
2008	562,990	225,517	337,473	50,060,390	31.9
2009	1,057,941	684,332	373,609	50,433,999	32.1
2010	8,918,091	1,834,798	7,083,293	57,517,292	36.6
2011	1,117,734	193,468	924,266	58,441,558	37.2
2012	948,366	297,130	651,236	59,092,794	37.6
2013	5,296,629	1,591,603	3,705,026	62,797,820	40.0
2014	1,684,130	175,145	1,508,985	64,306,805	40.9
2015	6,254,495	781,514	5,472,981	69,779,786	44.4
2016	39,375,991	2,738,939	36,637,052	106,416,838	67.8
2017	16,076,101	699,734	15,376,367	121,793,205	77.6
2018	13,121,305	467,903	12,653,402	134,446,607	85.6
2019	31,080,354	294,458	30,785,896	165,232,503	105.2
9999	11,454,549-	3,269,991-	8,184,558-	157,047,945	100.0
SUBTOTAL	215,597,632	58,549,687	157,047,945		
NONDEPRECIABLE	752,811		752,811		
TOTAL	216,350,443	58,549,687	157,800,756		

NET UTILITY PLANT IN SERVICE

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 354.20 STRUCTURES AND IMPROVEMENTS - COLLECTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-R3						
NET SALVAGE PERCENT.. 0						
2017	1,150,065.48	73,374	24,799	1,125,266	36.71	30,653
2018	1,521,877.84	58,744	19,854	1,502,024	37.41	40,150
2019	1,084,663.90	14,209	4,802	1,079,861	37.67	28,666
	3,756,607.22	146,327	49,455	3,707,152		99,469

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 37.3 2.65

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 354.30 STRUCTURES AND IMPROVEMENTS - SPP

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-S0						
NET SALVAGE PERCENT.. 0						
1972	448,221.67	306,584	219,827	228,395	21.94	10,410
2006	2,710,094.59	804,898	577,130	2,132,965	31.95	66,759
2015	13,400.00	1,580	1,133	12,267	33.67	364
2017	742,652.91	51,243	36,742	705,911	33.73	20,928
2018	2,303,781.95	98,602	70,700	2,233,082	33.59	66,481
2019	130,301.55	1,928	1,382	128,919	33.40	3,860
	6,348,452.67	1,264,835	906,914	5,441,539		168,802

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 32.2 2.66

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 354.40 STRUCTURES AND IMPROVEMENTS - TDP

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-S0						
NET SALVAGE PERCENT.. 0						
1972	12,792,716.50	8,750,218	7,326,138	5,466,578	21.94	249,160
1985	1,267,451.78	721,434	604,022	663,430	26.11	25,409
2003	2,468,809.66	851,246	712,707	1,756,103	31.35	56,016
2004	235,168.01	77,652	65,014	170,154	31.45	5,410
2009	3,290.00	801	671	2,619	32.60	80
2010	7,403,858.28	1,659,945	1,389,792	6,014,066	32.87	182,965
2012	15,255.00	2,815	2,357	12,898	33.15	389
2013	8,325.00	1,359	1,138	7,187	33.34	216
2014	188,545.95	26,547	22,227	166,319	33.56	4,956
2015	5,551,397.70	654,510	547,990	5,003,408	33.67	148,601
2016	19,818,007.39	1,866,856	1,563,028	18,254,979	33.67	542,173
2017	3,422,879.12	236,179	197,742	3,225,137	33.73	95,616
2018	37,879.57	1,621	1,357	36,523	33.59	1,087
2019	8,456.85	125	105	8,352	33.40	250
9999	2,500,000.00-	697,611-	584,077-	1,915,923-		61,644-
	50,722,040.81	14,153,697	11,850,211	38,871,829		1,250,684

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 31.1 2.47

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 360.10 COLLECTION SEWERS - FORCE MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 75-R3						
NET SALVAGE PERCENT.. 0						
1972	234,615.90	145,978	153,741	80,875	28.84	2,804
1989	4,590.34	1,960	2,064	2,526	40.93	62
2018	112,430.66	2,631	2,772	109,659	62.60	1,752
2019	4,317.80	34	35	4,282	62.79	68
	355,954.70	150,603	158,612	197,342		4,686

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 42.1 1.32

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.10 COLLECTION SEWERS - GRAVITY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 80-R2.5						
NET SALVAGE PERCENT.. 0						
1918	3,322,428.97	3,001,482	2,970,548	351,881	10.85	32,431
1938	890,094.71	739,936	732,310	157,785	16.54	9,540
1945	214,490.54	169,383	167,637	46,854	19.84	2,362
1950	968,751.89	733,926	726,362	242,390	22.24	10,899
1955	470,969.16	340,228	336,722	134,247	24.79	5,415
1960	941,116.00	643,912	637,276	303,840	27.46	11,065
1965	657,579.26	422,889	418,531	239,048	30.25	7,902
1970	768,240.18	460,176	455,433	312,807	33.14	9,439
1972	15,426,513.10	8,939,664	8,847,530	6,578,983	34.47	190,861
1973	525,768.41	300,740	297,640	228,128	34.80	6,555
1974	463,886.33	259,591	256,916	206,970	35.80	5,781
1975	2,161,305.40	1,192,608	1,180,317	980,988	36.15	27,137
1977	318,370.33	169,118	167,375	150,995	37.50	4,027
1978	839,485.42	438,967	434,443	405,042	37.87	10,696
1979	876,680.05	447,370	442,759	433,921	38.87	11,163
1980	1,112,373.45	557,967	552,216	560,157	39.24	14,275
1981	673,076.97	329,135	325,743	347,334	40.24	8,632
1982	502,620.38	241,258	238,772	263,848	40.62	6,496
1983	369,740.90	174,074	172,280	197,461	41.02	4,814
1984	418,254.64	191,561	189,587	228,668	42.02	5,442
1985	1,592,194.90	714,099	706,739	885,456	42.42	20,874
1986	749,889.52	326,577	323,211	426,679	43.42	9,827
1987	695,420.29	296,110	293,058	402,362	43.83	9,180
1988	278,437.01	115,774	114,581	163,856	44.26	3,702
1989	2,461,326.67	990,930	980,717	1,480,610	45.26	32,713
1990	2,878,035.49	1,129,341	1,117,702	1,760,333	45.68	38,536
1991	1,115,283.75	422,693	418,337	696,947	46.69	14,927
1992	2,127,972.51	784,158	776,076	1,351,897	47.13	28,684
1993	362,246.78	129,612	128,276	233,971	47.57	4,918
1994	161,692.28	55,654	55,080	106,612	48.58	2,195
1995	44,510.94	14,831	14,678	29,833	49.03	608
1996	175,003.17	55,931	55,355	119,648	50.03	2,392
1997	222,510.56	68,578	67,871	154,640	50.50	3,062
1998	1,433,061.84	425,189	420,807	1,012,255	50.96	19,864
1999	727,422.31	205,788	203,667	523,755	51.96	10,080
2000	303,806.51	82,332	81,483	222,324	52.45	4,239
2002	114,591.98	28,075	27,786	86,806	53.93	1,610
2003	6,750.00	1,570	1,554	5,196	54.43	95
2004	1,752,380.47	385,699	381,724	1,370,656	54.92	24,957
2005	1,351,223.10	280,244	277,356	1,073,867	55.43	19,373
2006	1,135,635.89	219,178	216,919	918,717	56.43	16,281

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.10 COLLECTION SEWERS - GRAVITY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 80-R2.5						
NET SALVAGE PERCENT.. 0						
2007	631,416.88	113,655	112,484	518,933	56.94	9,114
2008	185,816.56	30,994	30,675	155,142	57.46	2,700
2010	199,971.97	27,916	27,628	172,344	58.53	2,945
2011	633,959.14	79,752	78,930	555,029	59.07	9,396
2012	206,007.47	23,032	22,795	183,212	59.61	3,074
2013	341,037.44	33,251	32,908	308,129	60.17	5,121
2014	1,125,472.88	94,090	93,120	1,032,353	60.29	17,123
2015	16,178.80	1,121	1,109	15,070	60.44	249
2016	12,893,465.39	698,826	691,624	12,201,841	61.02	199,965
2017	6,795,685.16	268,430	265,663	6,530,022	60.79	107,419
2018	2,895,493.97	70,361	69,636	2,825,858	60.23	46,918
2019	23,341,718.51	200,739	198,670	23,143,049	57.98	399,156
9999	8,113,082.47-	2,262,241-	2,238,926-	5,874,157-		117,118-
	92,764,283.76	25,866,274	25,599,690	67,164,593		1,339,111

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 50.2 1.44

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.20 MANHOLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-S2.5						
NET SALVAGE PERCENT.. 0						
1918	192,002.76	192,003	192,003			
1938	263,057.70	252,983	249,566	13,492	3.25	4,151
1945	40,698.28	38,509	37,989	2,709	4.24	639
1950	100,436.85	92,844	91,590	8,847	5.68	1,558
1955	82,962.76	75,446	74,427	8,536	6.43	1,328
1960	124,835.20	110,679	109,184	15,651	7.61	2,057
1965	115,835.77	99,746	98,399	17,437	8.79	1,984
1970	131,490.13	108,690	107,222	24,268	10.38	2,338
1972	1,406,333.16	1,142,224	1,126,798	279,535	10.98	25,459
1973	300,514.18	241,734	238,469	62,045	11.31	5,486
1974	145,131.67	115,554	113,993	31,139	11.65	2,673
1975	428,835.35	335,864	331,328	97,507	12.32	7,915
1977	135,672.33	103,789	102,387	33,285	13.06	2,549
1978	365,240.42	275,866	272,140	93,100	13.45	6,922
1979	376,391.09	280,487	276,699	99,692	13.85	7,198
1980	344,640.29	253,207	249,787	94,853	14.26	6,652
1981	303,876.29	219,946	216,976	86,900	14.69	5,916
1982	241,192.22	171,849	169,528	71,664	15.13	4,737
1983	167,201.76	117,175	115,593	51,609	15.58	3,313
1984	193,153.85	132,349	130,562	62,592	16.31	3,838
1985	425,383.15	286,198	282,333	143,050	16.78	8,525
1986	362,362.31	239,159	235,929	126,433	17.26	7,325
1987	251,003.20	162,349	160,156	90,847	17.75	5,118
1988	96,404.18	60,735	59,915	36,489	18.50	1,972
1989	924,058.02	569,312	561,623	362,435	19.00	19,076
1990	1,029,539.70	616,488	608,162	421,378	19.76	21,325
1991	480,597.06	280,765	276,973	203,624	20.28	10,041
1992	446,706.85	253,059	249,642	197,065	21.04	9,366
1993	106,820.01	58,879	58,084	48,736	21.58	2,258
1994	78,794.97	41,998	41,431	37,364	22.34	1,673
1995	19,032.40	9,792	9,660	9,372	23.12	405
1996	77,786.29	38,566	38,045	39,741	23.90	1,663
1997	99,518.88	47,471	46,830	52,689	24.67	2,136
1998	667,600.22	305,761	301,632	365,968	25.45	14,380
1999	208,276.23	91,371	90,137	118,139	26.23	4,504
2004	334,058.14	112,878	111,354	222,704	30.37	7,333
2005	622,671.32	197,760	195,089	427,582	31.16	13,722
2006	485,376.83	143,477	141,539	343,838	32.16	10,691
2007	261,475.47	71,592	70,625	190,850	33.16	5,755
2008	80,960.76	20,483	20,206	60,755	33.95	1,790
2010	100,531.28	21,011	20,727	79,804	35.95	2,220

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.20 MANHOLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-S2.5						
NET SALVAGE PERCENT.. 0						
2011	201,873.88	37,750	37,240	164,634	36.95	4,456
2012	100,205.47	16,614	16,390	83,815	37.75	2,220
2013	16,187.94	2,325	2,294	13,894	38.75	359
2014	101,870.38	12,387	12,220	89,650	39.75	2,255
2018	49,417.77	1,641	1,619	47,799	43.75	1,093
2019	3,834,764.62	42,182	41,612	3,793,153	44.75	84,763
	16,922,779.39	8,102,947	7,996,107	8,926,672		343,137

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 26.0 2.03

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 363.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

SURVIVOR CURVE.. IOWA 47-R3
NET SALVAGE PERCENT.. 0

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
1918	19,727.62	19,728	19,728			
1938	143,126.96	143,127	143,127			
1945	22,988.29	22,607	21,478	1,510	1.26	1,198
1950	56,278.80	54,365	51,649	4,630	2.45	1,890
1955	48,679.71	46,158	43,852	4,828	3.52	1,372
1960	76,154.48	70,687	67,155	8,999	4.60	1,956
1965	78,429.72	70,524	67,001	11,429	6.11	1,871
1970	106,824.27	92,531	87,908	18,916	7.65	2,473
1972	579,573.92	490,030	465,548	114,026	8.68	13,137
1973	116,887.81	97,835	92,947	23,941	9.06	2,642
1974	139,735.00	115,715	109,934	29,801	9.45	3,154
1975	332,974.60	272,640	259,019	73,956	9.85	7,508
1977	107,076.26	85,104	80,852	26,224	10.97	2,391
1978	281,896.00	221,119	210,072	71,824	11.41	6,295
1979	300,946.68	232,812	221,180	79,767	11.85	6,731
1980	266,091.96	202,869	192,733	73,359	12.31	5,959
1981	234,753.75	175,338	166,578	68,176	13.05	5,224
1982	190,062.15	139,696	132,717	57,345	13.52	4,241
1983	132,799.92	95,975	91,180	41,620	14.01	2,971
1984	157,785.94	111,460	105,891	51,895	14.75	3,518
1985	324,685.98	225,137	213,889	110,797	15.25	7,265
1986	295,474.98	200,923	190,885	104,590	15.76	6,636
1987	205,043.94	135,944	129,152	75,892	16.52	4,594
1988	70,509.94	45,754	43,468	27,042	17.04	1,587
1989	746,798.97	471,529	447,971	298,828	17.81	16,779
1990	832,608.91	513,387	487,738	344,871	18.34	18,804
1991	393,283.11	235,380	223,620	169,663	19.12	8,874
1992	531,951.61	310,128	294,634	237,318	19.67	12,065
1994	66,342.64	36,369	34,552	31,791	21.01	1,513
1995	17,159.15	9,081	8,627	8,532	21.80	391
1996	69,426.23	35,567	33,790	35,636	22.37	1,593
1997	87,126.12	42,936	40,791	46,335	23.16	2,001
1998	573,379.95	271,209	257,659	315,721	23.95	13,183
1999	165,344.70	75,248	71,488	93,857	24.55	3,823
2000	12,081.20	5,253	4,991	7,090	25.35	280
2004	187,388.21	66,223	62,914	124,474	28.36	4,389
2005	502,155.36	166,716	158,387	343,768	29.17	11,785
2006	406,003.36	126,064	119,766	286,237	29.98	9,548
2007	228,819.60	66,358	63,042	165,778	30.60	5,418
2008	64,952.16	17,407	16,537	48,415	31.42	1,541
2009	79,573.30	19,551	18,574	60,999	32.24	1,892

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 363.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 47-R3						
NET SALVAGE PERCENT.. 0						
2011	170,969.39	34,296	32,583	138,386	33.87	4,086
2012	79,926.00	14,211	13,501	66,425	34.69	1,915
2013	16,092.23	2,501	2,376	13,716	35.34	388
2014	63,321.52	8,358	7,940	55,382	36.17	1,531
2016	134,440.98	11,427	10,856	123,585	37.65	3,282
2017	253,382.13	15,456	14,684	238,698	38.48	6,203
2018	237,501.57	8,764	8,326	229,176	39.15	5,854
2019	424,635.20	5,350	5,083	419,552	39.34	10,665
9999	841,466.15-	469,818-	446,989-	394,477-		19,184-
	9,791,706.13	5,467,029	5,201,384	4,590,322		223,232

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 20.6   2.28

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 364.00 FLOW MEASURING DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 15-L2.5						
NET SALVAGE PERCENT.. 0						
2010	104,719.11	65,858	30,341	74,378	5.61	13,258
2011	9,728.50	5,681	2,617	7,112	6.06	1,174
2016	382,145.13	103,523	47,693	334,452	9.42	35,504
2017	163,692.75	32,117	14,796	148,897	10.24	14,541
2018	43,907.33	5,229	2,409	41,498	11.09	3,742
2019	464,220.76	18,569	8,554	455,666	12.02	37,909
	1,168,413.58	230,977	106,410	1,062,003		106,128

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.0 9.08

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 371.00 PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 30-S0.5						
NET SALVAGE PERCENT.. 0						
1997	54,482.18	35,424	22,902	31,580	12.10	2,610
1998	126,283.62	80,089	51,778	74,506	12.40	6,009
2006	346,984.97	162,528	105,074	241,911	15.32	15,791
2008	14,157.48	5,894	3,810	10,347	16.12	642
2009	44,215.81	17,178	11,106	33,110	16.53	2,003
2010	637,416.83	229,470	148,352	489,065	16.89	28,956
2012	53,890.00	16,048	10,375	43,515	17.69	2,460
2013	21,350.98	5,635	3,643	17,708	18.13	977
2014	21,950.00	5,022	3,247	18,703	18.54	1,009
2015	24,030.00	4,619	2,986	21,044	18.92	1,112
2016	972,808.85	149,132	96,414	876,395	19.33	45,339
2017	71,939.90	8,093	5,232	66,708	19.72	3,383
2018	1,590,660.32	110,392	71,369	1,519,291	20.10	75,587
2019	232,756.38	5,586	3,611	229,146	20.38	11,244
	4,212,927.32	835,110	539,899	3,673,028		197,122

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 18.6 4.68

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 380.00 TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 35-S1.5						
NET SALVAGE PERCENT.. 0						
1987	1,660,003.55	1,273,223	673,297	986,707	9.87	99,970
1988	704,666.45	532,728	281,713	422,953	10.17	41,588
1994	177,243.99	118,860	62,855	114,389	12.52	9,137
1995	168,508.64	110,238	58,295	110,214	12.95	8,511
1996	48,237.17	30,833	16,305	31,932	13.26	2,408
1997	9,118.23	5,662	2,994	6,124	13.73	446
1998	4,240.79	2,553	1,350	2,891	14.21	203
2004	4,057,601.55	1,911,942	1,011,060	3,046,542	17.39	175,189
2006	4,464.26	1,880	994	3,470	18.55	187
2009	44,998.00	15,263	8,071	36,927	20.46	1,805
2010	127,227.24	39,402	20,836	106,391	21.17	5,026
2012	39,280.00	9,781	5,172	34,108	22.62	1,508
2014	63,473.13	11,768	6,223	57,250	24.17	2,369
2016	4,293,887.12	512,690	271,118	4,022,769	25.82	155,801
2017	2,560,321.77	218,908	115,762	2,444,560	26.74	91,420
2018	1,013,030.31	52,070	27,535	985,495	27.66	35,629
2019	29,208.69	502	265	28,943	28.57	1,013
	15,005,510.89	4,848,303	2,563,845	12,441,666		632,210

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 19.7   4.21

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 382.00 OUTFALL SEWER LINES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R3						
NET SALVAGE PERCENT.. 0						
2017	12,867.84	740	230	12,638	40.98	308
2018	1,445,509.40	50,304	15,611	1,429,898	41.60	34,373
2019	95,655.24	1,129	350	95,305	41.87	2,276
	1,554,032.48	52,173	16,191	1,537,842		36,957

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 41.6 2.38

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 389.10 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 20-S2.5						
NET SALVAGE PERCENT.. 0						
2013	4,142,753.27	1,464,878	1,170,052	2,972,701	11.88	250,227
2019	144,062.11	3,976	3,176	140,886	17.62	7,996
	4,286,815.38	1,468,854	1,173,228	3,113,588		258,223

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.1 6.02

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 390.00 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2008	12,008.00	6,905	1,006	11,002	8.50	1,294
2009	3,443.43	1,808	263	3,180	9.50	335
2010	44,755.08	21,259	3,096	41,659	10.50	3,968
2011	12,420.37	5,279	769	11,651	11.50	1,013
2012	35,803.65	13,426	1,955	33,849	12.50	2,708
2013	4,929.42	1,602	233	4,696	13.50	348
2014	23,508.40	6,465	942	22,566	14.50	1,556
2015	14,460.77	3,254	474	13,987	15.50	902
2016	706,971.10	123,720	18,017	688,954	16.50	41,755
2017	96,502.69	12,063	1,757	94,746	17.50	5,414
2018	53,190.91	3,989	581	52,610	18.50	2,844
	1,007,993.82	199,770	29,093	978,901		62,137

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.8   6.16

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 391.00 TRANSPORTATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 14-L4						
NET SALVAGE PERCENT.. 0						
2001	7,500.00	6,840	7,298	202	1.78	113
2006	99,532.58	83,846	89,455	10,078	2.53	3,983
2008	138,275.00	108,297	115,542	22,733	3.18	7,149
2009	648,949.00	478,340	510,340	138,609	3.75	36,962
2010	245,374.89	167,370	178,567	66,808	4.43	15,081
2011	69,519.00	43,255	46,149	23,370	5.16	4,529
2012	283,568.72	158,004	168,574	114,995	5.96	19,294
2013	569,531.08	278,045	296,646	272,885	6.81	40,071
2014	74,011.10	30,729	32,785	41,226	7.75	5,319
2015	628,453.46	214,051	228,371	400,082	8.71	45,934
2016	130,529.00	34,629	36,946	93,583	9.69	9,658
2017	76,549.06	14,506	15,476	61,073	10.69	5,713
2018	1,423,668.46	161,871	172,699	1,250,969	11.69	107,012
2019	637,746.89	24,171	25,788	611,959	12.69	48,224
	5,033,208.24	1,803,954	1,924,636	3,108,572		349,042

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 8.9   6.93

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 393.00 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2007	20,177.20	12,611	4,682-	24,859	7.50	3,315
2008	18,550.25	10,666	3,960-	22,510	8.50	2,648
2009	52,571.58	27,600	10,247-	62,819	9.50	6,613
2010	23,867.97	11,337	4,209-	28,077	10.50	2,674
2011	11,907.00	5,060	1,879-	13,786	11.50	1,199
2012	34,047.65	12,768	4,740-	38,788	12.50	3,103
2013	14,325.60	4,656	1,729-	16,055	13.50	1,189
2014	13,575.00	3,733	1,386-	14,961	14.50	1,032
2015	6,574.00	1,479	549-	7,123	15.50	460
2016	27,741.12	4,855	1,803-	29,544	16.50	1,791
2017	332,504.39	41,563	15,431-	347,935	17.50	19,882
2018	232,628.65	17,447	6,478-	239,107	18.50	12,925
2019	235,660.71	5,892	2,187-	237,848	19.50	12,197
	1,024,131.12	159,667	59,280-	1,083,412		69,028

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.7 6.74

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 394.00 LABORATORY EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2006	4,563.82	4,107	2,897-	7,461	1.50	4,974
2007	1,068.93	891	628-	1,697	2.50	679
2010	2,418.04	1,531	1,080-	3,498	5.50	636
2011	7,356.65	4,169	2,941-	10,298	6.50	1,584
2012	727.50	364	257-	984	7.50	131
2013	4,573.96	1,982	1,398-	5,972	8.50	703
2014	8,402.05	3,081	2,173-	10,575	9.50	1,113
2017	30,472.83	5,079	3,582-	34,055	12.50	2,724
2019	91,308.59	3,043	2,146-	93,455	14.50	6,445
	150,892.37	24,247	17,102-	167,995		18,989

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 8.8   12.58

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 395.00 POWER OPERATED EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 22-R2						
NET SALVAGE PERCENT.. 0						
2006	93,867.04	54,875	91,413	2,454	9.59	256
2007	19,935.00	11,014	18,348	1,587	10.12	157
2008	48,270.00	25,033	41,701	6,569	10.67	616
2009	180,900.00	87,375	145,554	35,346	11.24	3,145
2010	27,950.00	12,455	20,748	7,202	11.82	609
2012	99,654.42	36,623	61,008	38,646	12.91	2,993
2013	157,521.76	51,289	85,440	72,082	13.46	5,355
2016	15,995.00	3,029	5,046	10,949	14.98	731
2017	29,847.33	4,185	6,971	22,876	15.33	1,492
2018	44,891.21	3,959	6,595	38,296	15.51	2,469
	718,831.76	289,837	482,824	236,007		17,823

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 13.2 2.48

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 396.00 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2017	235,316.77	39,220	7,532	227,785	12.50	18,223
2018	92,490.12	9,249	1,776	90,714	13.50	6,720
2019	114,354.29	3,811	732	113,623	14.50	7,836
	442,161.18	52,280	10,040	432,121		32,779

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 13.2 7.41

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 397.00 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2019

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2017	101,420.98	16,904	11,361	90,060	12.50	7,205
2018	22,944.61	2,294	1,542	21,403	13.50	1,585
2019	206,521.63	6,883	4,625	201,896	14.50	13,924
	330,887.22	26,081	17,528	313,359		22,714

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 13.8 6.86

PART III. EXPERIENCED NET SALVAGE

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

EXPERIENCED RETIREMENTS BY ACCOUNT AND ASSOCIATED
COST OF REMOVAL, GROSS SALVAGE, AND NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2017 TRANSACTION YEAR				
354.40	5,819.01	1,715.39		1,715.39-
361.10	30,872.99	70,299.53		70,299.53-
363.00	802.02	18,801.55	250.00	18,551.55-
371.00	1,772.00			
380.00	79,306.20	4,297.60		4,297.60-
390.00	68,118.70			
393.00	58,434.64			
394.00	49,060.15			
395.00	6,125.00			
	300,310.71	95,114.07	250.00	94,864.07-
2018 TRANSACTION YEAR				
354.20		12,897.00		12,897.00-
354.30	5,732.53	2,859.26		2,859.26-
354.40	202,178.63	2,403.28		2,403.28-
360.10		2,819.19		2,819.19-
361.10	229,297.81	28,292.26		28,292.26-
363.00	4,745.21	27,682.42		27,682.42-
371.00	65,154.40	522.61		522.61-
380.00	1,806,025.87	58,050.21		58,050.21-
382.00		1,045.59		1,045.59-
390.00	64,677.45	13,128.96		13,128.96-
391.00	423,853.34	42,449.74		42,449.74-
393.00	225,336.27	4,038.83		4,038.83-
394.00	11,316.17			
395.00	8,551.14			
	3,046,868.82	196,189.35		196,189.35-

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

EXPERIENCED RETIREMENTS BY ACCOUNT AND ASSOCIATED
COST OF REMOVAL, GROSS SALVAGE, AND NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2019 TRANSACTION YEAR				
354.30	729,988.56	85,934.54		85,934.54-
354.40	1,020,415.82	64,798.11		64,798.11-
360.10		.09		.09-
361.10	6,619.40	530,646.50		530,646.50-
361.20		29,936.27		29,936.27-
363.00	3,929.16	52,929.84		52,929.84-
364.00	59,781.23			
371.00	185,365.58	43,007.97		43,007.97-
380.00	1,330,426.10	92,172.60		92,172.60-
382.00		3,306.40		3,306.40-
390.00	126,241.84			
391.00	75,000.00	45,195.91		45,195.91-
393.00	7,573.30	28,109.74		28,109.74-
394.00	19,315.01	4,804.76		4,804.76-
395.00	14,863.50	5,217.77		5,217.77-
396.00		39,091.19		39,091.19-
397.00		4,026.89		4,026.89-
	3,579,519.50	1,029,178.58		1,029,178.58-
TOTAL	6,926,699.03	1,320,482.00	250.00	1,320,232.00-

EXHIBIT NO. 11-V - DEPRECIATION STUDY

WASTEWATER CSS SCRANTON OPERATIONS

AS OF DECEMBER 31, 2020

Exhibit No. 11-V
Witness: J. J. Spanos

PENNSYLVANIA-AMERICAN WATER COMPANY

MECHANICSBURG, PENNSYLVANIA

WASTEWATER CSS SCRANTON OPERATIONS

2020 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO WASTEWATER PLANT
AS OF DECEMBER 31, 2020

Prepared by:

Gannett Fleming

Excellence Delivered ***As Promised***

Exhibit No. 11-V
Witness: J. J. Spanos

PENNSYLVANIA-AMERICAN WATER COMPANY

Mechanicsburg, Pennsylvania

WASTEWATER CSS SCRANTON OPERATIONS

2020 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO WASTEWATER PLANT
AS OF DECEMBER 31, 2020

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

Camp Hill, Pennsylvania

Gannett Fleming

Excellence Delivered ***As Promised***

April 22, 2020

Pennsylvania-American Water Company
852 Wesley Drive
Mechanicsburg, PA 17055

Attention Ashley E. Everette
Director, Rates & Regulatory

Ladies and Gentlemen:

Pursuant to your request, we have determined the annual depreciation accruals applicable to wastewater plant. The results of our study as of December 31, 2020, are presented in the attached report. The results of our study as of December 31, 2019, are presented in our report, "2019 Depreciation Study - Calculated Annual Depreciation Accruals Related to Wastewater Plant as of December 31, 2019." The same methods, procedures and estimates are used in both studies.

The attached report sets forth a description of the methods and procedures upon which the studies were based, the estimates of survivor curves, and the calculated annual depreciation as of December 31, 2020.

Respectfully submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC

John J. Spanos

JOHN J. SPANOS
President

JJS:mle

066548.100

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www.gfvrc.com

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PENNSYLVANIA-AMERICAN WATER COMPANY

WASTEWATER CSS SCRANTON OPERATIONS

DEPRECIATION STUDY

PART I. INTRODUCTION

SCOPE

This report sets forth the results of the depreciation study for Pennsylvania-American Water Company to determine the annual depreciation accrual rates and amounts applicable to the original cost of wastewater plant as of December 31, 2020. The rates and amounts are based on the straight line remaining life method of depreciation. This report also describes the concepts, methods and judgments which underlie the recommended annual depreciation accrual rates related to wastewater plant in service as of December 31, 2020.

Part I, Introduction, contains statements with respect to the basis of the study and the development of net original cost. Part II, Estimation of Survivor Curves, presents descriptions of the considerations and methods used in the service life study. Part III, Service Life Considerations, presents the results of the average service life analysis. Part IV, Calculation of Annual and Accrued Depreciation, describes the procedures used in the calculation of group depreciation. Part V, Results of Study, presents summaries by depreciable group of annual depreciation accrual rates and amounts, as well as composite remaining lives. Part VI, Service Life Statistics presents the statistical analysis of service life estimates, Part VII, Detailed Depreciation Calculations presents the detailed tabulations of annual depreciation and Part VIII, Experienced and Estimated Net Salvage presents the cost of removal and gross salvage recorded for the period 2016-2020.

BASIS OF THE STUDY

The purpose of the depreciation study was to determine the annual depreciation accruals applicable to the original cost of wastewater plant in service as of December 31, 2020. For most accounts, the straight line remaining life method using attained ages, the book depreciation reserve and estimated survivor curves, was the basis for the calculation of annual depreciation. For certain accounts, the annual and accrued amortization amounts were based on the age of the property and the selected amortization period.

The survivor curve estimates were based on judgment which incorporated (1) analyses of historical data related to wastewater property for all Pennsylvania-American Water Company Wastewater Operations; (2) consideration of the character, use and location of the property; (3) probable future events and management plans; and (4) a general knowledge of wastewater property lives. The use of Iowa type survivor curves is a generally-accepted method of estimating average service life when the actual lives of individual property units are dispersed.

DEVELOPMENT OF NET ORIGINAL COST

The original cost data used in this study were obtained from the Company's continuing property records and work order system which show in detail the original cost of the property including descriptions, locations and years of installation of property units. The net original cost was developed from the original cost data by deducting contributions in aid of construction. The development of net original cost by plant account is set forth in Table 1 on page V-4.

PART II. ESTIMATION OF SURVIVOR CURVES

PART II. ESTIMATION OF SURVIVOR CURVES

The calculation of annual depreciation based on the straight line method requires the estimation of survivor curves and the selection of group depreciation procedures. The estimation of survivor curves is discussed below and the development of net salvage is discussed in later sections of this report.

SURVIVOR CURVES

The use of an average service life for a property group implies that the various units in the group have different lives. Thus, the average life may be obtained by determining the separate lives of each of the units, or by constructing a survivor curve by plotting the number of units which survive at successive ages.

The survivor curve graphically depicts the amount of property existing at each age throughout the life of an original group. From the survivor curve, the average life of the group, the remaining life expectancy, the probable life, and the frequency curve can be calculated. In Figure 1, a typical smooth survivor curve and the derived curves are illustrated. The average life is obtained by calculating the area under the survivor curve, from age zero to the maximum age, and dividing this area by the ordinate at age zero. The remaining life expectancy at any age can be calculated by obtaining the area under the curve, from the observation age to the maximum age, and dividing this area by the percent surviving at the observation age. For example, in Figure 1, the remaining life at age 30 is equal to the crosshatched area under the survivor curve divided by 29.5 percent surviving at age 30. The probable life at any age is developed by adding the age and remaining life. If the probable life of the property is calculated for each year of age, the probable life curve shown in the chart can be developed. The frequency curve presents the number of units retired in each age interval. It is derived by obtaining the differences between the amount of property surviving at the beginning and at the end of each interval.

This study has incorporated the use of Iowa curves developed from a retirement rate analysis of historical retirement history. A discussion of the concepts of survivor curves and of the development of survivor curves using the retirement rate method is presented below.

Iowa Type Curves

The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized survivor curves known as the Iowa type curves. There are four families in the Iowa system, labeled in accordance with the location of the modes of the retirements (or the portion of the frequency curve with the highest level of retirements) in relationship to the average life and the relative height of the modes. The left moded curves, presented in Figure 2, are those in which the greatest frequency of retirement occurs to the left of, or prior to, average service life. The symmetrical moded curves, presented in Figure 3, are those in which the greatest frequency of retirement occurs at average service life. The right moded curves, presented in Figure 4, are those in which the greatest frequency occurs to the right of, or after, average service life. The origin moded curves, presented in Figure 5, are those in which the greatest frequency of retirement occurs at the origin, or immediately after age zero. The letter designation of each family of curves (L, S, R or O) represents the location of the mode of the associated frequency curve with respect to the average service life. The numbers represent the relative heights of the modes of the frequency curves within each family. A higher number designates a higher mode curve.

The Iowa curves were developed at the Iowa State College Engineering Experiment Station through an extensive process of observation and classification of the ages at which industrial property had been retired. A report of the study which resulted in the classification of property survivor characteristics into 18 type curves, which constitute three of the four families, was published in 1935 in the form of the Experiment Station’s Bulletin 125. These curve types have also been presented in subsequent

Experiment Station bulletins and in the text, "Engineering Valuation and Depreciation."[1] In 1957, Frank V. B. Couch, Jr., an Iowa State College graduate student submitted a thesis presenting his development of the fourth family consisting of the four O type survivor curves.

Retirement Rate Method of Analysis

The retirement rate method is an actuarial method of deriving survivor curves using the average rates at which property of each age group is retired. The method relates to property groups for which aged accounting experience is available and is the method used to develop the original stub survivor curves in this study. The method (also known as the annual rate method) is illustrated through the use of an example in the following text, and is also explained in several publications, including "Statistical Analyses of Industrial Property Retirements,"[2] "Engineering Valuation and Depreciation,"[3] and "Depreciation Systems."[4]

The average rate of retirement used in the calculation of the percent surviving for the survivor curve (life table) requires two sets of data: first, the property retired during a period of observation, identified by the property's age at retirement; and second, the property exposed to retirement at the beginning of the age intervals during the same period. The period of observation is referred to as the experience band, and the band of years which represent the installation dates of the property exposed to retirement during the experience band is referred to as the placement band. An example of the calculations used in the development of a life table follows. The example includes schedules of annual aged property transactions, a schedule of plant exposed to retirement, a life table and illustrations of smoothing the stub survivor curve.

---

[1]Marston, Anson, Robley Winfrey and Jean C. Hempstead. Engineering Valuation and Depreciation, 2nd Edition. New York, McGraw-Hill Book Company. 1953.

[2]Winfrey, Robley, Statistical Analyses of Industrial Property Retirements. Iowa State College, Engineering Experiment Station, Bulletin 125. 1935.

[3]Marston, Anson, Robley Winfrey, and Jean C. Hempstead, Supra Note 1.

[4]Wolf, Frank K. and W. Chester Fitch. Depreciation Systems. Iowa State University Press. 1994.

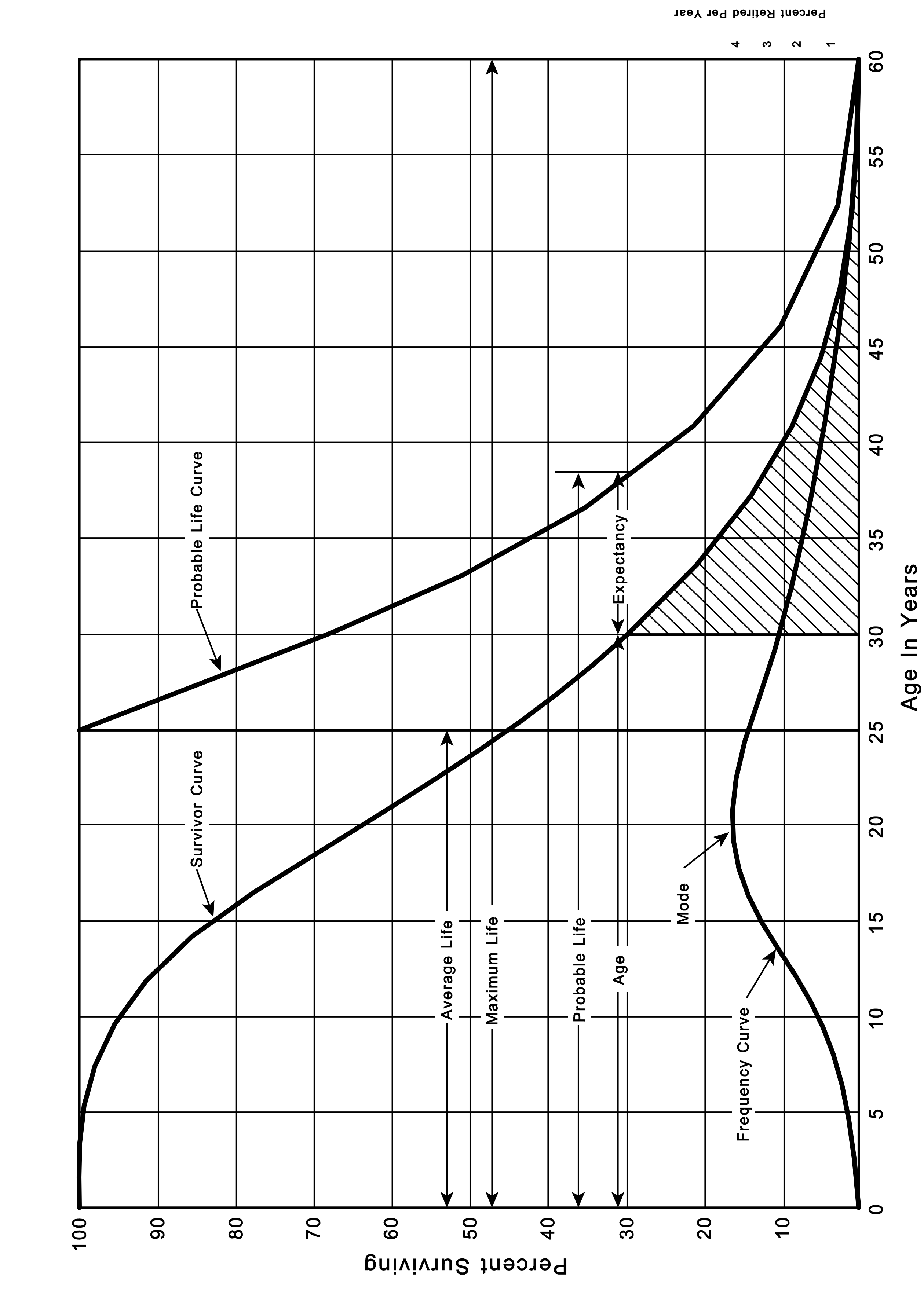


Figure 1. A Typical Survivor Curve and Derived Curves

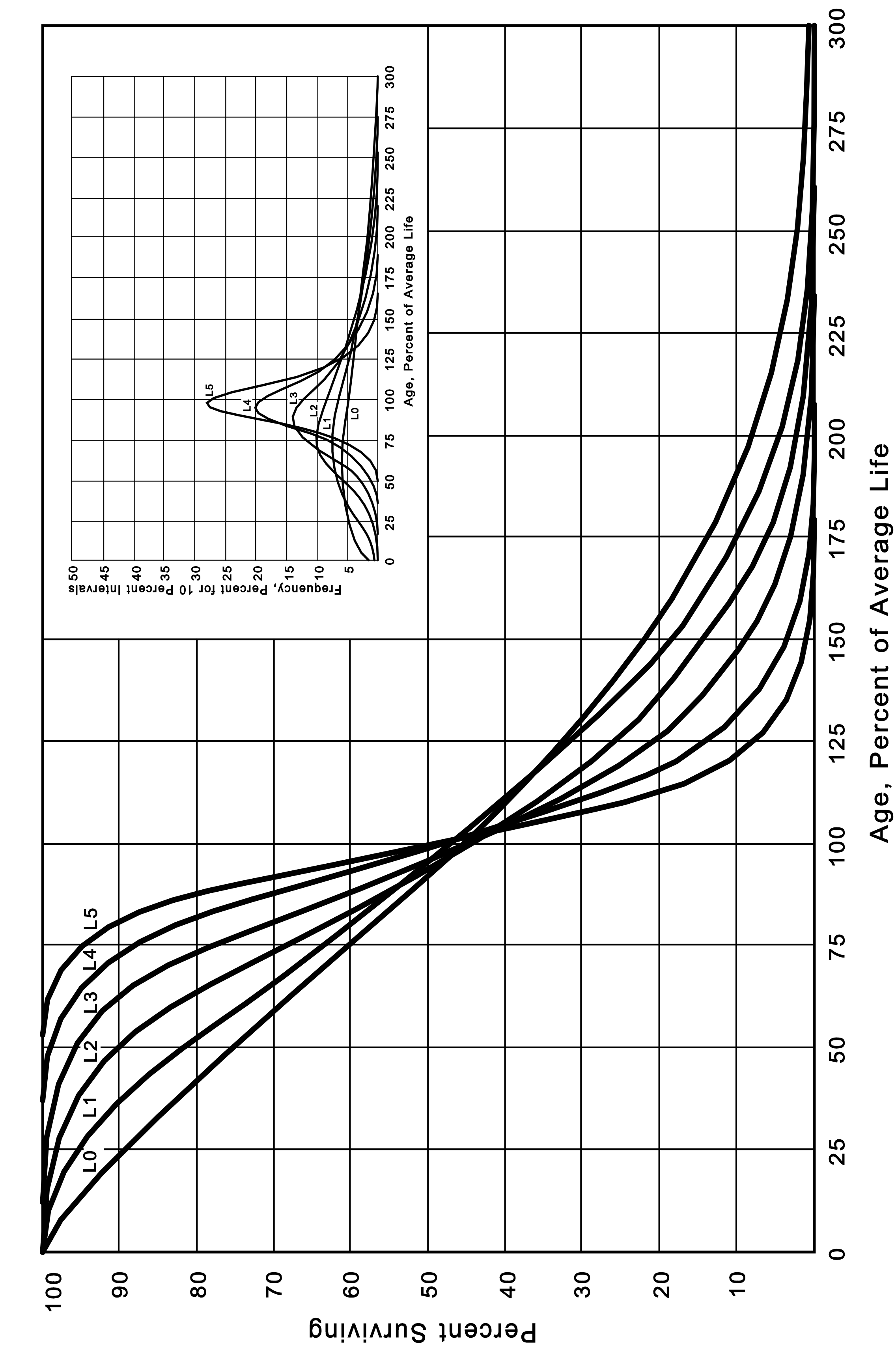


Figure 2. Left Modal or "L" Iowa Type Survivor Curves

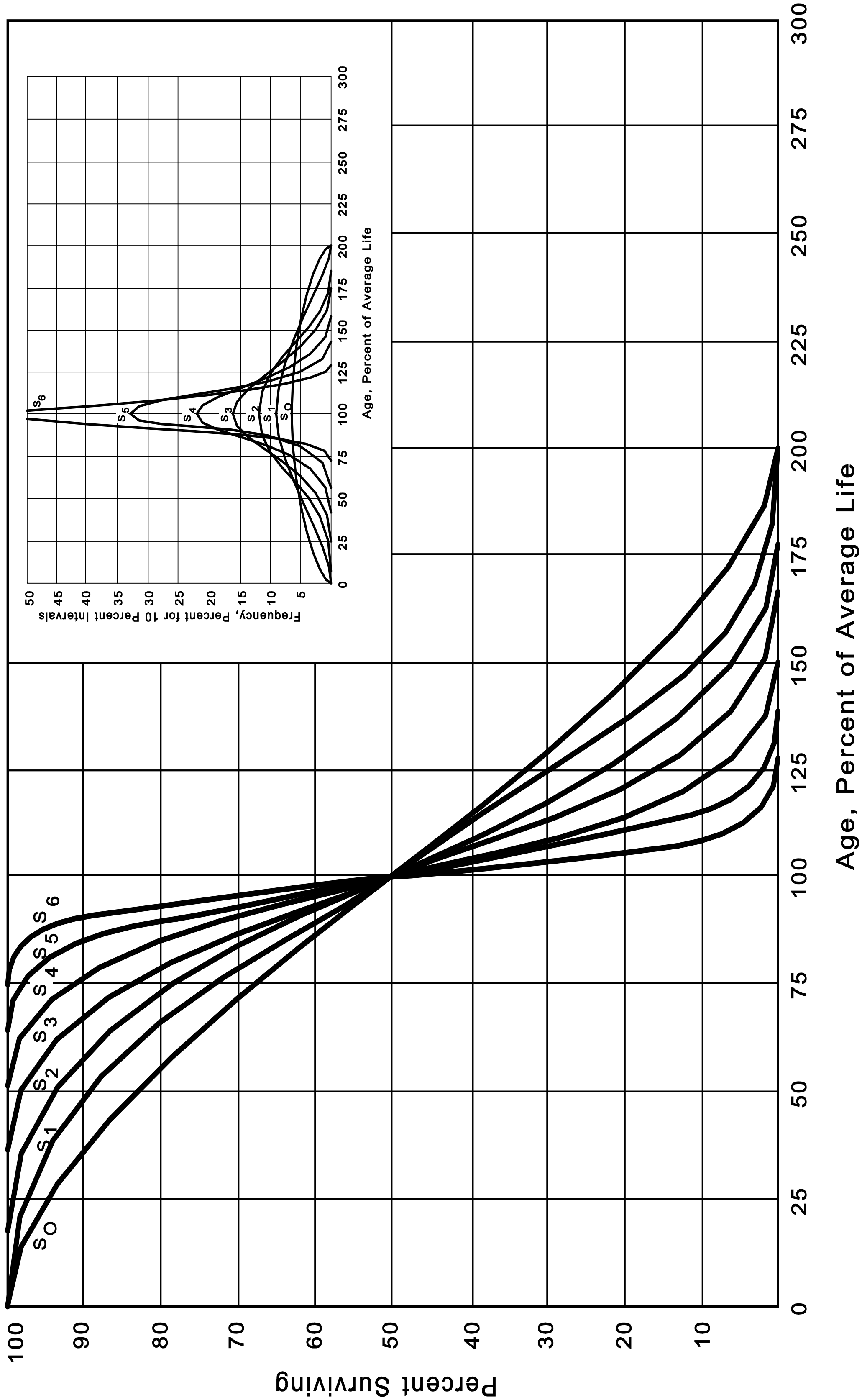


Figure 3. Symmetrical or "S" Iowa Type Survivor Curves

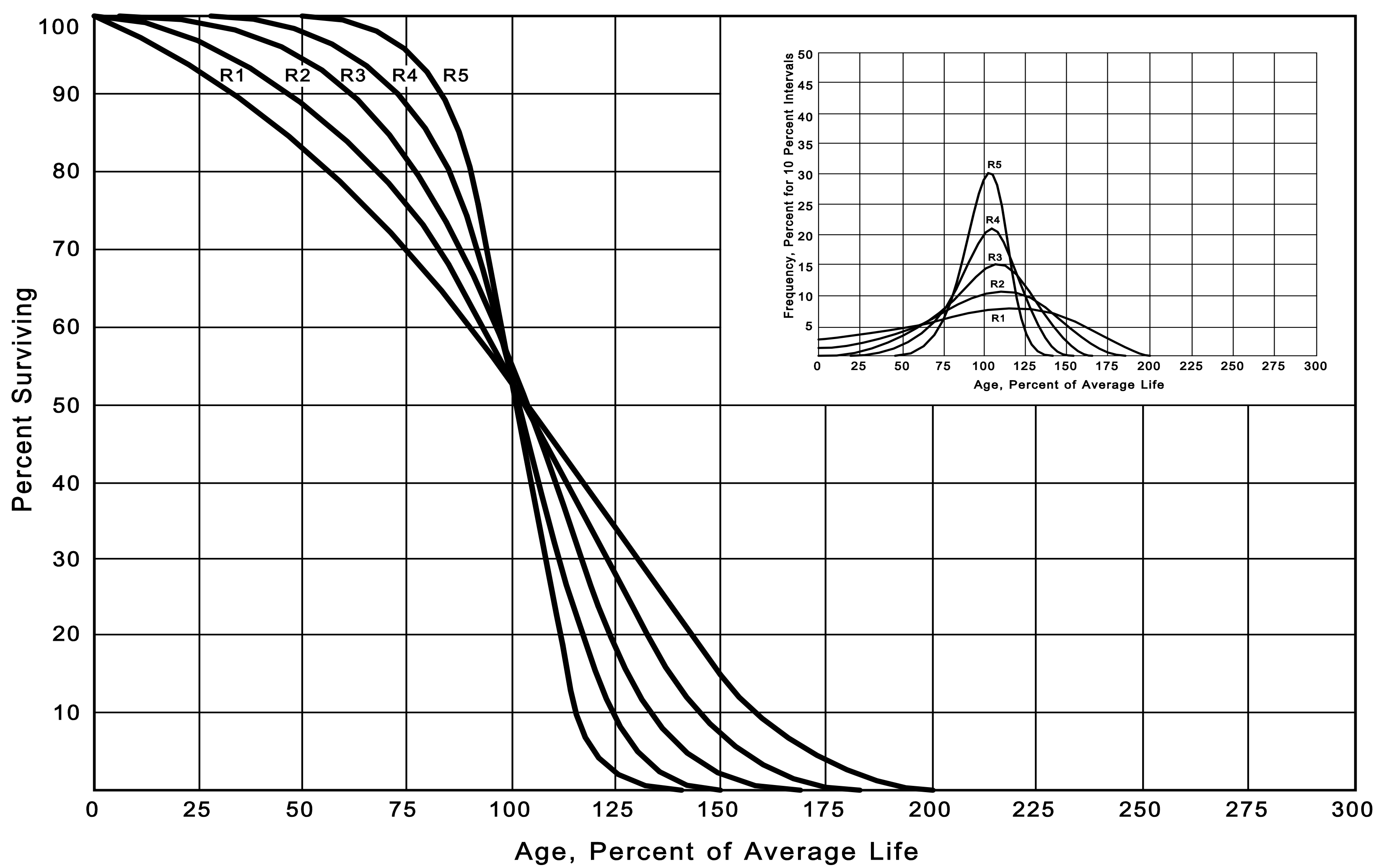


Figure 4. Right Modal or "R" Iowa Type Survivor Curves

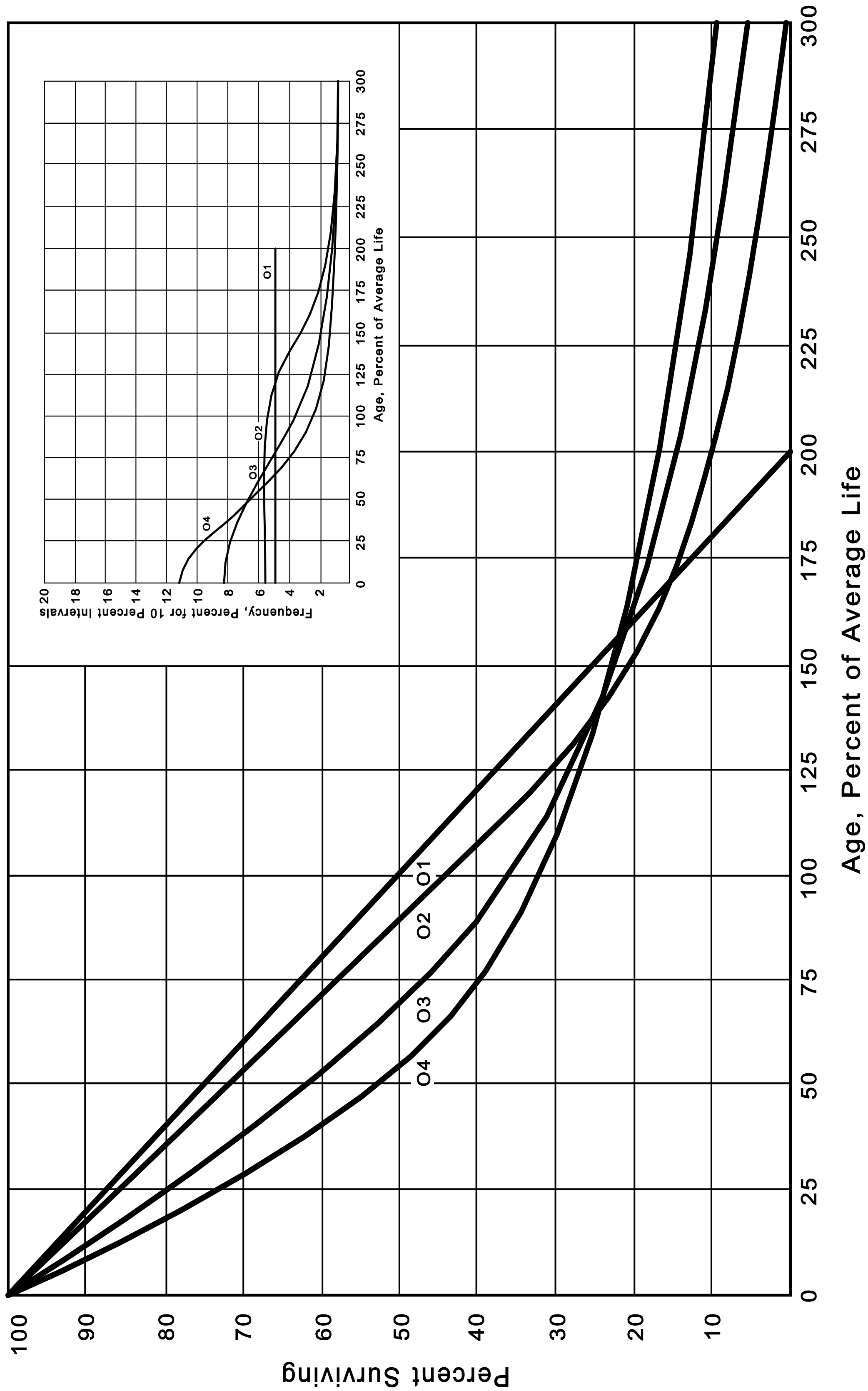


Figure 5. Origin Modal or "O" Iowa Type Survivor Curves

Schedules of Annual Transactions in Plant Records

A hypothetical property group is used to illustrate the retirement rate method. This property group is observed for the experience band 2010-2019 during which there were placements (or installations) during the years 2005-2019. In order to illustrate the summation of the aged data by age interval, the data were compiled in the manner presented in Schedules 1 and 2 on pages II-11 and II-12. In Schedule 1, year placed and the year of retirement are shown. The age interval during which a retirement occurred is determined from this information. In the example which follows, $10,000 of the dollars invested in 2005 were retired in 2010. The $10,000 retirement occurred during the age interval between 4½ and 5½ years on the basis that approximately one-half of the amount of property was installed prior to and subsequent to July 1 of each year. That is, on the average, property installed during a year is placed in service at the midpoint of the year for the purpose of the analysis. All retirements also are stated as occurring at the midpoint of a one-year age interval of time, except the first age interval which encompasses only one-half year.

The total retirements occurring in each age interval in a band are determined by summing the amounts for each transaction year-installation year combination for that age interval. For example, the total of $143,000 retired for age interval 4½-5½ is the sum of the retirements entered on Schedule 1 immediately above the stair step line drawn on the table beginning with the 2010 retirements of 2005 installations and ending with the 2019 retirements of the 2014 installations. Thus, the total amount of 143 for age interval 4½-5½ equals the sum of:

$$10 + 12 + 13 + 11 + 13 + 13 + 15 + 17 + 19 + 20.$$

SCHEDULE 1. RETIREMENTS FOR EACH YEAR 2010-2019
SUMMARIZED BY AGE INTERVAL

Experience Band 2010-2019 | Placement Band 2005-2019

Year Placed	Retirements, Thousands of Dollars During Year 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total During Age Interval	Age Interval
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2005	10	11	12	13	14	16	23	24	25	26	26	13½-14½
2006	11	12	13	15	16	18	20	21	22	19	44	12½-13½
2007	11	12	13	14	16	17	19	21	22	18	64	11½-12½
2008	8	9	10	11	11	13	14	15	16	17	83	10½-11½
2009	9	10	11	12	13	14	16	17	19	20	93	9½-10½
2010	4	9	10	11	12	13	14	15	16	20	105	8½-9½
2011		5	11	12	13	14	15	16	18	20	113	7½-8½
2012			6	12	13	15	16	17	19	19	124	6½-7½
2013				6	13	15	16	17	19	19	131	5½-6½
2014					7	14	16	17	19	20	143	4½-5½
2015						8	18	20	22	23	146	3½-4½
2016							9	20	22	25	150	2½-3½
2017								11	23	25	151	1½-2½
2018									11	24	153	½-1½
2019										13	80	0-½
Total	53	68	86	106	128	157	196	231	273	308	1,606	

SCHEDULE 2. OTHER TRANSACTIONS FOR EACH YEAR 2010-2019
SUMMARIZED BY AGE INTERVAL

Experience Band 2010-2019 | Placement Band 2005-2019

Acquisitions, Transfers and Sales, Thousands of Dollars
During Year

Year Placed (1)	2010 (2)	2011 (3)	2012 (4)	2013 (5)	2014 (6)	2015 (7)	2016 (8)	2017 (9)	2018 (10)	2019 (11)	Total During Age Interval (12)	Age Interval (13)
2005	-	-	-	-	-	-	60[a]	-	-	-	-	13½-14½
2006	-	-	-	-	-	-	-	-	-	-	-	12½-13½
2007	-	-	-	-	-	-	-	-	-	-	-	11½-12½
2008	-	-	-	-	-	-	-	(5)[b]	-	-	60	10½-11½
2009	-	-	-	-	-	-	-	6[a]	-	-	-	9½-10½
2010	-	-	-	-	-	-	-	-	-	-	(5)	8½-9½
2011		-	-	-	-	-	-	-	-	-	6	7½-8½
2012			-	-	-	-	-	-	-	-	-	6½-7½
2013				-	-	-	-	(12)[b]	-	-	-	5½-6½
2014					-	-	-	-	22[a]	-	-	4½-5½
2015						-	-	(19)[b]	-	-	10	3½-4½
2016							-	-	-	-	-	2½-3½
2017								-	-	(102)[c]	(121)	1½-2½
2018									-	-	-	½-1½
2019											-	0-½
Total	-	-	-	-	-	-	60	(30)	22	(102)	(50)	

[a] Transfer Affecting Exposures at Beginning of Year
[b] Transfer Affecting Exposures at End of Year
[c] Sale with Continued Use
Parentheses Denote Credit Amount.

In Schedule 2, other transactions which affect the group are recorded in a similar manner. The entries illustrated include transfers and sales. The entries which are credits to the plant account are shown in parentheses. The items recorded on this schedule are not totaled with the retirements, but are used in developing the exposures at the beginning of each age interval.

Schedule of Plant Exposed to Retirement

The development of the amount of plant exposed to retirement at the beginning of each age interval is illustrated in Schedule 3 on page II-14. The surviving plant at the beginning of each year from 2010 through 2019 is recorded by year in the portion of the table headed "Annual Survivors at the Beginning of the Year." The last amount entered in each column is the amount of new plant added to the group during the year. The amounts entered in Schedule 3 for each successive year following the beginning balance or addition are obtained by adding or subtracting the net entries shown on Schedules 1 and 2. For the purpose of determining the plant exposed to retirement, transfers-in are considered as being exposed to retirement in this group at the beginning of the year in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the beginning of the following year. Thus, the amounts of plant shown at the beginning of each year are the amounts of plant from each placement year considered to be exposed to retirement at the beginning of each successive transaction year. For example, the exposures for the installation year 2015 are calculated in the following manner:

Exposures at age 0	= amount of addition	= $750,000
Exposures at age ½	= $750,000 - $ 8,000	= $742,000
Exposures at age 1½	= $742,000 - $18,000	= $724,000
Exposures at age 2½	= $724,000 - $20,000 - $19,000	= $685,000
Exposures at age 3½	= $685,000 - $22,000	= $663,000

SCHEDULE 3. PLANT EXPOSED TO RETIREMENT
JANUARY 1 OF EACH YEAR 2010-2019
SUMMARIZED BY AGE INTERVAL

Experience Band 2010-2019 Placement Band 2005-2019

Year Placed	Exposures, Thousands of Dollars — Annual Survivors at the Beginning of the Year 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total at Beginning of Age Interval	Age Interval
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2005	255	245	234	222	209	195	239	216	192	167	167	13½-14½
2006	279	268	256	243	228	212	194	174	153	131	323	12½-13½
2007	307	296	284	271	257	241	224	205	184	162	531	11½-12½
2008	338	330	321	311	300	289	276	262	242	226	823	10½-11½
2009	376	367	357	346	334	321	307	297	280	261	1,097	9½-10½
2010	420[a]	416	407	397	386	374	361	347	332	316	1,503	8½-9½
2011		460[a]	455	444	432	419	405	390	374	356	1,952	7½-8½
2012			510[a]	504	492	479	464	448	431	412	2,463	6½-7½
2013				580[a]	574	561	546	530	501	482	3,057	5½-6½
2014					660[a]	653	639	623	628	609	3,789	4½-5½
2015						750[a]	742	724	685	663	4,332	3½-4½
2016							850[a]	841	821	799	4,955	2½-3½
2017								960[a]	949	926	5,719	1½-2½
2018									1,080[a]	1,069	6,579	½-1½
2019										1,220[a]	7,490	0-½
Total	1,975	2,382	2,824	3,318	3,872	4,494	5,247	6,017	6,852	7,799	44,780	

[a]Additions during the year

For the entire experience band 2010-2019, the total exposures at the beginning of an age interval are obtained by summing diagonally in a manner similar to the summing of the retirements during an age interval (Schedule 1). For example, the figure of 3,789, shown as the total exposures at the beginning of age interval 4½-5½, is obtained by summing:

255 + 268 + 284 + 311 + 334 + 374 + 405 + 448 + 501 + 609.

Original Life Table

The original life table, illustrated in Schedule 4 on page II-16, is developed from the totals shown on the schedules of retirements and exposures, Schedules 1 and 3, respectively. The exposures at the beginning of the age interval are obtained from the corresponding age interval of the exposure schedule, and the retirements during the age interval are obtained from the corresponding age interval of the retirement schedule. The retirement ratio is the result of dividing the retirements during the age interval by the exposures at the beginning of the age interval. The percent surviving at the beginning of each age interval is derived from survivor ratios, each of which equals one minus the retirement ratio. The percent surviving is developed by starting with 100% at age zero and successively multiplying the percent surviving at the beginning of each interval by the survivor ratio, i.e. one minus the retirement ratio for that age interval. The calculations necessary to determine the percent surviving at age 5½ are as follows:

Percent surviving at age 4½	=	88.15				
Exposures at age 4½	=	3,789,000				
Retirements from age 4½ to 5½	=	143,000				
Retirement Ratio	=	143,000	÷	3,789,000	=	0.0377
Survivor Ratio	=	1.000	-	0.0377	=	0.9623
Percent surviving at age 5½	=	(88.15)	x	(0.9623)	=	84.83

The totals of the exposures and retirements (columns 2 and 3) are shown for the purpose of checking with the respective totals in Schedules 1 and 3. The ratio of the total retirements to the total exposures, other than for each age interval, is meaningless.

SCHEDULE 4. ORIGINAL LIFE TABLE

CALCULATED BY THE RETIREMENT RATE METHOD

Experience Band 2010-2019 Placement Band 2005-2019

(Exposure and Retirement Amounts are in Thousands of Dollars)

Age at Beginning of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retirement Ratio	Survivor Ratio	Percent Surviving at Beginning of Age Interval
(1)	(2)	(3)	(4)	(5)	(6)
0.0	7,490	80	0.0107	0.9893	100.00
0.5	6,579	153	0.0233	0.9767	98.93
1.5	5,719	151	0.0264	0.9736	96.62
2.5	4,955	150	0.0303	0.9697	94.07
3.5	4,332	146	0.0337	0.9663	91.22
4.5	3,789	143	0.0377	0.9623	88.15
5.5	3,057	131	0.0429	0.9571	84.83
6.5	2,463	124	0.0503	0.9497	81.19
7.5	1,952	113	0.0579	0.9421	77.11
8.5	1,503	105	0.0699	0.9301	72.65
9.5	1,097	93	0.0848	0.9152	67.57
10.5	823	83	0.1009	0.8991	61.84
11.5	531	64	0.1205	0.8795	55.60
12.5	323	44	0.1362	0.8638	48.90
13.5	167	26	0.1557	0.8443	42.24
14.5					35.66
Total	44,780	1,606			

Column 2 from Schedule 3, Column 12, Plant Exposed to Retirement.
Column 3 from Schedule 1, Column 12, Retirements for Each Year.
Column 4 = Column 3 Divided by Column 2.
Column 5 = 1.0000 Minus Column 4.
Column 6 = Column 5 Multiplied by Column 6 as of the Preceding Age Interval.

The original survivor curve is plotted from the original life table (column 6, Schedule 4). When the curve terminates at a percent surviving greater than zero, it is called a stub survivor curve. Survivor curves developed from retirement rate studies generally are stub curves.

Smoothing the Original Survivor Curve

The smoothing of the original survivor curve eliminates any irregularities and serves as the basis for the preliminary extrapolation to zero percent surviving of the original stub curve. Even if the original survivor curve is complete from 100% to zero percent, it is desirable to eliminate any irregularities, as there is still an extrapolation for the vintages which have not yet lived to the age at which the curve reaches zero percent. In this study, the smoothing of the original curve with established type curves was used to eliminate irregularities in the original curve.

The Iowa type curves are used in this study to smooth those original stub curves which are expressed as percents surviving at ages in years. Each original survivor curve was compared to the Iowa curves using visual and mathematical matching in order to determine the better fitting smooth curves. In Figures 6, 7, and 8, the original curve developed in Schedule 4 is compared with the L, S, and R Iowa type curves which most nearly fit the original survivor curve. In Figure 6, the L1 curve with an average life between 12 and 13 years appears to be the best fit. In Figure 7, the S0 type curve with a 12-year average life appears to be the best fit and appears to be better than the L1 fitting. In Figure 8, the R1 type curve with a 12-year average life appears to be the best fit and appears to be better than either the L1 or the S0.

In Figure 9, the three fittings, 12-L1, 12-S0 and 12-R1 are drawn for comparison purposes. It is probable that the 12-R1 Iowa curve would be selected as the most representative of the plotted survivor characteristics of the group.

FIGURE 6. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1 IOWA TYPE CURVE
ORIGINAL AND SMOOTH SURVIVOR CURVES

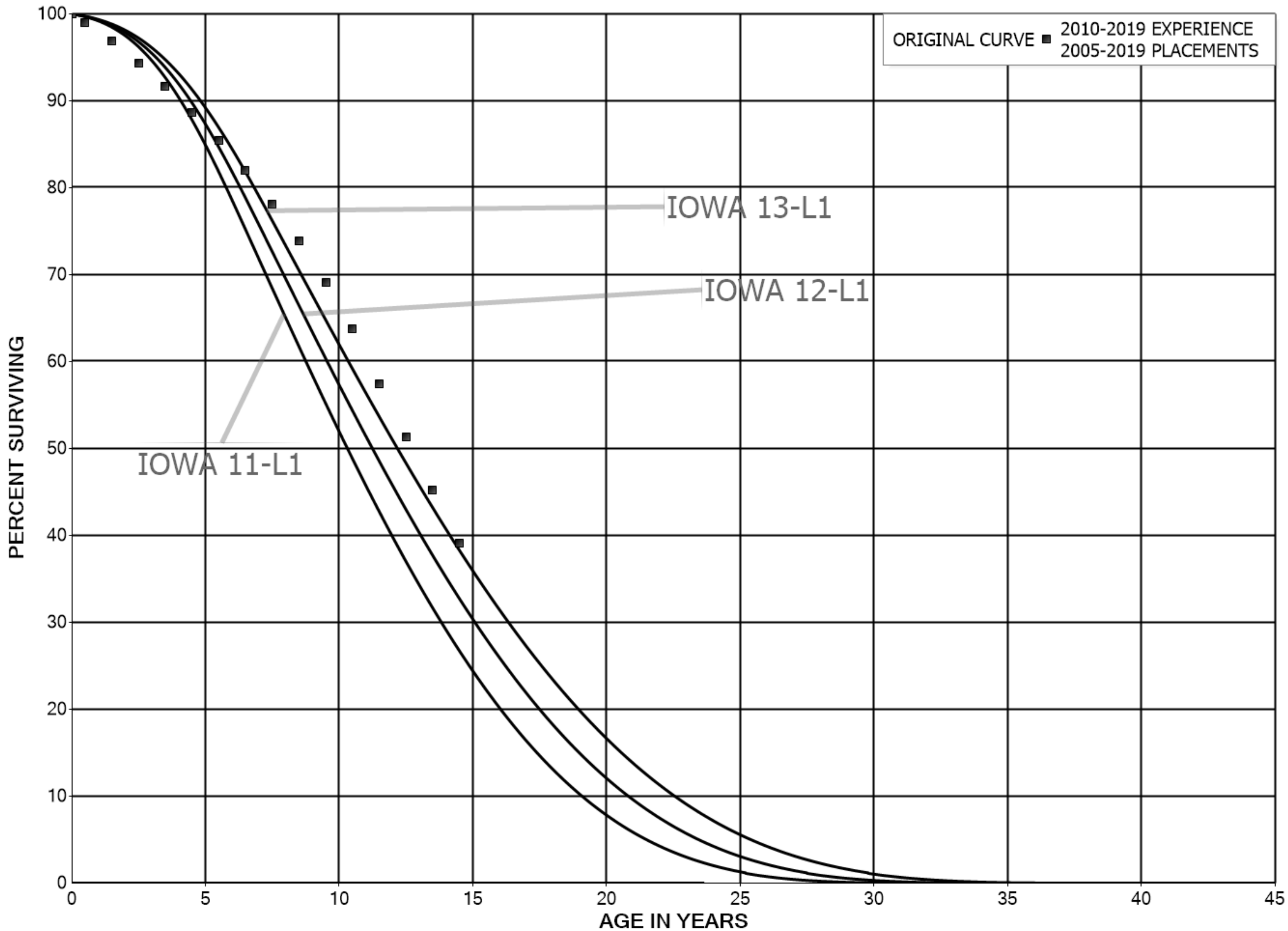


FIGURE 7. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN S0 IOWA TYPE CURVE
ORIGINAL AND SMOOTH SURVIVOR CURVES

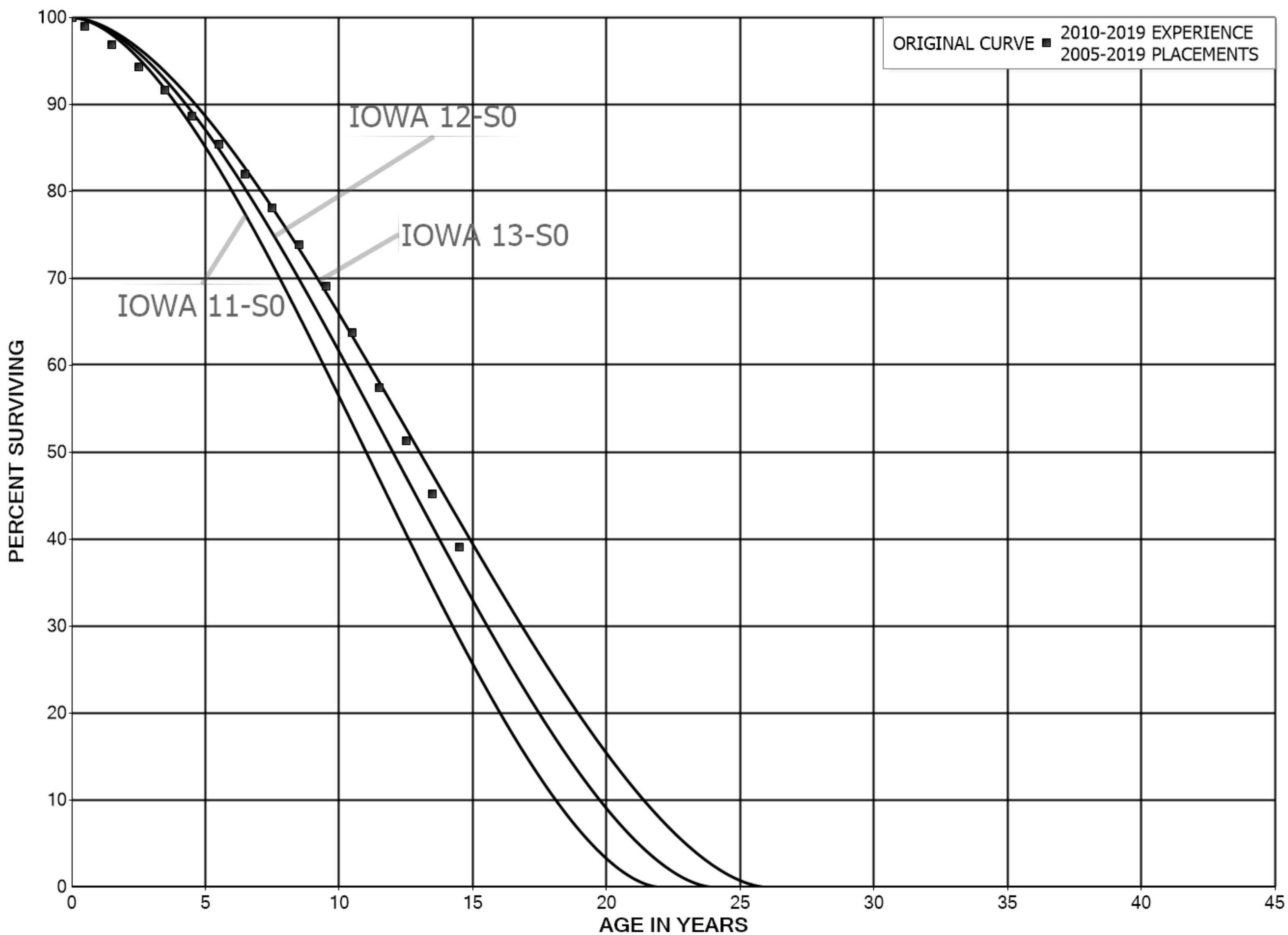


FIGURE 8. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN R1 IOWA TYPE CURVE
ORIGINAL AND SMOOTH SURVIVOR CURVES

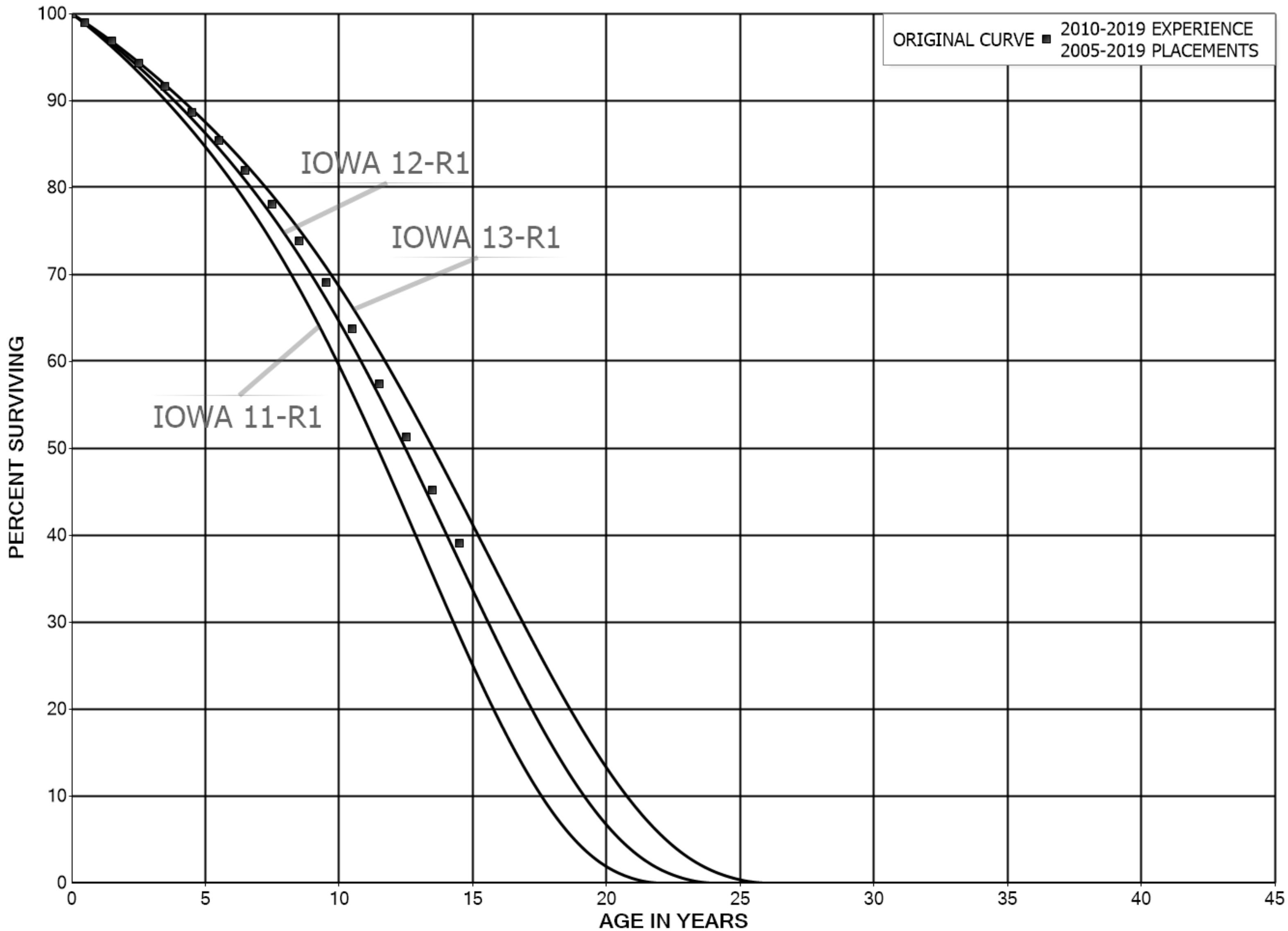
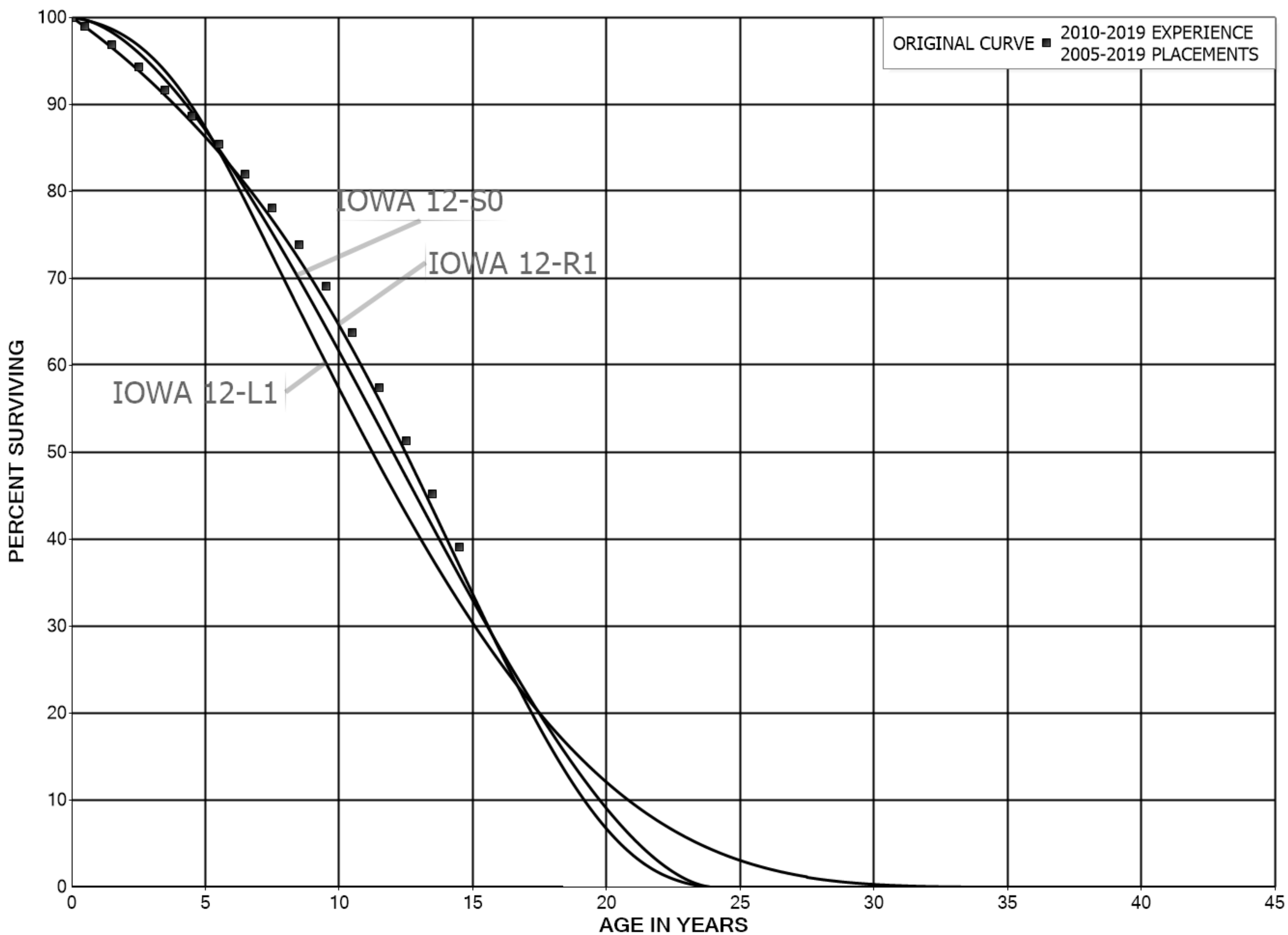


FIGURE 9. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1, S0 AND R1 IOWA TYPE CURVE
ORIGINAL AND SMOOTH SURVIVOR CURVES



PART III. SERVICE LIFE CONSIDERATIONS

PART III. SERVICE LIFE CONSIDERATIONS

FIELD TRIPS

In order to be familiar with the operation of the Company and observe representative portions of the plant, field trips have been conducted for the system. A general understanding of the function of the plant and information with respect to the reasons for past retirements and the expected future causes of retirements are obtained during field trips. This knowledge and information were incorporated in the interpretation and extrapolation of the statistical analyses.

The following is a list of the locations visited during the most recent field trip.

March 27, 2017
Keyser Valley Pump Station
Parrott Avenue Pump Station
Scranton Wastewater Treatment Facility

Judgments. The survivor curve estimates were based on judgment which considered factors including statistical analyses of retirements, Company policies and outlook as determined during discussions with management, and survivor curve estimates from previous studies of other Pennsylvania-American wastewater systems. For depreciable groups which consist of numerous similar items of property, the distribution of the lives of the units in the group was judged on the basis of an average survival pattern for the entire group.

The amortization periods selected for general plant Accounts 390, 393, 394, 396 and 397 are discussed in the section, “Amortization of General Plant Accounts.”

PART IV. CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

PART IV. CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

BOOK RESERVE

The book reserve as of December 31, 2019, is the result of a bringforward of the book reserves established by the Commission for the Scranton wastewater operation. The projected book reserve as of December 31, 2020, is a bringforward of the December 31, 2019 book reserve based on projected accruals, retirements, cost of removal, salvage and other credits.

GROUP DEPRECIATION PROCEDURES

A group procedure for depreciation is appropriate when considering more than a single item of property. Normally the items within a group do not have identical service lives, but have lives that are dispersed over a range of time. There are two primary group procedures, namely, average service life and equal life group. In the average service life procedure, the rate of annual depreciation is based on the average life or average remaining life of the group, and this rate is applied to the surviving balances of the group's cost. A characteristic of this procedure is that the cost of plant retired prior to average life is not fully recouped at the time of retirement, whereas the cost of plant retired subsequent to average life is more than fully recouped. Over the entire life cycle, the portion of cost not recouped prior to average life is balanced by the cost recouped subsequent to average life.

Single Unit of Property

The calculation of straight line depreciation for a single unit of property is straightforward. For example, if a $1,000 unit of property attains an age of four years and has a life expectancy of six years, the annual accrual over the total life is:

$$\frac{\$1{,}000}{(4 + 6)} = \$100 \text{ per year.}$$

The accrued depreciation is:

$$\$1{,}000\left(1 - \frac{6}{10}\right) = \$400.$$

Remaining Life Annual Accruals

For the purpose of calculating remaining life accruals as of December 31, 2020, the depreciation reserve for each plant account is allocated among vintages in proportion to the calculated accrued depreciation for the account. Explanations of remaining life accruals and calculated accrued depreciation follow. The detailed calculations as of December 31, 2020, are set forth in the Results of Study section of the report.

Equal Life Group Procedure

In the equal life group procedure, the remaining life annual accrual for each vintage is determined by dividing future book accruals (original cost less book reserve) by the composite remaining life for the surviving original cost of that vintage. The composite remaining life is derived by compositing the individual equal life group remaining lives in accordance with the following equation:

$$\text{Composite Remaining Life} = \frac{\sum\left(\frac{\text{Book Cost}}{\text{Life}} \text{ x Remaining Life}\right)}{\sum\frac{\text{Book Cost}}{\text{Life}}}.$$

The book costs and lives of the several equal life groups which are summed in the foregoing equation are defined by the estimated survivor curve.

Inasmuch as book cost divided by life equals the whole life annual accrual, the foregoing equation reduces to the following form:

$$\text{Composite Remaining Life} = \frac{\sum \text{Whole Life Future Accruals}}{\sum \text{Whole Life Annual Accruals}}$$

or

$$\text{Composite Remaining Life} = \frac{\sum \text{Book Cost - Calc. Reserve}}{\sum \text{Whole Life Annual Accrual}}.$$

The annual accrual rate for each account is equal to the sum of the remaining life annual accruals for all vintages divided by the account's total original cost. The account's "composite remaining life" is calculated by dividing the sum of the future book accruals for all vintages by the sum of the remaining life annual accruals for all vintages.

The calculated accrued depreciation in the equal life group procedure also represents that portion of depreciable cost which will not be allocated to expense through future accruals. However, the calculation is based at the equal life group level rather than the vintage group level, and does not require the use of averages. The equal life group accrued depreciation ratio is calculated as follows:

$$Ratio = 1 - \left(\frac{Remaining\ Life}{Service\ Life}\right)$$

Inasmuch as service life minus remaining life equals age, when averages are not employed, the foregoing equation reduces to:

$$Ratio = \left(\frac{Age}{Service\ Life}\right)$$

AMORTIZATION OF GENERAL PLANT ACCOUNTS

In order to use a more efficient and cost effective accounting process for equipment recorded in general plant Accounts 390, 393, 394, 396 and 397; amounts capitalized in these accounts are amortized rather than depreciated. Amortization as defined in the Uniform System of Accounts is the gradual extinguishment of an amount in an account by distributing such amount over a fixed period, over the life of the asset or liability to which it applies, or over the period during which it is anticipated the benefit will be realized.

The primary reasons for the amortization of certain general plant accounts is that the effort required to unitize additions, periodically inventory equipment and determine amounts to be retired for equipment recorded in these accounts is disproportionate to the original cost of the equipment when compared to other wastewater plant accounts.

Accounting for such equipment using an amortization concept consists of capitalization of amounts to these accounts based on the same criteria as used previously under depreciation accounting, amortization of the asset over a fixed period, retirement of the equipment at the end of the amortization period and recognition of any net salvage related to disposition of equipment in these accounts as a gain or loss. For equipment in these accounts that was placed in service prior to implementation of amortization accounting, the net book value by vintage amortized over the remaining amortization period specified for each account and the original cost will be retired at the end of this period.

The amortization periods selected for each account or subaccount are based on a review of the existing depreciation rates for the accounts, typical service lives used for each type of equipment and a consideration of the period during which it is anticipated that most of the benefit of the equipment will be realized. The amortization periods are as follows:

Account Number	Description	Amortization Period, Years
390	Office Furniture and Equipment	20
393	Tools, Shop and Garage Equipment	20
394	Laboratory Equipment	15
396	Communication Equipment	15
397	Miscellaneous Equipment	15

NET SALVAGE

Experienced net salvage is incorporated in the results of the study as it was reported on the Company's books and records for the period January 1, 2016 through December 31, 2019, and estimated for the period January 1, 2020 through December 31, 2020. The calculation of the amortization is shown in Table 5 on page V-8. The amounts of salvage and removal cost by account for each year are set forth in the section beginning on page VIII-2.

Net salvage is presented in this manner to determine the amount of net salvage to be amortized to the cost of service for ratemaking purposes. In order to be consistent with this manner of recognizing net salvage, no adjustments for net salvage were made to the annual depreciation calculated for the individual accounts.

PART V. RESULTS OF STUDY

PART V. RESULTS OF STUDY

DESCRIPTION OF SUMMARY TABULATIONS

Table 1 presents the development of the net original cost used in the study. The results of the depreciation study are summarized in Table 2 which sets forth, by depreciable group, the estimated survivor curve, calculated annual accruals and book reserve related to net original cost and the annual amortization of net salvage. Table 3 presents the bringforward to December 31, 2020 of the book reserve as of December 31, 2019. Table 4 sets forth the calculation of estimated depreciation accruals for the twelve months ended December 31, 2020. Table 5 presents the amortization of experienced and estimated net salvage, by account, based on the five-year period, 2016-2020. The total amortization amount is incorporated in the total annual accrual in Table 2.

DESCRIPTION OF DETAILED TABULATIONS

Supporting statistical data for the estimates of average service lives and survivor curves, the annual depreciation calculations, and salvage and cost of removal for the years 2016-2020 are presented in three sections.

The section beginning on page VI-2 sets forth, for each depreciable group analyzed by the retirement rate method, a chart depicting the original and estimated survivor curves followed by a tabular presentation of the original life table plotted on the chart. A cumulative summary, by year installed, for utility plant and the supporting data for the original cost depreciation calculations are presented in the section beginning on page VII-3. The tabulations of experienced and estimated net salvage, by year and account for the five-year period 2016-2020, are presented in the section beginning on page VIII-2.

In the first section, the survivor curves estimated for the depreciable groups are shown as dark smooth curves on the charts. Each smooth survivor curve is denoted by a numeral followed by the type curve designation. The numeral used is the average life derived from the entire curve from 100 percent to zero percent surviving. In cases where only a segment of the estimated curve is used in the depreciation calculation, the numeral used for identification purposes is not a designation of the average life of the group. The titles of the charts indicate the group, the symbol used to plot the points of the original life table, and the experience and placement bands of the life tables which were plotted. The experience band indicates the range of years for which the retirements were used to develop the stub survivor curve. The placements indicate, for the related experience band, the range of years of installations which appear in the experience.

The tables of the calculated annual depreciation related to net original cost are presented in account sequence in the second section and indicate the estimated average survivor curves used in the calculations. The tables set forth, for each installation year, the original cost, calculated accrued depreciation, allocated book reserve, remaining life expectancy, and the calculated annual accrual.

Detailed tabulations setting forth the cost of removal, gross salvage and net salvage amounts, by account and year, are presented in the third section. The net salvage amounts, by account and year, are carried forward to Table 5, which presents the five-year amortization of net salvage.

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 1. DEVELOPMENT OF NET ORIGINAL COST AS OF DECEMBER 31, 2020

DEPRCIABLE GROUP (1)	ORIGINAL COST AS OF DECEMBER 31, 2020 (2)	-	CUSTOMER ADVANCES (3)	-	CONTRIBUTIONS IN AID OF CONSTRUCTION (4)	-	EXCLUDED PROPERTY (5)	=	NET ORIGINAL COST AS OF DECMEBER 31, 2020 (6)
DEPRECIABLE PLANT									
354.20 STRUCTURES AND IMPROVEMENTS - COLLECTION	3,990,966.49								3,990,966.49
354.30 STRUCTURES AND IMPROVEMENTS - SPP	6,744,506.51								6,744,506.51
354.40 STRUCTURES AND IMPROVEMENTS - TDP	56,542,344.95				2,500,000.00				54,042,344.95
360.10 COLLECTION SEWERS - FORCE MAINS	355,954.70								355,954.70
361.10 COLLECTION SEWERS - GRAVITY MAINS	106,779,109.37				8,142,432.47				98,636,676.90
361.20 MANHOLES	17,107,597.50								17,107,597.50
362.00 SPECIAL COLLECTION STRUCTURES	12,631,538.89								12,631,538.89
363.00 SERVICES	10,987,626.62				841,466.15				10,146,160.47
364.00 FLOW MEASURING DEVICES	1,168,413.58								1,168,413.58
371.00 PUMPING EQUIPMENT	5,361,715.13								5,361,715.13
380.00 TREATMENT EQUIPMENT	19,600,662.15								19,600,662.15
382.00 OUTFALL SEWER LINES	1,554,032.48								1,554,032.48
389.10 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES	4,279,906.20								4,279,906.20
389.60 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS	120,000.00								120,000.00
390.00 OFFICE FURNITURE AND EQUIPMENT	1,007,993.82								1,007,993.82
391.00 TRANSPORTATION EQUIPMENT	5,055,708.24								5,055,708.24
393.00 TOOLS, SHOP AND GARAGE EQUIPMENT	1,226,631.12								1,226,631.12
394.00 LABORATORY EQUIPMENT	150,892.37								150,892.37
395.00 POWER OPERATED EQUIPMENT	718,831.76								718,831.76
396.00 COMMUNICATION EQUIPMENT	442,161.18								442,161.18
397.00 MISCELLANEOUS EQUIPMENT	330,887.22								330,887.22
TOTAL DEPRECIABLE PLANT	**256,157,480.28**		**0.00**		**11,483,898.62**		**0.00**		**244,673,581.66**
NONDEPRECIABLE PLANT									
353.20 LAND AND LAND RIGHTS - COLLECTION	599,222.68								599,222.68
353.30 LAND AND LAND RIGHTS - SPP	43,570.00								43,570.00
353.40 LAND AND LAND RIGHTS - TDP	110,019.50								110,019.50
TOTAL NONDEPRECIABLE PLANT	**752,812.18**		**0.00**		**0.00**		**0.00**		**752,812.18**
TOTAL UTILITY PLANT	**256,910,292.46**		**0.00**		**11,483,898.62**		**0.00**		**245,426,393.84**

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 2. SUMMARY OF ESTIMATED SURVIVOR CURVE, ORIGINAL COST, BOOK RESERVE, AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WASTEWATER PLANT AS OF DECEMBER 31, 2020

	DEPRECIABLE GROUP	SURVIVOR CURVE	ORIGINAL COST AS OF DECEMBER 31, 2020	BOOK RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)=(6)/(3)	(8)
	DEPRECIABLE PLANT							
354.20	STRUCTURES AND IMPROVEMENTS - COLLECTION	45-R3	3,990,966.49	140,371	3,850,595	104,749	2.62	36.8
354.30	STRUCTURES AND IMPROVEMENTS - SPP	55-S0	6,744,506.51	1,071,709	5,672,798	175,549	2.60	32.3
354.40	STRUCTURES AND IMPROVEMENTS - TDP	55-S0	54,042,344.95	12,942,812	41,099,533	1,320,713	2.44	31.1
360.10	COLLECTION SEWERS - FORCE MAINS	75-R3	355,954.70	163,875	192,079	4,585	1.29	41.9
361.10	COLLECTION SEWERS - GRAVITY MAINS	80-R2.5	98,636,676.90	26,580,811	72,055,866	1,419,163	1.44	50.8
361.20	MANHOLES	50-S2.5	17,107,597.50	8,342,320	8,765,277	339,135	1.98	25.8
362.00	SPECIAL COLLECTION STRUCTURES	60-R2.5	12,631,538.89	105,473	12,526,066	286,310	2.27	43.8
363.00	SERVICES	47-R3	10,146,160.47	5,424,102	4,722,058	226,595	2.23	20.8
364.00	FLOW MEASURING DEVICES	15-L2.5	1,168,413.58	212,502	955,911	102,467	8.77	9.3
371.00	PUMPING EQUIPMENT	30-S0.5	5,361,715.13	690,536	4,671,179	248,426	4.63	18.8
380.00	TREATMENT EQUIPMENT	35-S1.5	19,600,662.15	3,028,436	16,572,226	775,935	3.96	21.4
382.00	OUTFALL SEWER LINES	50-R3	1,554,032.48	54,047	1,499,986	36,573	2.35	41.0
389.10	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES	20-S2.5	4,279,906.20	1,424,177	2,855,730	255,044	5.96	11.2
389.60	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS	5-SQ	120,000.00	12,000	108,000	24,000	20.00	4.5
390.00	OFFICE FURNITURE AND EQUIPMENT	20-SQ	1,007,993.82	93,811	914,183	61,804	6.13	14.8
391.00	TRANSPORTATION EQUIPMENT	14-L4	5,055,708.24	2,291,746	2,763,962	338,733	6.70	8.2
393.00	TOOLS, SHOP AND GARAGE EQUIPMENT	20-SQ	1,226,631.12	23,001	1,203,631	77,416	6.31	15.5
394.00	LABORATORY EQUIPMENT	15-SQ	150,892.37	2,841	148,052	17,583	11.65	8.4
395.00	POWER OPERATED EQUIPMENT	22-R2	718,831.76	501,695	217,136	17,067	2.37	12.7
396.00	COMMUNICATION EQUIPMENT	15-SQ	442,161.18	50,622	391,539	32,088	7.26	12.2
397.00	MISCELLANEOUS EQUIPMENT	15-SQ	330,887.22	41,032	289,855	22,634	6.84	12.8
	TOTAL DEPRECIABLE PLANT		**244,673,581.66**	**63,197,920**	**181,475,662**	**5,886,569**	**2.41**	**30.8**
	NONDEPRECIABLE PLANT							
353.20	LAND AND LAND RIGHTS - COLLECTION		599,222.68					
353.30	LAND AND LAND RIGHTS - SPP		43,570.00					
353.40	LAND AND LAND RIGHTS - TDP		110,019.50					
	TOTAL NONDEPRECIABLE PLANT		**752,812.18**					
	AMORTIZATION OF NET SALVAGE					**306,476**		
	TOTAL UTILITY PLANT		**245,426,393.84**	**63,197,920**	**181,475,662**	**6,193,045**		

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 3. BRINGFORWARD TO DECEMBER 31, 2020, OF BOOK RESERVE AS OF DECEMBER 31, 2019

ACCOUNT (1)	BOOK RESERVE BALANCE AS OF 12/31/2019 (2)	+	PROJECTED DEPRECIATION ACCRUALS (3)	-	PROJECTED RETIREMENTS (4)	-	PROJECTED COST OF REMOVAL (5)	+	PROJECTED SALVAGE (6)	+	ACQUISITIONS (7)	=	PROJECTED BOOK RESERVE BALANCE AS OF 12/31/2020 (8)
354.20	49,455		105,234		14,318								140,371
354.30	906,914		191,895		24,197		2,904						1,071,709
354.40	11,850,211		1,307,623		202,851		12,171						12,942,812
360.10	158,612		5,263										163,875
361.10	25,599,690		1,503,935		360,562		162,253						26,580,811
361.20	7,996,107		351,395		5,182								8,342,320
362.00	0		105,473										105,473
363.00	5,201,384		247,125		15,546		9,327		466				5,424,102
364.00	106,410		106,092										212,502
371.00	539,899		232,753		70,184		11,931						690,536
380.00	2,563,845		759,364		280,737		14,037						3,028,436
382.00	16,191		37,856										54,047
389.10	1,173,228		257,858		6,909								1,424,177
389.60	0		12,000										12,000
390.00	29,093		64,718										93,811
391.00	1,924,636		367,110										2,291,746
393.00	(59,280)		82,281										23,001
394.00	(17,102)		19,943										2,841
395.00	482,824		18,871										501,695
396.00	10,040		40,582										50,622
397.00	17,528		23,504										41,032
TOTAL	**58,549,687**		**5,840,875**		**980,485**		**212,623**		**466**		**0**		**63,197,920**

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 4. CALCULATION OF DEPRECIATION ACCRUALS FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2020

ACCOUNT (1)	NET ORIGINAL COST AS OF 12/31/2019 (2)	NET ORIGINAL COST AS OF 12/31/2020 (3)	ACCRUAL RATE (4)	AVERAGE ACCRUALS (5)=([(2)+(3)]/2)*(4)	AMORTIZATION OF NET SALVAGE (6)	PROJECTED DEPRECIATION ACCRUALS (7)=(5)+(6)
354.20	3,756,607.22	3,990,966.49	2.65	102,655	2,579	105,234
354.30	6,348,452.67	6,744,506.51	2.66	174,136	17,759	191,895
354.40	50,722,040.81	54,042,344.95	2.47	1,293,840	13,783	1,307,623
360.10	355,954.70	355,954.70	1.32	4,699	564	5,263
361.10	92,764,283.76	98,636,676.90	1.44	1,378,087	125,848	1,503,935
361.20	16,922,779.39	17,107,597.50	2.03	345,408	5,987	351,395
362.00	0.00	12,631,538.89	1.67	105,473		105,473
363.00	9,791,706.13	10,146,160.47	2.28	227,292	19,833	247,125
364.00	1,168,413.58	1,168,413.58	9.08	106,092		106,092
371.00	4,212,927.32	5,361,715.13	4.68	224,047	8,706	232,753
380.00	15,005,510.89	19,600,662.15	4.21	728,460	30,904	759,364
382.00	1,554,032.48	1,554,032.48	2.38	36,986	870	37,856
389.10	4,286,815.38	4,279,906.20	6.02	257,858		257,858
389.60	0.00	120,000.00	20.00	12,000		12,000
390.00	1,007,993.82	1,007,993.82	6.16	62,092	2,626	64,718
391.00	5,033,208.24	5,055,708.24	6.93	349,581	17,529	367,110
393.00	1,024,131.12	1,226,631.12	6.74	75,851	6,430	82,281
394.00	150,892.37	150,892.37	12.58	18,982	961	19,943
395.00	718,831.76	718,831.76	2.48	17,827	1,044	18,871
396.00	442,161.18	442,161.18	7.41	32,764	7,818	40,582
397.00	330,887.22	330,887.22	6.86	22,699	805	23,504
TOTAL	**215,597,630.04**	**244,673,581.66**		**5,576,829**	**264,046**	**5,840,875**

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

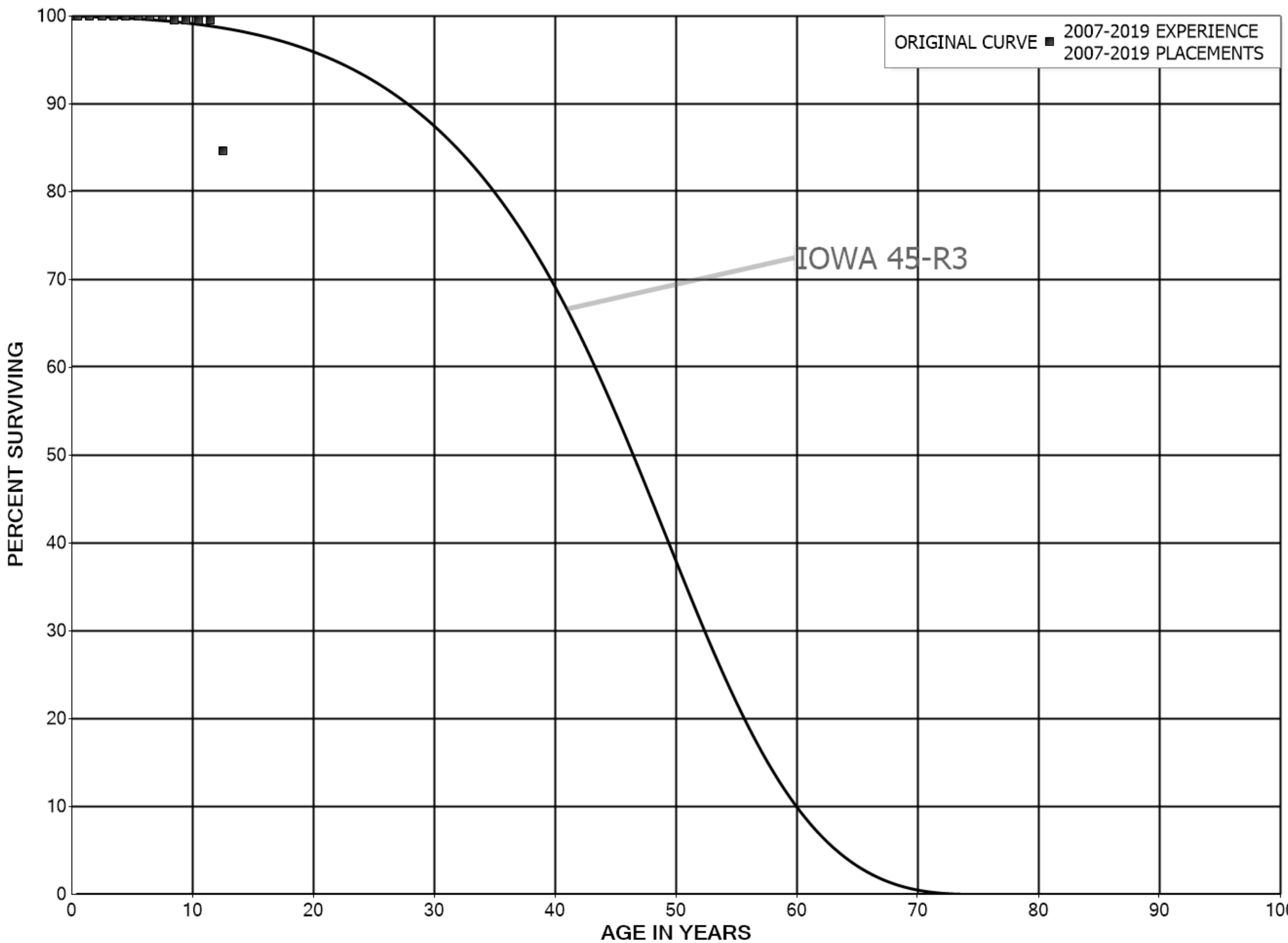
TABLE 5. AMORTIZATION OF EXPERIENCED AND ESTIMATED NET SALVAGE

	2016		2017		2018		2019		PROJECTED 2020			
ACCOUNT	GROSS SALVAGE	COST OF REMOVAL	GROSS SALVAGE	COST OF REMOVAL	GROSS SALVAGE	COST OF REMOVAL	GROSS SALVAGE	COST OF REMOVAL	GROSS SALVAGE	COST OF REMOVAL	NET SALVAGE	SALVAGE ACCRUAL
(1)	(2) -	(3) +	(4) -	(5) +	(6) -	(7) +	(8) -	(9) +	(10) -	(11) =	(12)*	(13)=(12)/5
354.20						12,897					(12,897)	(2,579)
354.30						2,859		85,935		2,904	(91,697)	(18,339)
354.40				1,715		2,403		64,798		12,171	(81,088)	(16,218)
360.10						2,819		0			(2,819)	(564)
361.10				70,300		28,292		530,647		162,253	(791,491)	(158,298)
361.20								29,936			(29,936)	(5,987)
363.00			250	18,802		27,682		52,930	466	9,327	(108,025)	(21,605)
371.00						523		43,008		11,931	(55,462)	(11,092)
380.00				4,298		58,050		92,173		14,037	(168,557)	(33,711)
382.00						1,046		3,306			(4,352)	(870)
390.00						13,129					(13,129)	(2,626)
391.00						42,450		45,196			(87,646)	(17,529)
393.00						4,039		28,110			(32,149)	(6,430)
394.00								4,805			(4,805)	(961)
395.00								5,218			(5,218)	(1,044)
396.00								39,091			(39,091)	(7,818)
397.00								4,027			(4,027)	(805)
TOTAL	**0**	**0**	**250**	**95,114**	**0**	**196,189**	**0**	**1,029,179**	**466**	**212,623**	**(1,532,389)**	**(306,476)**

* Column (12) equals the summation of Columns (2) through (11).

PART VI. SERVICE LIFE STATISTICS

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 354.20 STRUCTURES AND IMPROVEMENTS - COLLECTION
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

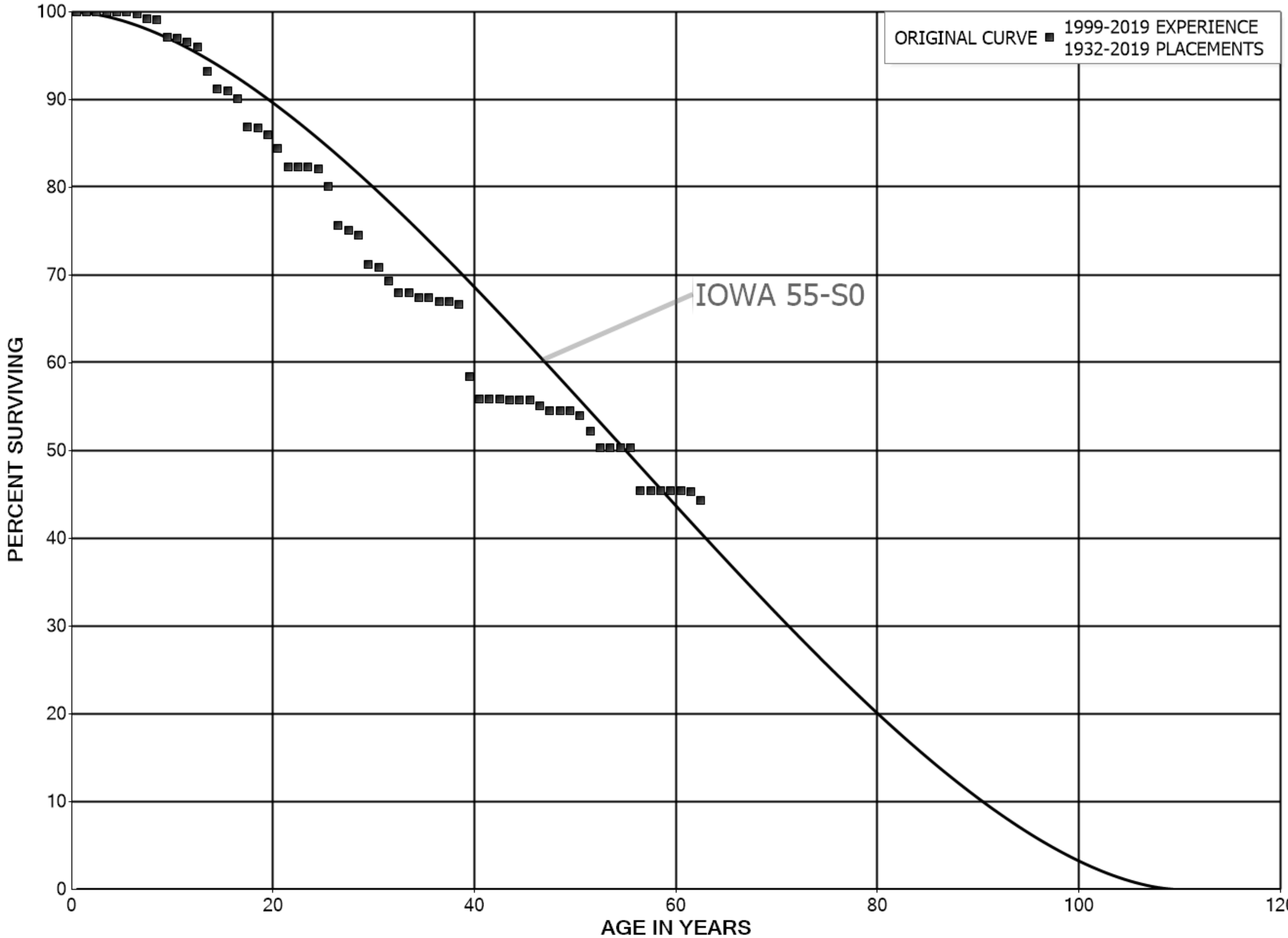
ACCOUNT 354.20 STRUCTURES AND IMPROVEMENTS - COLLECTION

ORIGINAL LIFE TABLE

PLACEMENT BAND 2007-2019 EXPERIENCE BAND 2007-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	4,844,636		0.0000	1.0000	100.00
0.5	3,478,774		0.0000	1.0000	100.00
1.5	1,864,154		0.0000	1.0000	100.00
2.5	516,452	0	0.0000	1.0000	100.00
3.5	479,797		0.0000	1.0000	100.00
4.5	437,900	416	0.0010	0.9990	100.00
5.5	422,717		0.0000	1.0000	99.90
6.5	321,516		0.0000	1.0000	99.90
7.5	321,516	1,408	0.0044	0.9956	99.90
8.5	311,522		0.0000	1.0000	99.47
9.5	311,522		0.0000	1.0000	99.47
10.5	134,415		0.0000	1.0000	99.47
11.5	20,659	3,076	0.1489	0.8511	99.47
12.5					84.66

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNTS 354.30 AND 354.40 STRUCTURES AND IMPROVEMENTS - SPP AND TDP
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNTS 354.30 AND 354.40 STRUCTURES AND IMPROVEMENTS - SPP AND TDP

ORIGINAL LIFE TABLE

PLACEMENT BAND 1932-2019 EXPERIENCE BAND 1999-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	70,500,767		0.0000	1.0000	100.00
0.5	76,131,665		0.0000	1.0000	100.00
1.5	80,233,751	6,642	0.0001	0.9999	100.00
2.5	105,447,960		0.0000	1.0000	99.99
3.5	85,605,007	28,836	0.0003	0.9997	99.99
4.5	79,002,174	4,425	0.0001	0.9999	99.96
5.5	46,624,214	105,422	0.0023	0.9977	99.95
6.5	51,444,895	277,564	0.0054	0.9946	99.73
7.5	50,906,335	75,090	0.0015	0.9985	99.19
8.5	50,793,050	1,027,715	0.0202	0.9798	99.04
9.5	34,780,266	28,544	0.0008	0.9992	97.04
10.5	15,695,508	65,025	0.0041	0.9959	96.96
11.5	15,618,899	88,716	0.0057	0.9943	96.56
12.5	20,002,643	601,564	0.0301	0.9699	96.01
13.5	17,169,269	353,428	0.0206	0.9794	93.12
14.5	16,203,968	41,247	0.0025	0.9975	91.20
15.5	16,204,082	163,309	0.0101	0.9899	90.97
16.5	13,585,539	481,677	0.0355	0.9645	90.06
17.5	12,995,837	17,548	0.0014	0.9986	86.86
18.5	12,210,208	114,143	0.0093	0.9907	86.74
19.5	7,393,964	134,551	0.0182	0.9818	85.93
20.5	6,513,761	157,405	0.0242	0.9758	84.37
21.5	6,711,244	2,801	0.0004	0.9996	82.33
22.5	7,374,817	1,543	0.0002	0.9998	82.30
23.5	6,783,698	15,823	0.0023	0.9977	82.28
24.5	6,921,413	166,617	0.0241	0.9759	82.09
25.5	6,763,696	380,532	0.0563	0.9437	80.11
26.5	5,899,041	38,147	0.0065	0.9935	75.60
27.5	4,281,769	34,820	0.0081	0.9919	75.12
28.5	3,967,252	175,318	0.0442	0.9558	74.50
29.5	4,051,668	21,732	0.0054	0.9946	71.21
30.5	5,300,696	114,682	0.0216	0.9784	70.83
31.5	4,027,463	76,382	0.0190	0.9810	69.30
32.5	2,813,504	2,190	0.0008	0.9992	67.98
33.5	2,649,698	20,846	0.0079	0.9921	67.93
34.5	1,122,954		0.0000	1.0000	67.40
35.5	398,615	2,457	0.0062	0.9938	67.40
36.5	369,394		0.0000	1.0000	66.98
37.5	339,885	1,942	0.0057	0.9943	66.98
38.5	249,055	30,753	0.1235	0.8765	66.60

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNTS 354.30 AND 354.40 STRUCTURES AND IMPROVEMENTS - SPP AND TDP

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1932-2019 EXPERIENCE BAND 1999-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	877,505	37,754	0.0430	0.9570	58.37
40.5	1,351,121		0.0000	1.0000	55.86
41.5	19,298,436	4,893	0.0003	0.9997	55.86
42.5	19,293,543	30,808	0.0016	0.9984	55.85
43.5	32,745,779		0.0000	1.0000	55.76
44.5	14,343,608	10,968	0.0008	0.9992	55.76
45.5	14,332,640	153,806	0.0107	0.9893	55.72
46.5	14,199,715	156,087	0.0110	0.9890	55.12
47.5	552,598		0.0000	1.0000	54.51
48.5	1,223,925		0.0000	1.0000	54.51
49.5	1,265,936	12,500	0.0099	0.9901	54.51
50.5	1,284,936	43,517	0.0339	0.9661	53.98
51.5	570,093	20,853	0.0366	0.9634	52.15
52.5	524,823		0.0000	1.0000	50.24
53.5	524,823		0.0000	1.0000	50.24
54.5	447,474		0.0000	1.0000	50.24
55.5	447,474	42,843	0.0957	0.9043	50.24
56.5	13,313,486	1,903	0.0001	0.9999	45.43
57.5	13,311,583		0.0000	1.0000	45.42
58.5	13,049,341	13	0.0000	1.0000	45.42
59.5	140,486		0.0000	1.0000	45.42
60.5	140,486	363	0.0026	0.9974	45.42
61.5	140,123	3,040	0.0217	0.9783	45.31
62.5					44.32
63.5					
64.5					
65.5					
66.5					
67.5					
68.5	39,928		0.0000		
69.5	39,928		0.0000		
70.5	39,928		0.0000		
71.5	39,928		0.0000		
72.5	40,428		0.0000		
73.5	39,928		0.0000		
74.5	39,928		0.0000		
75.5	39,928		0.0000		
76.5	602		0.0000		
77.5	602		0.0000		
78.5	602		0.0000		

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

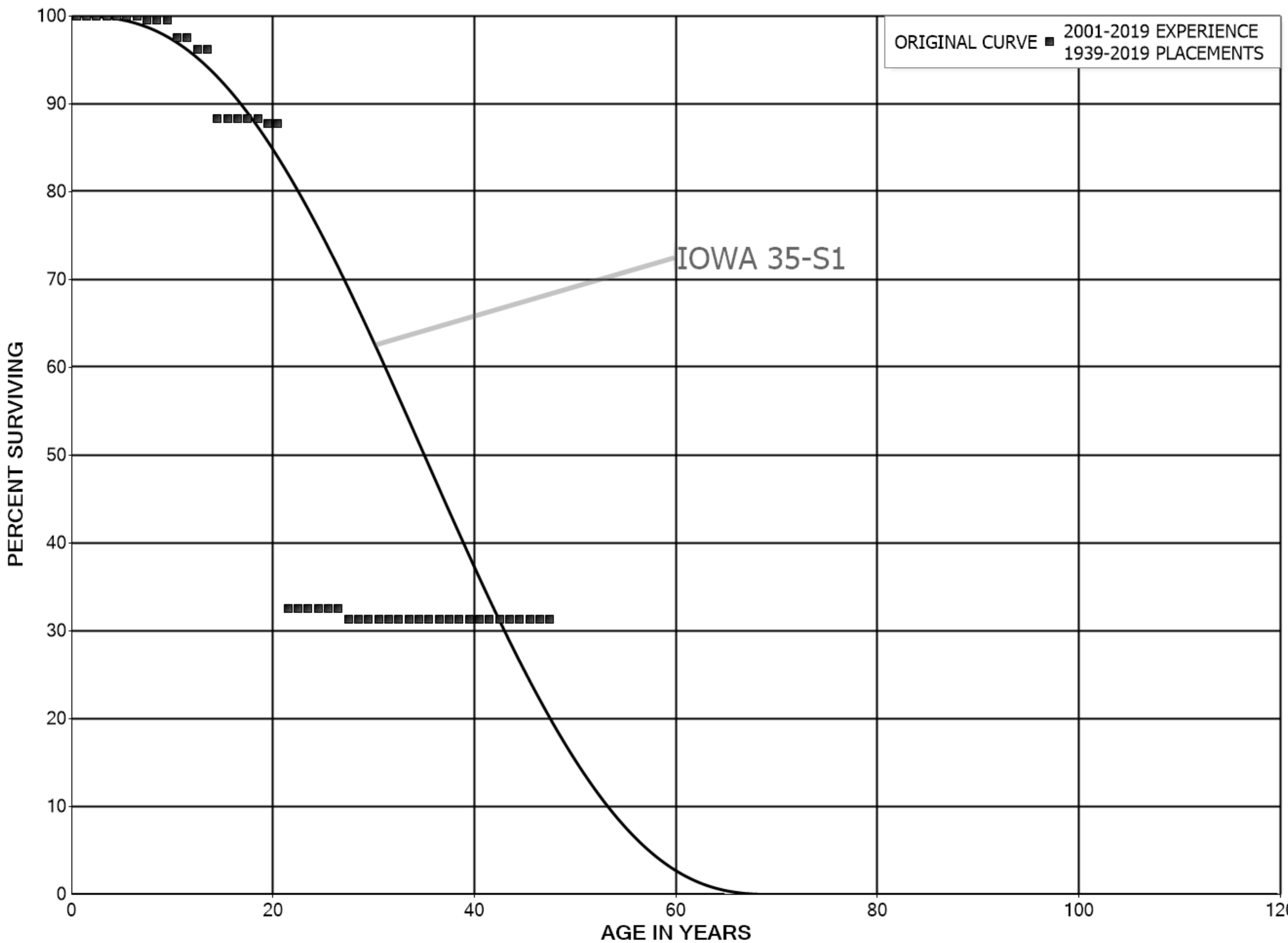
ACCOUNTS 354.30 AND 354.40 STRUCTURES AND IMPROVEMENTS - SPP AND TDP

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1932-2019 EXPERIENCE BAND 1999-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	602		0.0000		
80.5	602		0.0000		
81.5	602		0.0000		
82.5	602		0.0000		
83.5	602		0.0000		
84.5	602		0.0000		
85.5	602		0.0000		
86.5	602		0.0000		
87.5					

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 354.70 STRUCTURES AND IMPROVEMENTS - GENERAL
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 354.70 STRUCTURES AND IMPROVEMENTS - GENERAL

ORIGINAL LIFE TABLE

PLACEMENT BAND 1939-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	2,331,347		0.0000	1.0000	100.00
0.5	2,248,872	400	0.0002	0.9998	100.00
1.5	2,139,519		0.0000	1.0000	99.98
2.5	2,007,976		0.0000	1.0000	99.98
3.5	1,998,798		0.0000	1.0000	99.98
4.5	978,189		0.0000	1.0000	99.98
5.5	566,034		0.0000	1.0000	99.98
6.5	540,776	2,524	0.0047	0.9953	99.98
7.5	668,631		0.0000	1.0000	99.52
8.5	661,526		0.0000	1.0000	99.52
9.5	622,592	12,303	0.0198	0.9802	99.52
10.5	529,371	373	0.0007	0.9993	97.55
11.5	209,362	2,752	0.0131	0.9869	97.48
12.5	204,311		0.0000	1.0000	96.20
13.5	220,425	18,073	0.0820	0.9180	96.20
14.5	208,207		0.0000	1.0000	88.31
15.5	208,207		0.0000	1.0000	88.31
16.5	165,317		0.0000	1.0000	88.31
17.5	193,471		0.0000	1.0000	88.31
18.5	210,457	1,510	0.0072	0.9928	88.31
19.5	223,914		0.0000	1.0000	87.68
20.5	223,914	140,772	0.6287	0.3713	87.68
21.5	67,028		0.0000	1.0000	32.56
22.5	73,481		0.0000	1.0000	32.56
23.5	73,481		0.0000	1.0000	32.56
24.5	73,481		0.0000	1.0000	32.56
25.5	44,261		0.0000	1.0000	32.56
26.5	27,275	1,047	0.0384	0.9616	32.56
27.5	11,260		0.0000	1.0000	31.31
28.5	11,260		0.0000	1.0000	31.31
29.5	11,260		0.0000	1.0000	31.31
30.5	11,260		0.0000	1.0000	31.31
31.5	11,260		0.0000	1.0000	31.31
32.5	11,260		0.0000	1.0000	31.31
33.5	11,260		0.0000	1.0000	31.31
34.5	11,260		0.0000	1.0000	31.31
35.5	450		0.0000	1.0000	31.31
36.5	450		0.0000	1.0000	31.31
37.5	450		0.0000	1.0000	31.31
38.5	450		0.0000	1.0000	31.31

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 354.70 STRUCTURES AND IMPROVEMENTS - GENERAL

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1939-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	450		0.0000	1.0000	31.31
40.5	450		0.0000	1.0000	31.31
41.5	450		0.0000	1.0000	31.31
42.5	450		0.0000	1.0000	31.31
43.5	450		0.0000	1.0000	31.31
44.5	450		0.0000	1.0000	31.31
45.5	450		0.0000	1.0000	31.31
46.5	450		0.0000	1.0000	31.31
47.5					31.31
48.5					
49.5					
50.5					
51.5					
52.5					
53.5					
54.5					
55.5					
56.5					
57.5					
58.5					
59.5					
60.5					
61.5					
62.5					
63.5					
64.5					
65.5					
66.5					
67.5					
68.5	3,802		0.0000		
69.5	3,802		0.0000		
70.5	3,802	283	0.0744		
71.5	3,519		0.0000		
72.5	3,519		0.0000		
73.5	3,519		0.0000		
74.5	3,519		0.0000		
75.5	3,519		0.0000		
76.5	3,519		0.0000		
77.5	3,519		0.0000		
78.5	3,519		0.0000		

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

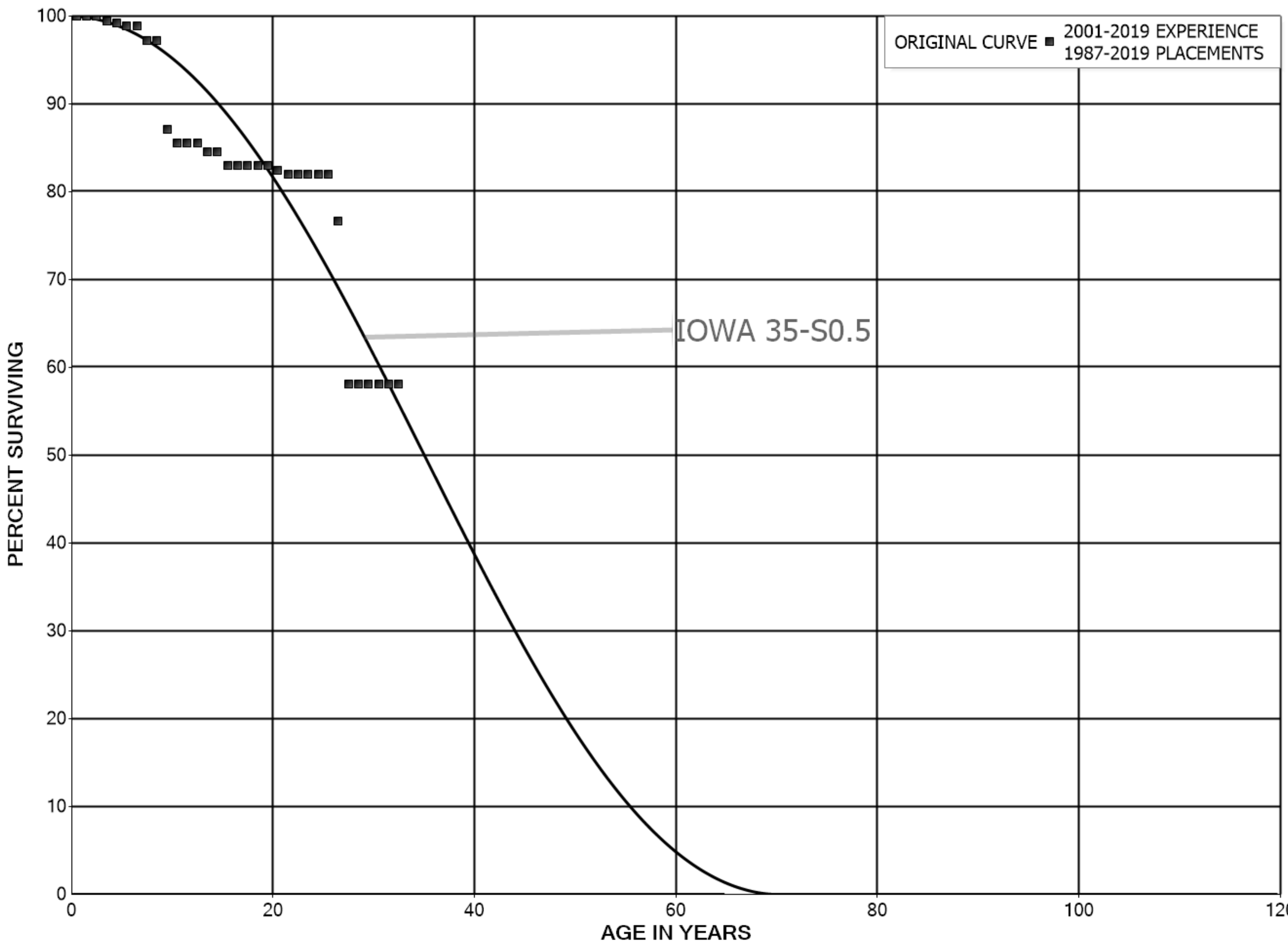
ACCOUNT 354.70 STRUCTURES AND IMPROVEMENTS - GENERAL

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1939-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	3,519		0.0000		
80.5					

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 355.00 POWER GENERATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

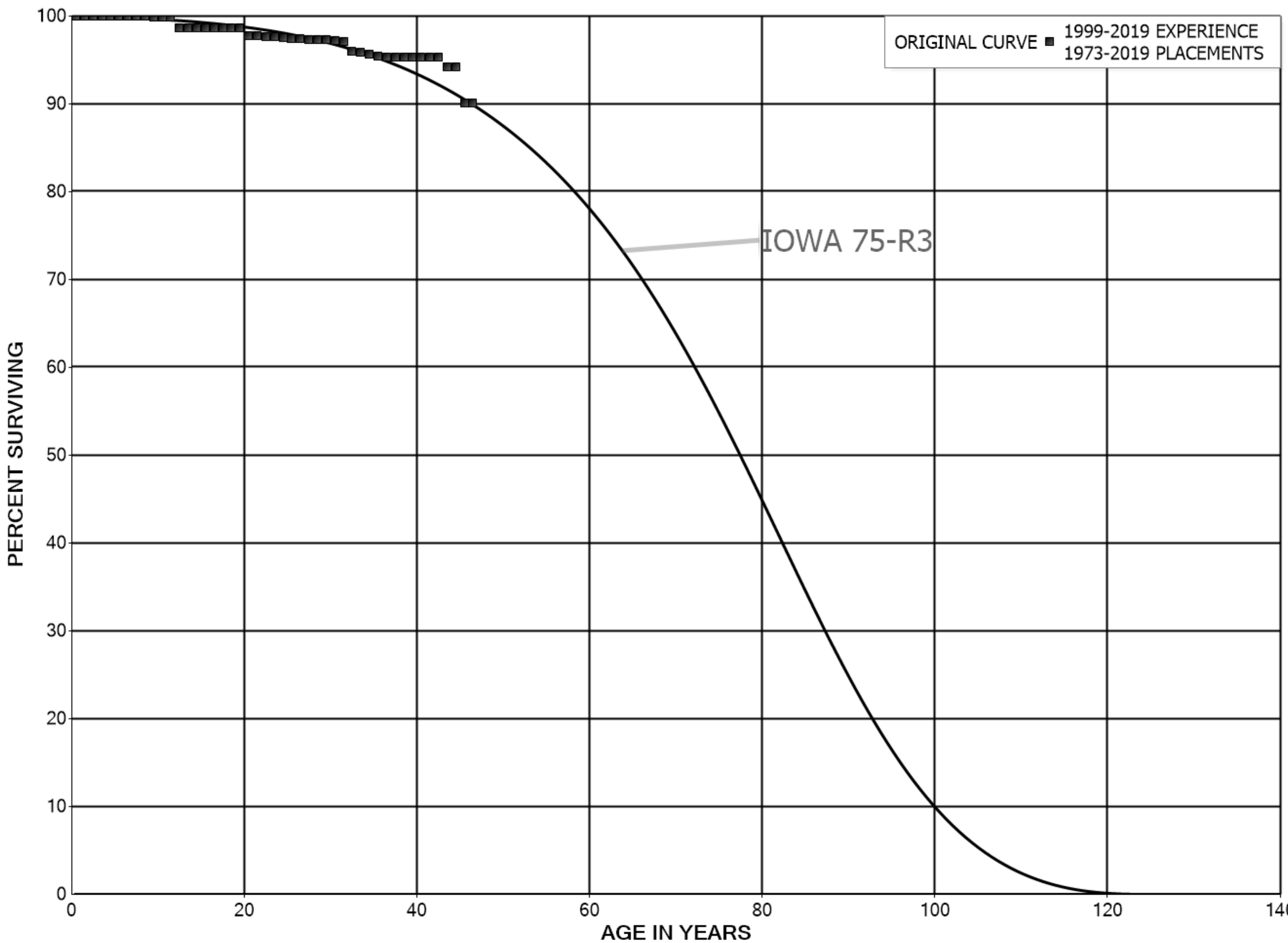
ACCOUNT 355.00 POWER GENERATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1987-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	3,656,122		0.0000	1.0000	100.00
0.5	3,685,338		0.0000	1.0000	100.00
1.5	4,385,880		0.0000	1.0000	100.00
2.5	4,494,639	26,926	0.0060	0.9940	100.00
3.5	4,479,665	10,161	0.0023	0.9977	99.40
4.5	4,398,000	14,523	0.0033	0.9967	99.18
5.5	3,773,674	1,387	0.0004	0.9996	98.85
6.5	3,828,658	61,470	0.0161	0.9839	98.81
7.5	3,336,361		0.0000	1.0000	97.23
8.5	3,321,984	347,576	0.1046	0.8954	97.23
9.5	2,953,727	51,388	0.0174	0.9826	87.05
10.5	328,249		0.0000	1.0000	85.54
11.5	144,528		0.0000	1.0000	85.54
12.5	267,555	3,097	0.0116	0.9884	85.54
13.5	327,093		0.0000	1.0000	84.55
14.5	278,538	5,336	0.0192	0.9808	84.55
15.5	281,064		0.0000	1.0000	82.93
16.5	293,645		0.0000	1.0000	82.93
17.5	241,944		0.0000	1.0000	82.93
18.5	203,466		0.0000	1.0000	82.93
19.5	203,466	1,204	0.0059	0.9941	82.93
20.5	202,262	1,103	0.0055	0.9945	82.44
21.5	432,455		0.0000	1.0000	81.99
22.5	402,008		0.0000	1.0000	81.99
23.5	402,008		0.0000	1.0000	81.99
24.5	402,008		0.0000	1.0000	81.99
25.5	402,978	26,388	0.0655	0.9345	81.99
26.5	174,978	42,310	0.2418	0.7582	76.62
27.5	89,880		0.0000	1.0000	58.09
28.5	68,585		0.0000	1.0000	58.09
29.5	68,585		0.0000	1.0000	58.09
30.5	19,246		0.0000	1.0000	58.09
31.5	19,246		0.0000	1.0000	58.09
32.5					58.09

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 360.10 COLLECTION SEWERS - FORCE MAINS
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 360.10 COLLECTION SEWERS - FORCE MAINS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1973-2019 EXPERIENCE BAND 1999-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	31,766,704	19	0.0000	1.0000	100.00
0.5	28,215,316	26	0.0000	1.0000	100.00
1.5	35,558,986	33	0.0000	1.0000	100.00
2.5	23,783,577	70	0.0000	1.0000	100.00
3.5	21,373,939	350	0.0000	1.0000	100.00
4.5	18,774,036	315	0.0000	1.0000	100.00
5.5	14,425,014	397	0.0000	1.0000	100.00
6.5	14,188,090	1,611	0.0001	0.9999	99.99
7.5	14,122,868	1,747	0.0001	0.9999	99.98
8.5	13,850,582	16,747	0.0012	0.9988	99.97
9.5	13,465,099	64	0.0000	1.0000	99.85
10.5	13,318,392	82	0.0000	1.0000	99.85
11.5	10,748,868	127,626	0.0119	0.9881	99.85
12.5	9,661,386		0.0000	1.0000	98.66
13.5	7,868,737	3,291	0.0004	0.9996	98.66
14.5	7,779,655	99	0.0000	1.0000	98.62
15.5	5,905,707	9	0.0000	1.0000	98.62
16.5	5,774,986	949	0.0002	0.9998	98.62
17.5	5,344,267	1,253	0.0002	0.9998	98.60
18.5	4,614,847	826	0.0002	0.9998	98.58
19.5	4,197,905	37,017	0.0088	0.9912	98.56
20.5	3,986,776	70	0.0000	1.0000	97.69
21.5	4,475,797	1,897	0.0004	0.9996	97.69
22.5	3,907,599	569	0.0001	0.9999	97.65
23.5	4,900,347	3,932	0.0008	0.9992	97.64
24.5	6,419,851	13,411	0.0021	0.9979	97.56
25.5	6,580,720	788	0.0001	0.9999	97.35
26.5	6,033,834	1,095	0.0002	0.9998	97.34
27.5	6,011,515	2,049	0.0003	0.9997	97.32
28.5	5,991,855	3,135	0.0005	0.9995	97.29
29.5	6,011,945	3,365	0.0006	0.9994	97.24
30.5	5,911,879	4,784	0.0008	0.9992	97.19
31.5	5,517,306	65,876	0.0119	0.9881	97.11
32.5	5,225,480	4,106	0.0008	0.9992	95.95
33.5	5,192,765	13,636	0.0026	0.9974	95.87
34.5	4,869,190	12,733	0.0026	0.9974	95.62
35.5	4,856,457	2,869	0.0006	0.9994	95.37
36.5	4,661,206	15	0.0000	1.0000	95.31
37.5	4,607,713		0.0000	1.0000	95.31
38.5	4,446,768	1,883	0.0004	0.9996	95.31

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

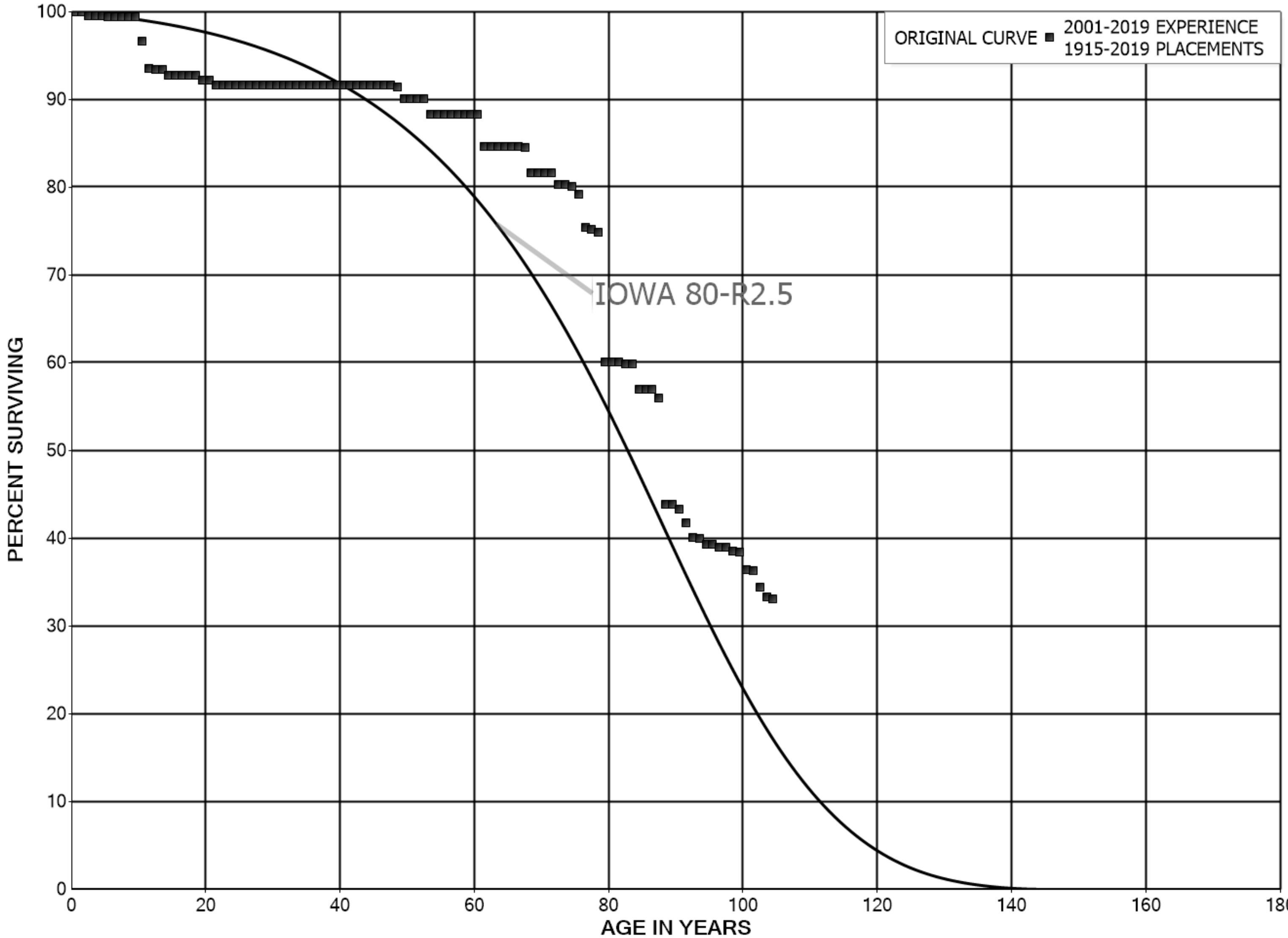
ACCOUNT 360.10 COLLECTION SEWERS - FORCE MAINS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1973-2019 EXPERIENCE BAND 1999-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,369,779	82	0.0000	1.0000	95.27
40.5	4,295,948	6	0.0000	1.0000	95.27
41.5	4,025,587	0	0.0000	1.0000	95.27
42.5	3,566,737	42,283	0.0119	0.9881	95.27
43.5	2,553,034		0.0000	1.0000	94.14
44.5	1,703,254	73,783	0.0433	0.9567	94.14
45.5	125,695		0.0000	1.0000	90.06
46.5					90.06

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 361.10 COLLECTION SEWERS - GRAVITY MAINS
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 361.10 COLLECTION SEWERS - GRAVITY MAINS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1915-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	123,698,865	1,489	0.0000	1.0000	100.00
0.5	80,968,134	1,744	0.0000	1.0000	100.00
1.5	71,427,735	349,743	0.0049	0.9951	100.00
2.5	61,491,291		0.0000	1.0000	99.51
3.5	47,985,505		0.0000	1.0000	99.51
4.5	43,496,282	26,093	0.0006	0.9994	99.51
5.5	34,622,702	11,064	0.0003	0.9997	99.45
6.5	36,236,717	10,556	0.0003	0.9997	99.42
7.5	44,473,440	0	0.0000	1.0000	99.39
8.5	44,403,805	13,334	0.0003	0.9997	99.39
9.5	42,579,956	1,180,167	0.0277	0.9723	99.36
10.5	27,257,562	886,763	0.0325	0.9675	96.60
11.5	23,041,413	10,064	0.0004	0.9996	93.46
12.5	15,696,984	13,300	0.0008	0.9992	93.42
13.5	13,197,516	82,522	0.0063	0.9937	93.34
14.5	9,898,866	187	0.0000	1.0000	92.76
15.5	8,175,329	367	0.0000	1.0000	92.75
16.5	11,005,722	1,374	0.0001	0.9999	92.75
17.5	22,668,123		0.0000	1.0000	92.74
18.5	22,367,436	144,378	0.0065	0.9935	92.74
19.5	21,841,271		0.0000	1.0000	92.14
20.5	10,429,000	56,430	0.0054	0.9946	92.14
21.5	13,494,984		0.0000	1.0000	91.64
22.5	12,095,717		0.0000	1.0000	91.64
23.5	13,846,891		0.0000	1.0000	91.64
24.5	14,182,481		0.0000	1.0000	91.64
25.5	19,071,002		0.0000	1.0000	91.64
26.5	16,170,692		0.0000	1.0000	91.64
27.5	36,060,280		0.0000	1.0000	91.64
28.5	35,923,542		0.0000	1.0000	91.64
29.5	33,683,971		0.0000	1.0000	91.64
30.5	8,391,683	866	0.0001	0.9999	91.64
31.5	8,167,272	21	0.0000	1.0000	91.63
32.5	8,027,418		0.0000	1.0000	91.63
33.5	7,266,714		0.0000	1.0000	91.63
34.5	5,540,059		0.0000	1.0000	91.63
35.5	3,406,034		0.0000	1.0000	91.63
36.5	3,951,146		0.0000	1.0000	91.63
37.5	4,287,296		0.0000	1.0000	91.63
38.5	4,273,219		0.0000	1.0000	91.63

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 361.10 COLLECTION SEWERS - GRAVITY MAINS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1915-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,243,666		0.0000	1.0000	91.63
40.5	41,503,891	5,447	0.0001	0.9999	91.63
41.5	41,043,016	49	0.0000	1.0000	91.62
42.5	41,341,828		0.0000	1.0000	91.62
43.5	20,516,395		0.0000	1.0000	91.62
44.5	17,262,745	4,573	0.0003	0.9997	91.62
45.5	17,447,879		0.0000	1.0000	91.60
46.5	16,922,111	1,617	0.0001	0.9999	91.60
47.5	1,493,981	2,878	0.0019	0.9981	91.59
48.5	1,491,103	21,283	0.0143	0.9857	91.41
49.5	995,707	187	0.0002	0.9998	90.11
50.5	1,249,631		0.0000	1.0000	90.09
51.5	1,214,773		0.0000	1.0000	90.09
52.5	1,253,366	24,618	0.0196	0.9804	90.09
53.5	28,374,663		0.0000	1.0000	88.32
54.5	38,998,170		0.0000	1.0000	88.32
55.5	39,986,553		0.0000	1.0000	88.32
56.5	13,005,874		0.0000	1.0000	88.32
57.5	59,432,346		0.0000	1.0000	88.32
58.5	60,820,282	557	0.0000	1.0000	88.32
59.5	59,761,303	747	0.0000	1.0000	88.32
60.5	2,094,297	87,761	0.0419	0.9581	88.32
61.5	22,663,762	8	0.0000	1.0000	84.62
62.5	21,213,491	61	0.0000	1.0000	84.62
63.5	21,215,934	289	0.0000	1.0000	84.62
64.5	46,353		0.0000	1.0000	84.62
65.5	1,102,303		0.0000	1.0000	84.62
66.5	1,102,303	1,673	0.0015	0.9985	84.62
67.5	1,100,630	37,140	0.0337	0.9663	84.49
68.5	1,259,440		0.0000	1.0000	81.64
69.5	290,689		0.0000	1.0000	81.64
70.5	962,463	168	0.0002	0.9998	81.64
71.5	962,295	15,230	0.0158	0.9842	81.62
72.5	1,042,298	993	0.0010	0.9990	80.33
73.5	946,072	2,053	0.0022	0.9978	80.25
74.5	683,176	7,508	0.0110	0.9890	80.08
75.5	675,668	32,767	0.0485	0.9515	79.20
76.5	642,901	1,310	0.0020	0.9980	75.36
77.5	1,531,686	8,017	0.0052	0.9948	75.20
78.5	1,523,669	299,242	0.1964	0.8036	74.81

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

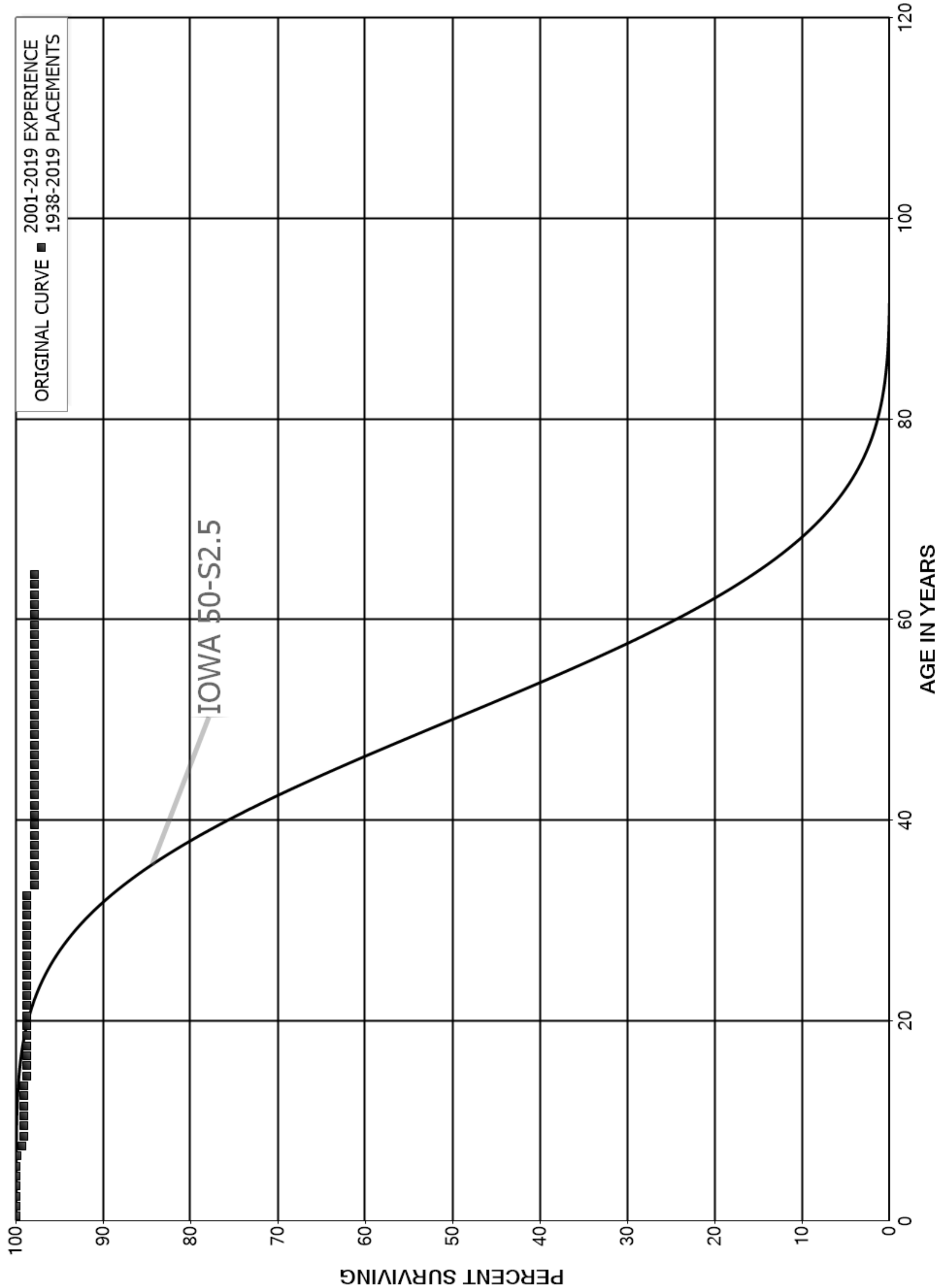
ACCOUNT 361.10 COLLECTION SEWERS - GRAVITY MAINS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1915-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	1,224,427	291	0.0002	0.9998	60.12
80.5	1,522,508		0.0000	1.0000	60.10
81.5	632,413	2,303	0.0036	0.9964	60.10
82.5	648,868		0.0000	1.0000	59.89
83.5	648,868	31,252	0.0482	0.9518	59.89
84.5	601,981	10	0.0000	1.0000	57.00
85.5	722,814		0.0000	1.0000	57.00
86.5	722,814	13,485	0.0187	0.9813	57.00
87.5	709,329	153,014	0.2157	0.7843	55.94
88.5	556,315	264	0.0005	0.9995	43.87
89.5	329,027	4,352	0.0132	0.9868	43.85
90.5	306,175	11,276	0.0368	0.9632	43.27
91.5	294,898	11,132	0.0377	0.9623	41.68
92.5	283,767	1,273	0.0045	0.9955	40.10
93.5	282,494	4,366	0.0155	0.9845	39.92
94.5	278,128	221	0.0008	0.9992	39.31
95.5	277,906	1,967	0.0071	0.9929	39.27
96.5	275,939	42	0.0002	0.9998	39.00
97.5	3,804,626	42,906	0.0113	0.9887	38.99
98.5	3,761,720	15,091	0.0040	0.9960	38.55
99.5	3,616,599	191,754	0.0530	0.9470	38.40
100.5	3,424,846	6,012	0.0018	0.9982	36.36
101.5	96,405	5,167	0.0536	0.9464	36.30
102.5	91,238	2,967	0.0325	0.9675	34.35
103.5	88,271	309	0.0035	0.9965	33.23
104.5					33.12

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 361.20 MANHOLES
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 361.20 MANHOLES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1938-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	14,379,651		0.0000	1.0000	100.00
0.5	10,176,887		0.0000	1.0000	100.00
1.5	10,661,285	0	0.0000	1.0000	100.00
2.5	11,952,425		0.0000	1.0000	100.00
3.5	12,083,028	911	0.0001	0.9999	100.00
4.5	7,585,455		0.0000	1.0000	99.99
5.5	5,573,639	6,667	0.0012	0.9988	99.99
6.5	4,589,383	27,566	0.0060	0.9940	99.87
7.5	4,569,090	10,961	0.0024	0.9976	99.27
8.5	5,066,097		0.0000	1.0000	99.03
9.5	5,304,644		0.0000	1.0000	99.03
10.5	5,838,060		0.0000	1.0000	99.03
11.5	5,353,439		0.0000	1.0000	99.03
12.5	4,555,554		0.0000	1.0000	99.03
13.5	4,114,028	12,188	0.0030	0.9970	99.03
14.5	2,635,311		0.0000	1.0000	98.74
15.5	2,105,291	0	0.0000	1.0000	98.74
16.5	2,247,105	472	0.0002	0.9998	98.74
17.5	2,934,821		0.0000	1.0000	98.72
18.5	2,849,242		0.0000	1.0000	98.72
19.5	2,782,656		0.0000	1.0000	98.72
20.5	2,425,509	0	0.0000	1.0000	98.72
21.5	1,772,096		0.0000	1.0000	98.72
22.5	970,343		0.0000	1.0000	98.72
23.5	1,299,611		0.0000	1.0000	98.72
24.5	1,741,110		0.0000	1.0000	98.72
25.5	2,636,710		0.0000	1.0000	98.72
26.5	3,361,749		0.0000	1.0000	98.72
27.5	3,450,899		0.0000	1.0000	98.72
28.5	3,240,536		0.0000	1.0000	98.72
29.5	2,574,979		0.0000	1.0000	98.72
30.5	1,538,799		0.0000	1.0000	98.72
31.5	1,635,548		0.0000	1.0000	98.72
32.5	1,551,747	13,277	0.0086	0.9914	98.72
33.5	1,328,056		0.0000	1.0000	97.88
34.5	1,038,030		0.0000	1.0000	97.88
35.5	1,093,592		0.0000	1.0000	97.88
36.5	1,326,879		0.0000	1.0000	97.88
37.5	1,450,927		0.0000	1.0000	97.88
38.5	1,304,196		0.0000	1.0000	97.88

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 361.20 MANHOLES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1938-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	994,944		0.0000	1.0000	97.88
40.5	2,263,935		0.0000	1.0000	97.88
41.5	2,043,826		0.0000	1.0000	97.88
42.5	2,216,232		0.0000	1.0000	97.88
43.5	2,406,018		0.0000	1.0000	97.88
44.5	2,040,304		0.0000	1.0000	97.88
45.5	2,008,665		0.0000	1.0000	97.88
46.5	1,708,150		0.0000	1.0000	97.88
47.5	301,817		0.0000	1.0000	97.88
48.5	301,817		0.0000	1.0000	97.88
49.5	170,327		0.0000	1.0000	97.88
50.5	201,568		0.0000	1.0000	97.88
51.5	166,180		0.0000	1.0000	97.88
52.5	172,781		0.0000	1.0000	97.88
53.5	1,995,623		0.0000	1.0000	97.88
54.5	1,827,036		0.0000	1.0000	97.88
55.5	1,951,871		0.0000	1.0000	97.88
56.5	131,436		0.0000	1.0000	97.88
57.5	10,950,272		0.0000	1.0000	97.88
58.5	10,950,272		0.0000	1.0000	97.88
59.5	10,825,437		0.0000	1.0000	97.88
60.5	89,564		0.0000	1.0000	97.88
61.5	89,564		0.0000	1.0000	97.88
62.5	89,564		0.0000	1.0000	97.88
63.5	89,564		0.0000	1.0000	97.88
64.5					97.88
65.5	100,437		0.0000		
66.5	100,437		0.0000		
67.5	123,426		0.0000		
68.5	167,059	22,989	0.1376		
69.5	43,633		0.0000		
70.5	84,331		0.0000		
71.5	84,331		0.0000		
72.5	90,699		0.0000		
73.5	84,331		0.0000		
74.5	43,633		0.0000		
75.5	43,633		0.0000		
76.5	43,633		0.0000		
77.5	306,691		0.0000		
78.5	306,691		0.0000		

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

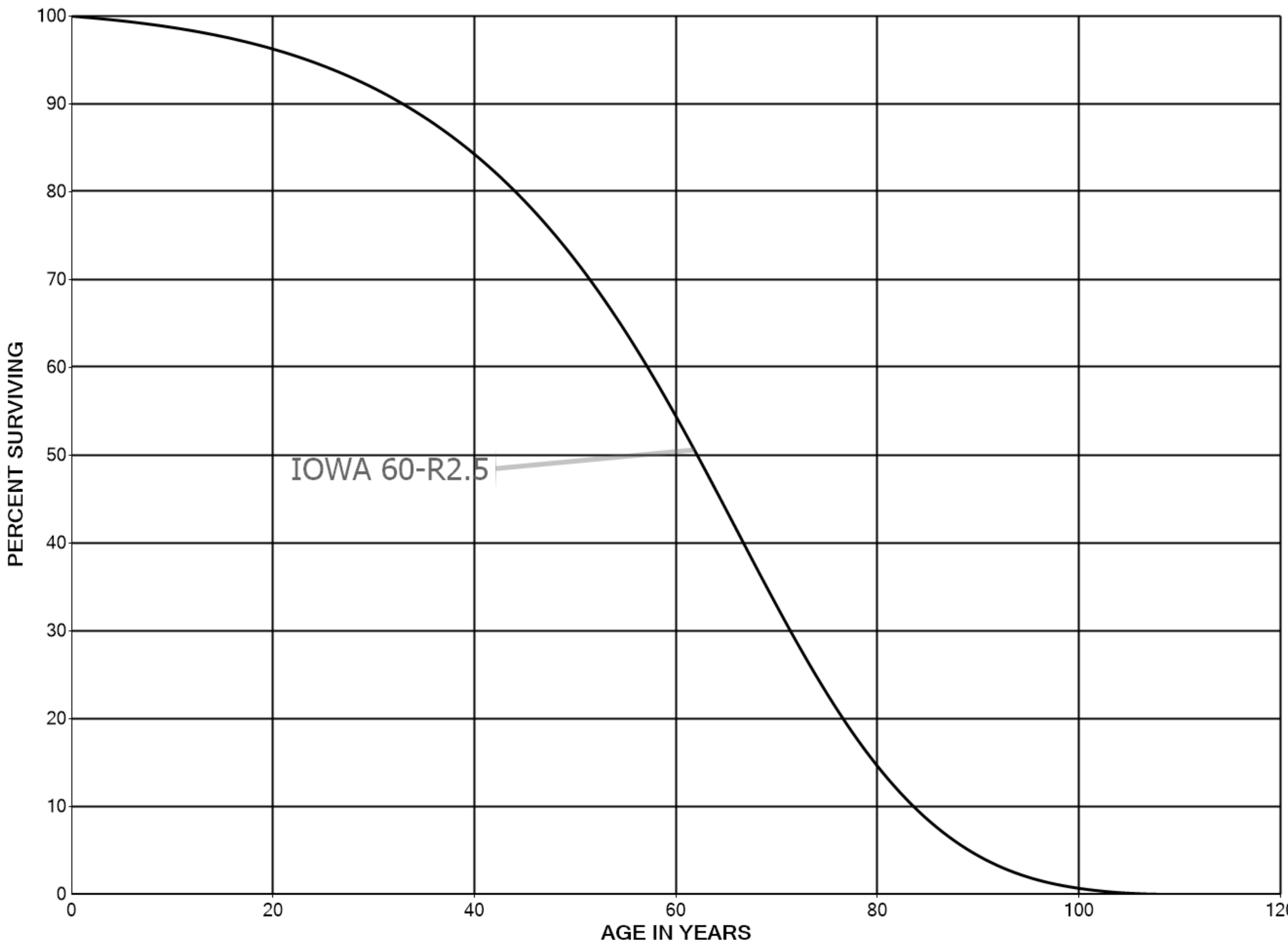
ACCOUNT 361.20 MANHOLES

ORIGINAL LIFE TABLE, CONT.

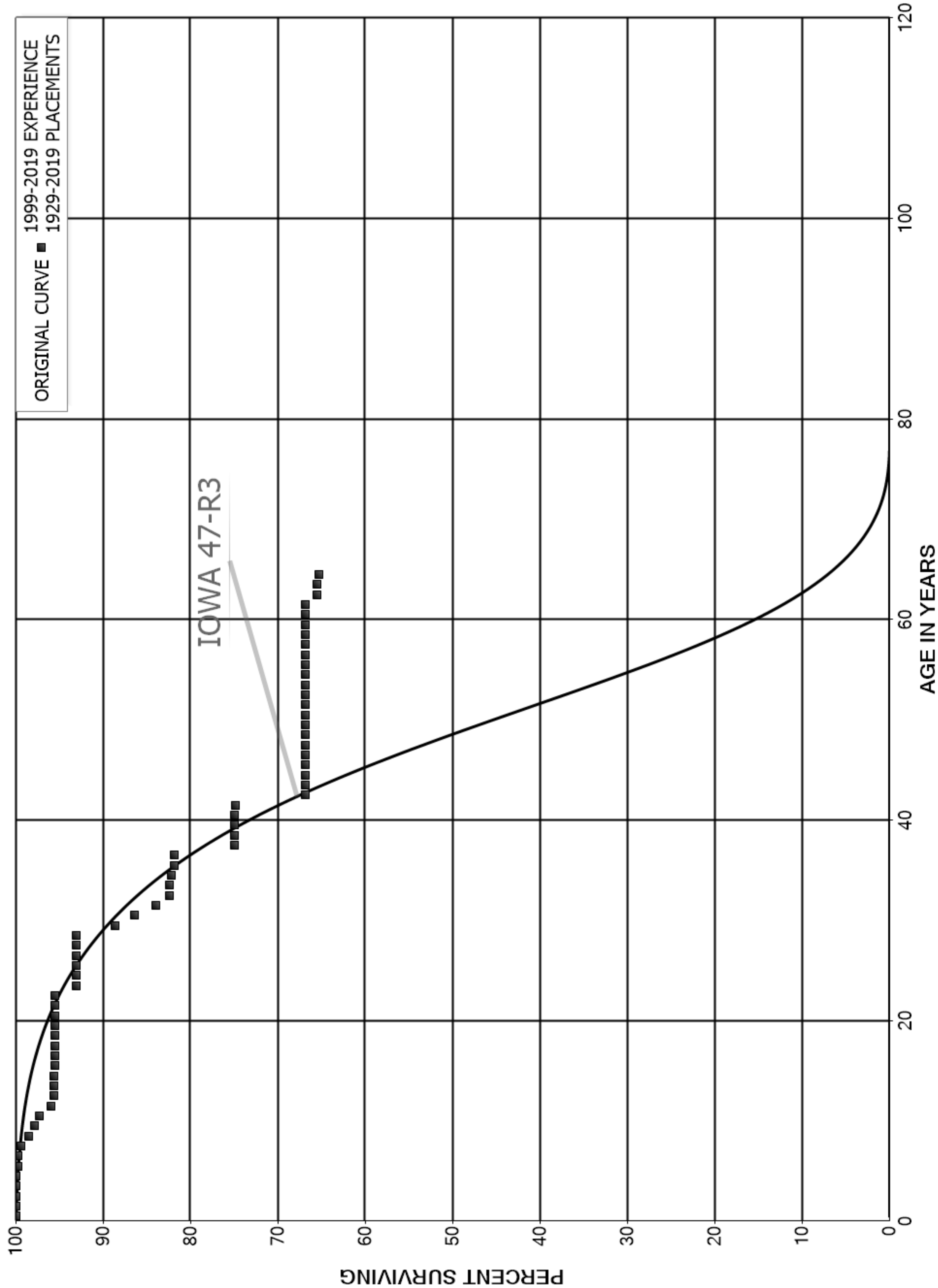
PLACEMENT BAND 1938-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	306,691	1,171	0.0038		
80.5	263,058		0.0000		
81.5					

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 362.00 SPECIAL COLLECTION STRUCTURES
SMOOTH SURVIVOR CURVE



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 363.00 SERVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 363.00 SERVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1929-2019 EXPERIENCE BAND 1999-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	10,615,796	0	0.0000	1.0000	100.00
0.5	10,038,138	0	0.0000	1.0000	100.00
1.5	9,510,472	60	0.0000	1.0000	100.00
2.5	8,790,677	5,668	0.0006	0.9994	100.00
3.5	8,679,530	421	0.0000	1.0000	99.93
4.5	7,932,683	12,635	0.0016	0.9984	99.93
5.5	6,966,530	2,890	0.0004	0.9996	99.77
6.5	8,411,000	31,963	0.0038	0.9962	99.73
7.5	8,278,555	65,894	0.0080	0.9920	99.35
8.5	8,313,922	64,649	0.0078	0.9922	98.56
9.5	8,351,147	42,617	0.0051	0.9949	97.79
10.5	6,470,010	87,729	0.0136	0.9864	97.29
11.5	6,246,021	19,892	0.0032	0.9968	95.98
12.5	5,858,877	0	0.0000	1.0000	95.67
13.5	4,698,450	4,942	0.0011	0.9989	95.67
14.5	4,095,435	871	0.0002	0.9998	95.57
15.5	3,284,377		0.0000	1.0000	95.55
16.5	3,511,888	0	0.0000	1.0000	95.55
17.5	3,953,464	0	0.0000	1.0000	95.55
18.5	3,909,166	55	0.0000	1.0000	95.55
19.5	3,630,733		0.0000	1.0000	95.55
20.5	3,925,137		0.0000	1.0000	95.55
21.5	3,646,749		0.0000	1.0000	95.55
22.5	3,395,484	87,997	0.0259	0.9741	95.55
23.5	3,780,922		0.0000	1.0000	93.07
24.5	4,115,954	497	0.0001	0.9999	93.07
25.5	5,003,579		0.0000	1.0000	93.06
26.5	5,176,777		0.0000	1.0000	93.06
27.5	4,635,070		0.0000	1.0000	93.06
28.5	4,421,930	209,578	0.0474	0.9526	93.06
29.5	3,596,999	92,585	0.0257	0.9743	88.65
30.5	2,947,708	80,733	0.0274	0.9726	86.37
31.5	2,783,645	51,927	0.0187	0.9813	84.00
32.5	2,491,265	1,241	0.0005	0.9995	82.43
33.5	2,228,511	4,871	0.0022	0.9978	82.39
34.5	1,965,612	8,461	0.0043	0.9957	82.21
35.5	1,925,423	503	0.0003	0.9997	81.86
36.5	1,973,278	167,021	0.0846	0.9154	81.84
37.5	1,839,375	192	0.0001	0.9999	74.91
38.5	1,657,395		0.0000	1.0000	74.90

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 363.00 SERVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1929-2019 EXPERIENCE BAND 1999-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,207,182		0.0000	1.0000	74.90
40.5	1,197,802	385	0.0003	0.9997	74.90
41.5	1,022,673	110,064	0.1076	0.8924	74.88
42.5	886,687		0.0000	1.0000	66.82
43.5	1,408,938		0.0000	1.0000	66.82
44.5	900,914		0.0000	1.0000	66.82
45.5	855,938		0.0000	1.0000	66.82
46.5	736,586		0.0000	1.0000	66.82
47.5	156,414		0.0000	1.0000	66.82
48.5	155,860		0.0000	1.0000	66.82
49.5	82,277		0.0000	1.0000	66.82
50.5	145,022		0.0000	1.0000	66.82
51.5	132,653		0.0000	1.0000	66.82
52.5	134,754	0	0.0000	1.0000	66.82
53.5	137,757		0.0000	1.0000	66.82
54.5	20,119		0.0000	1.0000	66.82
55.5	100,869		0.0000	1.0000	66.82
56.5	100,869		0.0000	1.0000	66.82
57.5	97,866		0.0000	1.0000	66.82
58.5	256,316		0.0000	1.0000	66.82
59.5	180,162	20	0.0001	0.9999	66.82
60.5	228,822		0.0000	1.0000	66.81
61.5	228,822	4,595	0.0201	0.9799	66.81
62.5	50,781		0.0000	1.0000	65.47
63.5	50,781	162	0.0032	0.9968	65.47
64.5					65.26
65.5	60,144		0.0000		
66.5	60,144		0.0000		
67.5	60,144		0.0000		
68.5	70,211		0.0000		
69.5	13,932	819	0.0588		
70.5	36,101		0.0000		
71.5	36,101	4,521	0.1252		
72.5	31,580	1,251	0.0396		
73.5	30,329	442	0.0146		
74.5	6,899	644	0.0933		
75.5	6,255		0.0000		
76.5	6,255		0.0000		
77.5	151,010		0.0000		
78.5	151,010		0.0000		

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

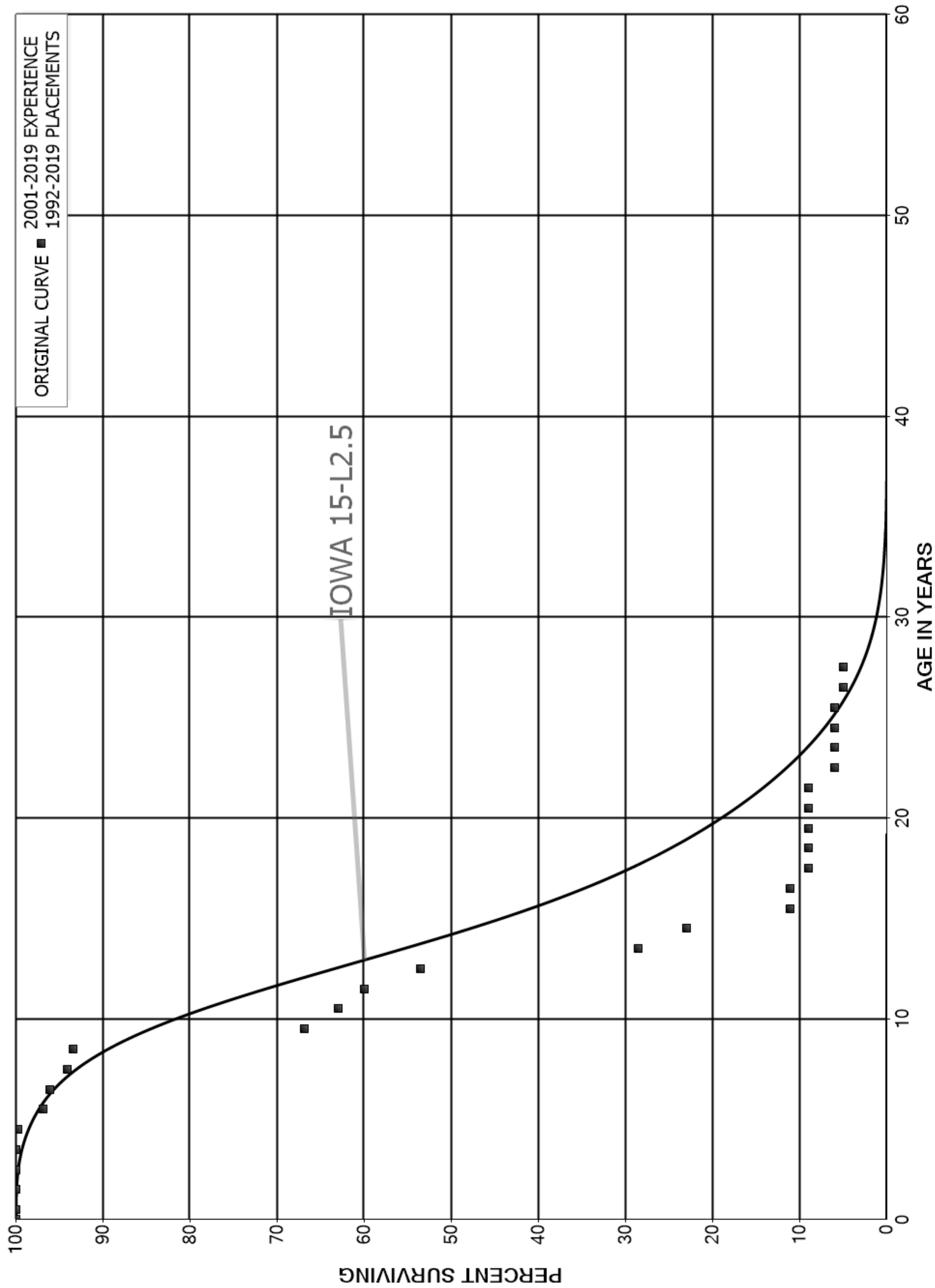
ACCOUNT 363.00 SERVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1929-2019 EXPERIENCE BAND 1999-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	151,010		0.0000		
80.5	144,755	1,628	0.0112		
81.5					
82.5	717		0.0000		
83.5	717		0.0000		
84.5	717		0.0000		
85.5	717		0.0000		
86.5	717		0.0000		
87.5	717		0.0000		
88.5	717		0.0000		
89.5	717		0.0000		
90.5					

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 364.00 FLOW MEASURING DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

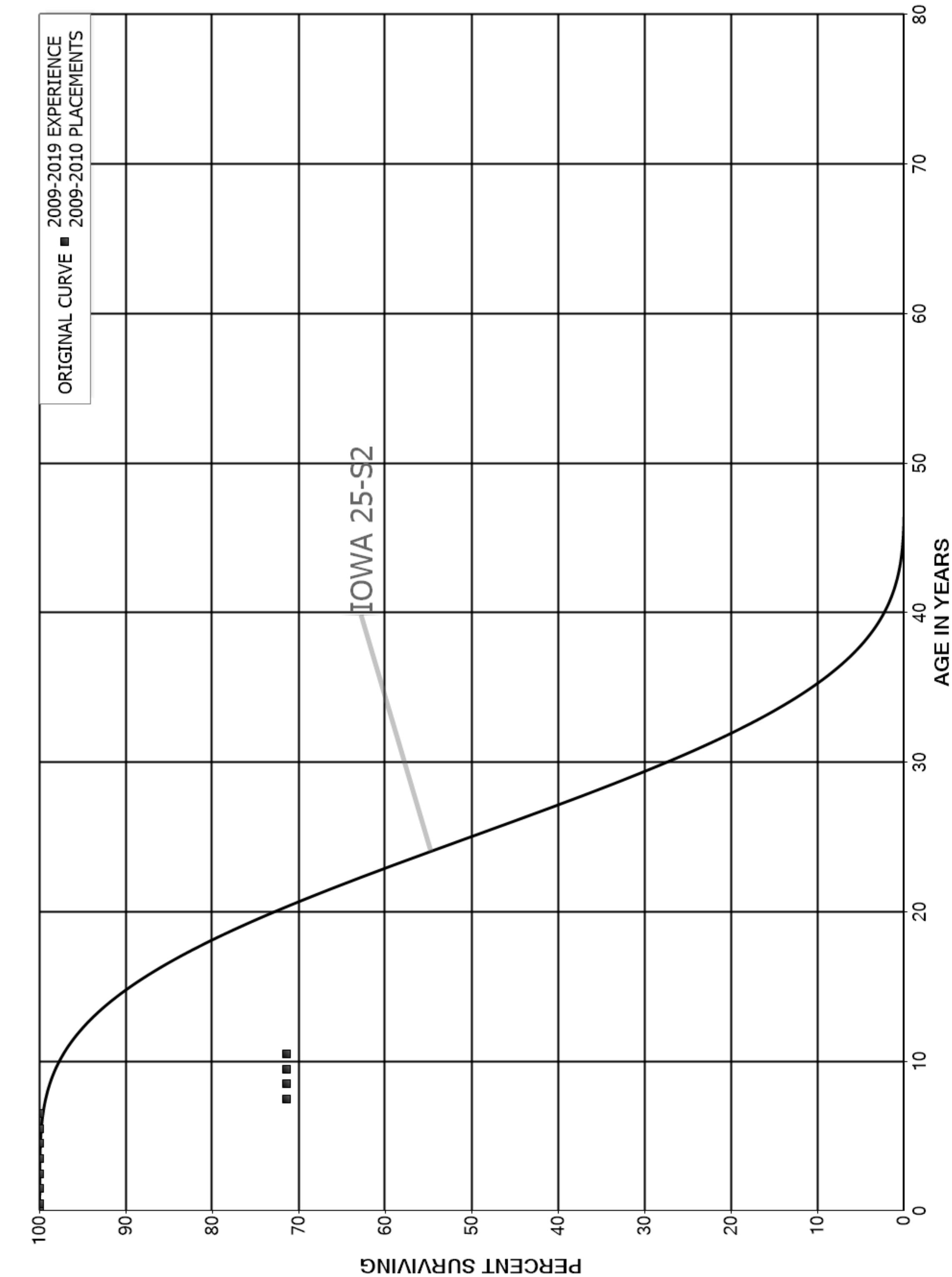
ACCOUNT 364.00 FLOW MEASURING DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1992-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,359,184		0.0000	1.0000	100.00
0.5	993,961		0.0000	1.0000	100.00
1.5	1,007,023		0.0000	1.0000	100.00
2.5	1,088,761		0.0000	1.0000	100.00
3.5	829,368	2,564	0.0031	0.9969	100.00
4.5	790,917	22,463	0.0284	0.9716	99.69
5.5	745,466	5,882	0.0079	0.9921	96.86
6.5	575,156	12,254	0.0213	0.9787	96.10
7.5	576,785	4,337	0.0075	0.9925	94.05
8.5	639,652	181,670	0.2840	0.7160	93.34
9.5	332,968	19,182	0.0576	0.9424	66.83
10.5	221,704	10,816	0.0488	0.9512	62.98
11.5	90,287	9,617	0.1065	0.8935	59.91
12.5	71,639	33,466	0.4671	0.5329	53.53
13.5	31,704	6,133	0.1934	0.8066	28.52
14.5	16,849	8,739	0.5187	0.4813	23.00
15.5	16,281		0.0000	1.0000	11.07
16.5	16,281	3,203	0.1967	0.8033	11.07
17.5	13,078		0.0000	1.0000	8.90
18.5	13,078		0.0000	1.0000	8.90
19.5	13,078		0.0000	1.0000	8.90
20.5	13,078		0.0000	1.0000	8.90
21.5	13,078	4,272	0.3266	0.6734	8.90
22.5	8,806		0.0000	1.0000	5.99
23.5	8,806		0.0000	1.0000	5.99
24.5	8,806		0.0000	1.0000	5.99
25.5	8,806	1,522	0.1728	0.8272	5.99
26.5	7,285		0.0000	1.0000	4.95
27.5					4.95

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 365.00 FLOW MEASURING INSTALLATIONS
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

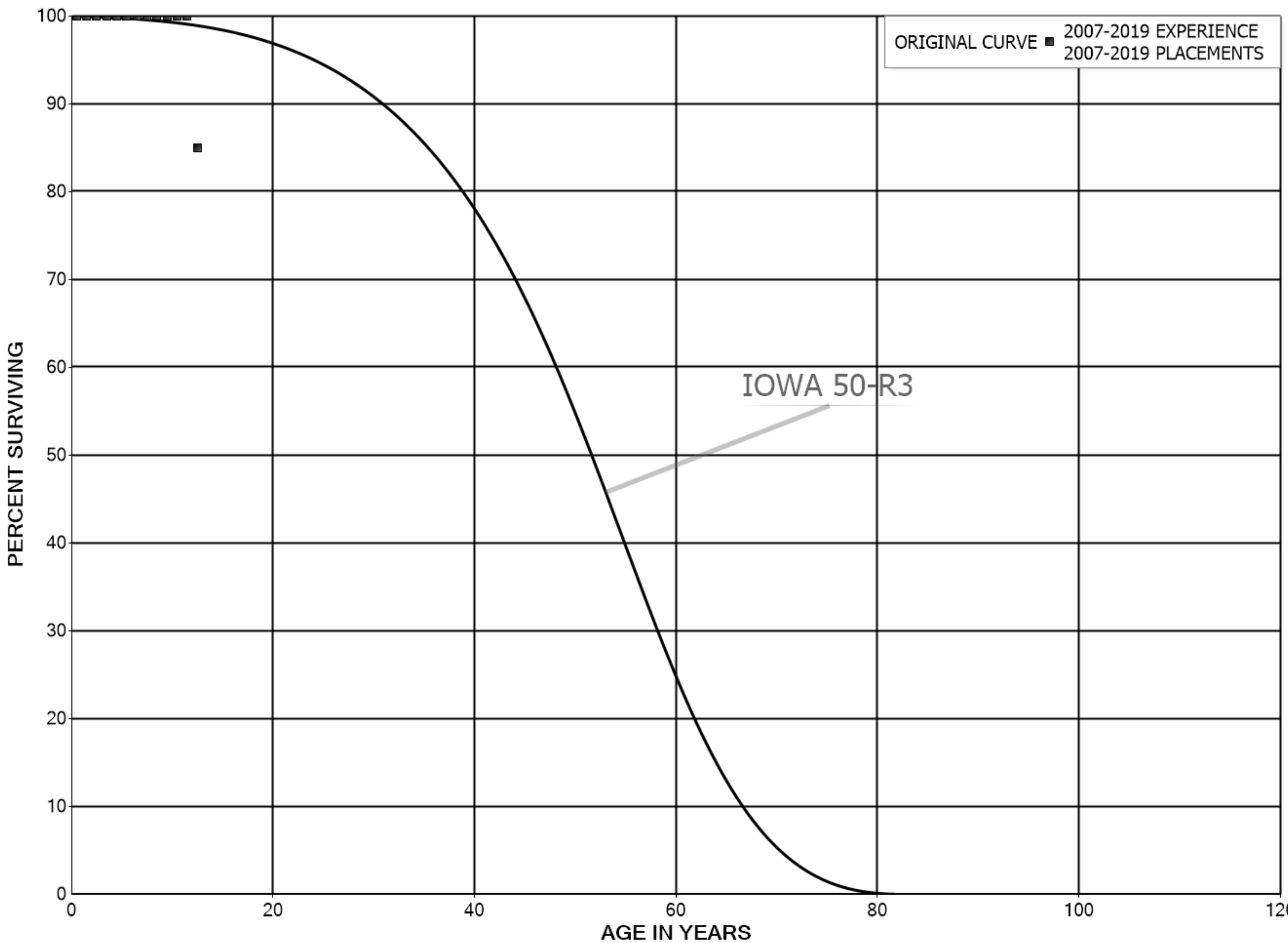
ACCOUNT 365.00 FLOW MEASURING INSTALLATIONS

ORIGINAL LIFE TABLE

PLACEMENT BAND 2009-2010 EXPERIENCE BAND 2009-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	20,918		0.0000	1.0000	100.00
0.5	20,918		0.0000	1.0000	100.00
1.5	20,918		0.0000	1.0000	100.00
2.5	20,918		0.0000	1.0000	100.00
3.5	20,918		0.0000	1.0000	100.00
4.5	20,918		0.0000	1.0000	100.00
5.5	20,918		0.0000	1.0000	100.00
6.5	20,918	5,980	0.2859	0.7141	100.00
7.5	14,938		0.0000	1.0000	71.41
8.5	14,938		0.0000	1.0000	71.41
9.5	14,938		0.0000	1.0000	71.41
10.5					71.41

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 370.00 RECEIVING WELLS
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

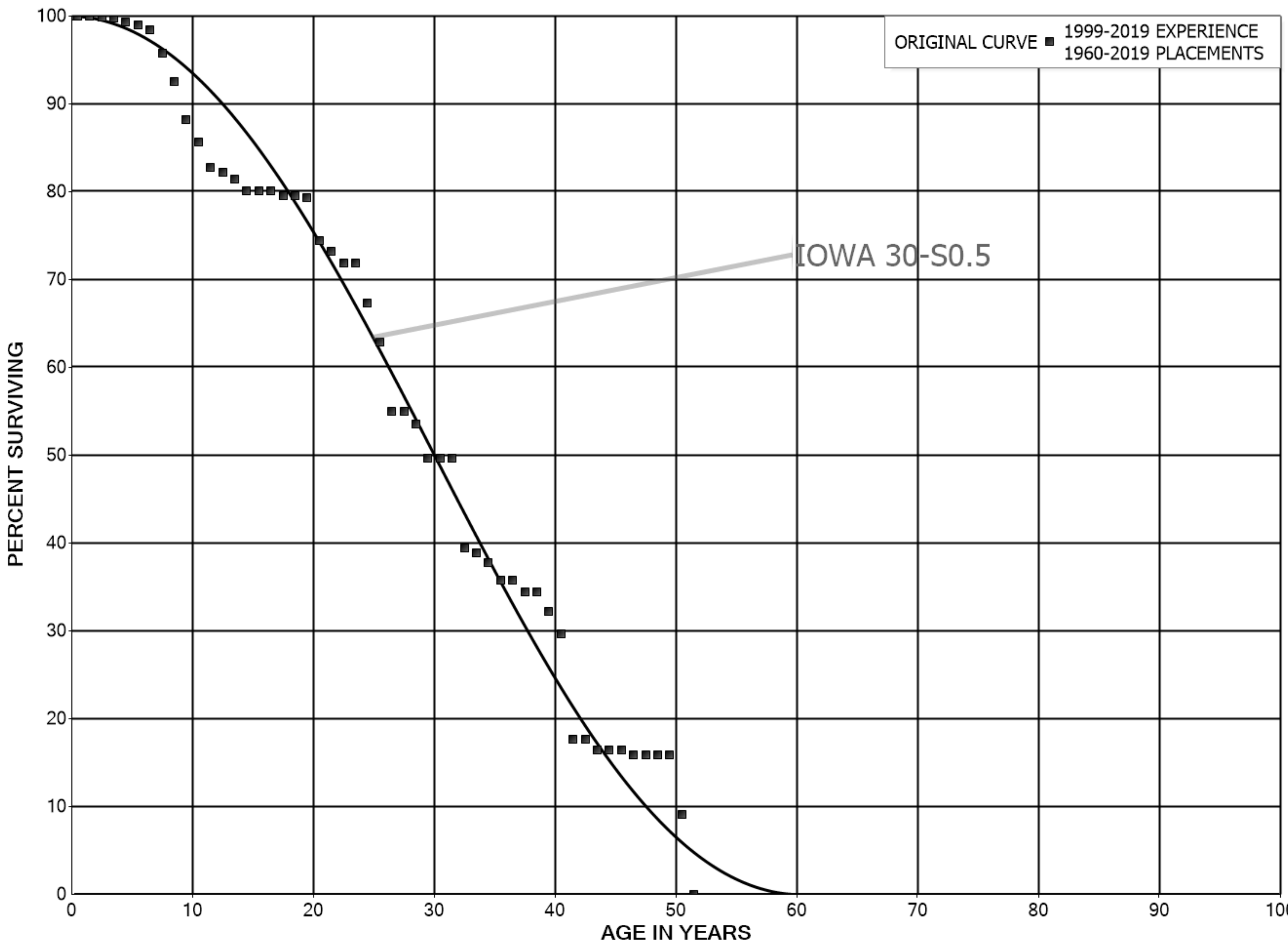
ACCOUNT 370.00 RECEIVING WELLS

ORIGINAL LIFE TABLE

PLACEMENT BAND 2007-2019 EXPERIENCE BAND 2007-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	121,180		0.0000	1.0000	100.00
0.5	111,148		0.0000	1.0000	100.00
1.5	111,148		0.0000	1.0000	100.00
2.5	132,949		0.0000	1.0000	100.00
3.5	132,949		0.0000	1.0000	100.00
4.5	132,949		0.0000	1.0000	100.00
5.5	132,949		0.0000	1.0000	100.00
6.5	99,482		0.0000	1.0000	100.00
7.5	99,482		0.0000	1.0000	100.00
8.5	99,482		0.0000	1.0000	100.00
9.5	99,482		0.0000	1.0000	100.00
10.5	7,370		0.0000	1.0000	100.00
11.5	7,370	1,109	0.1505	0.8495	100.00
12.5					84.95

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 371.00 PUMPING EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 371.00 PUMPING EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2019 EXPERIENCE BAND 1999-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	13,928,914		0.0000	1.0000	100.00
0.5	8,653,630	5,419	0.0006	0.9994	100.00
1.5	11,021,964	12,306	0.0011	0.9989	99.94
2.5	10,781,219	12,096	0.0011	0.9989	99.83
3.5	9,453,412	44,345	0.0047	0.9953	99.71
4.5	6,817,321	23,246	0.0034	0.9966	99.25
5.5	5,785,361	27,560	0.0048	0.9952	98.91
6.5	5,413,591	148,677	0.0275	0.9725	98.44
7.5	3,768,518	126,794	0.0336	0.9664	95.73
8.5	3,446,810	160,001	0.0464	0.9536	92.51
9.5	2,549,487	73,710	0.0289	0.9711	88.22
10.5	1,455,129	50,056	0.0344	0.9656	85.67
11.5	1,043,502	7,445	0.0071	0.9929	82.72
12.5	1,137,255	10,025	0.0088	0.9912	82.13
13.5	837,345	14,096	0.0168	0.9832	81.41
14.5	784,395		0.0000	1.0000	80.04
15.5	677,887		0.0000	1.0000	80.04
16.5	534,434	3,610	0.0068	0.9932	80.04
17.5	610,401	101	0.0002	0.9998	79.50
18.5	664,971	1,413	0.0021	0.9979	79.48
19.5	663,558	41,426	0.0624	0.9376	79.31
20.5	588,736	9,514	0.0162	0.9838	74.36
21.5	638,927	11,409	0.0179	0.9821	73.16
22.5	599,786		0.0000	1.0000	71.85
23.5	517,501	33,177	0.0641	0.9359	71.85
24.5	484,324	31,555	0.0652	0.9348	67.25
25.5	497,723	62,415	0.1254	0.8746	62.87
26.5	428,133		0.0000	1.0000	54.98
27.5	312,603	8,673	0.0277	0.9723	54.98
28.5	241,647	17,595	0.0728	0.9272	53.46
29.5	235,281		0.0000	1.0000	49.56
30.5	280,168		0.0000	1.0000	49.56
31.5	280,168	57,666	0.2058	0.7942	49.56
32.5	222,502	2,887	0.0130	0.9870	39.36
33.5	140,599	3,932	0.0280	0.9720	38.85
34.5	136,159	7,170	0.0527	0.9473	37.77
35.5	183,946		0.0000	1.0000	35.78
36.5	183,946	7,008	0.0381	0.9619	35.78
37.5	176,938		0.0000	1.0000	34.41
38.5	127,299	8,408	0.0660	0.9340	34.41

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

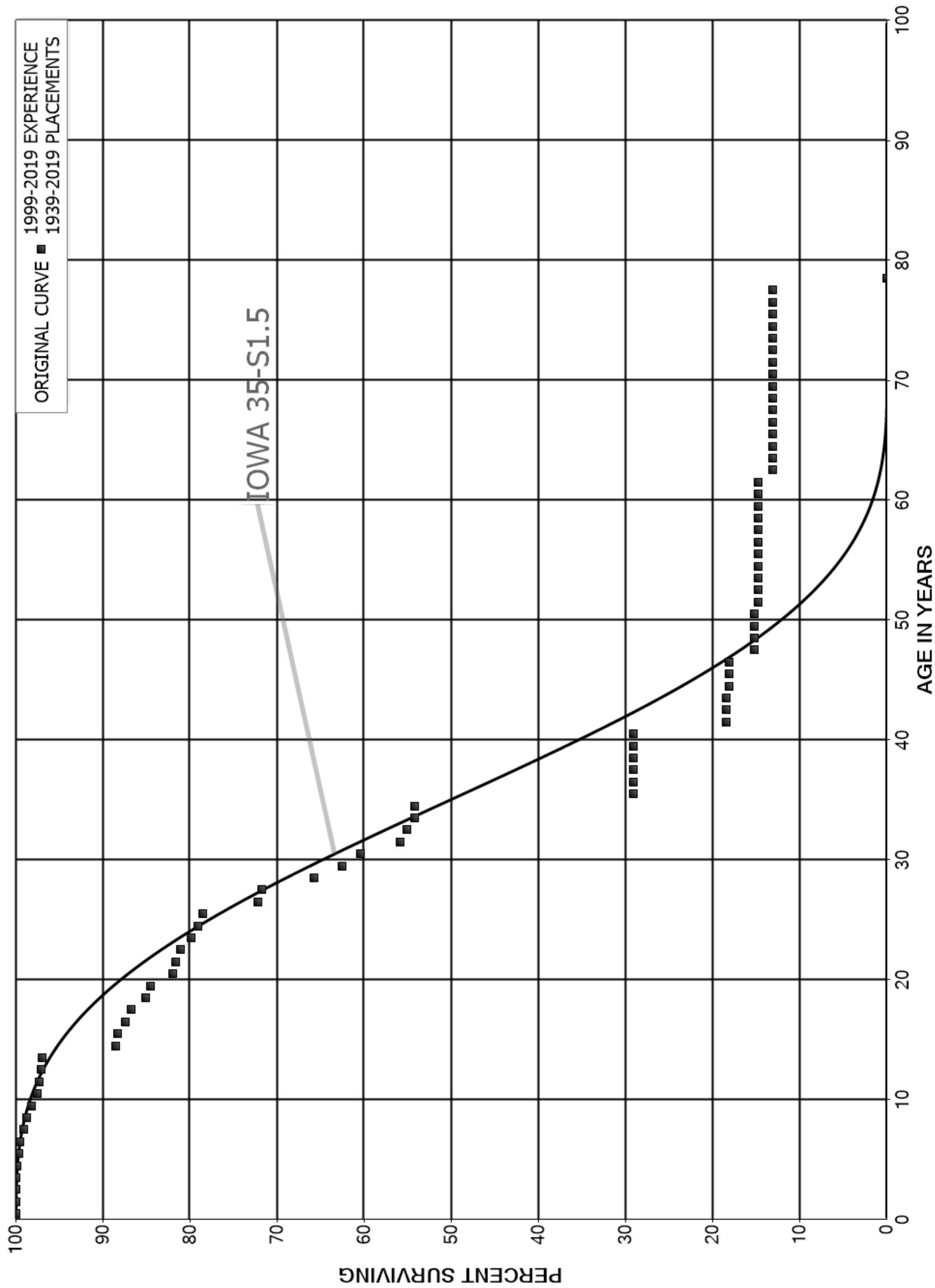
ACCOUNT 371.00 PUMPING EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1960-2019 EXPERIENCE BAND 1999-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	128,004	9,910	0.0774	0.9226	32.14
40.5	140,361	56,891	0.4053	0.5947	29.65
41.5	83,470		0.0000	1.0000	17.63
42.5	83,470	6,122	0.0733	0.9267	17.63
43.5	28,842		0.0000	1.0000	16.34
44.5	28,842		0.0000	1.0000	16.34
45.5	28,842	860	0.0298	0.9702	16.34
46.5	27,983		0.0000	1.0000	15.85
47.5	21,408		0.0000	1.0000	15.85
48.5	5,141		0.0000	1.0000	15.85
49.5	5,141	2,187	0.4255	0.5745	15.85
50.5	2,953	2,953	1.0000		9.11
51.5					

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 380.00 TREATMENT EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 380.00 TREATMENT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1939-2019 EXPERIENCE BAND 1999-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	52,484,979		0.0000	1.0000	100.00
0.5	52,338,297		0.0000	1.0000	100.00
1.5	64,377,580	1,853	0.0000	1.0000	100.00
2.5	61,280,085	2,456	0.0000	1.0000	100.00
3.5	56,645,719	97,216	0.0017	0.9983	99.99
4.5	44,542,853	95,360	0.0021	0.9979	99.82
5.5	39,192,994	29,279	0.0007	0.9993	99.61
6.5	37,993,990	195,343	0.0051	0.9949	99.53
7.5	37,038,634	104,008	0.0028	0.9972	99.02
8.5	38,046,057	237,211	0.0062	0.9938	98.74
9.5	28,856,102	179,693	0.0062	0.9938	98.13
10.5	11,015,164	26,343	0.0024	0.9976	97.52
11.5	15,100,040	30,352	0.0020	0.9980	97.28
12.5	16,280,292	28,816	0.0018	0.9982	97.09
13.5	16,807,417	1,468,058	0.0873	0.9127	96.92
14.5	14,676,816	22,218	0.0015	0.9985	88.45
15.5	11,808,330	121,942	0.0103	0.9897	88.32
16.5	11,627,778	92,492	0.0080	0.9920	87.41
17.5	12,550,432	231,211	0.0184	0.9816	86.71
18.5	10,724,551	78,054	0.0073	0.9927	85.11
19.5	10,812,422	322,982	0.0299	0.9701	84.49
20.5	9,468,414	37,906	0.0040	0.9960	81.97
21.5	9,609,732	62,020	0.0065	0.9935	81.64
22.5	9,543,450	153,592	0.0161	0.9839	81.11
23.5	9,334,263	87,607	0.0094	0.9906	79.81
24.5	9,070,811	59,133	0.0065	0.9935	79.06
25.5	8,792,217	707,485	0.0805	0.9195	78.54
26.5	4,703,706	32,521	0.0069	0.9931	72.22
27.5	4,778,474	397,707	0.0832	0.9168	71.72
28.5	6,059,797	298,086	0.0492	0.9508	65.75
29.5	6,184,153	215,062	0.0348	0.9652	62.52
30.5	5,152,304	387,965	0.0753	0.9247	60.35
31.5	5,356,247	72,674	0.0136	0.9864	55.80
32.5	3,421,800	52,448	0.0153	0.9847	55.05
33.5	2,753,091		0.0000	1.0000	54.20
34.5	2,272,767	1,055,181	0.4643	0.5357	54.20
35.5	635,826		0.0000	1.0000	29.04
36.5	779,480		0.0000	1.0000	29.04
37.5	801,627		0.0000	1.0000	29.04
38.5	778,140		0.0000	1.0000	29.04

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

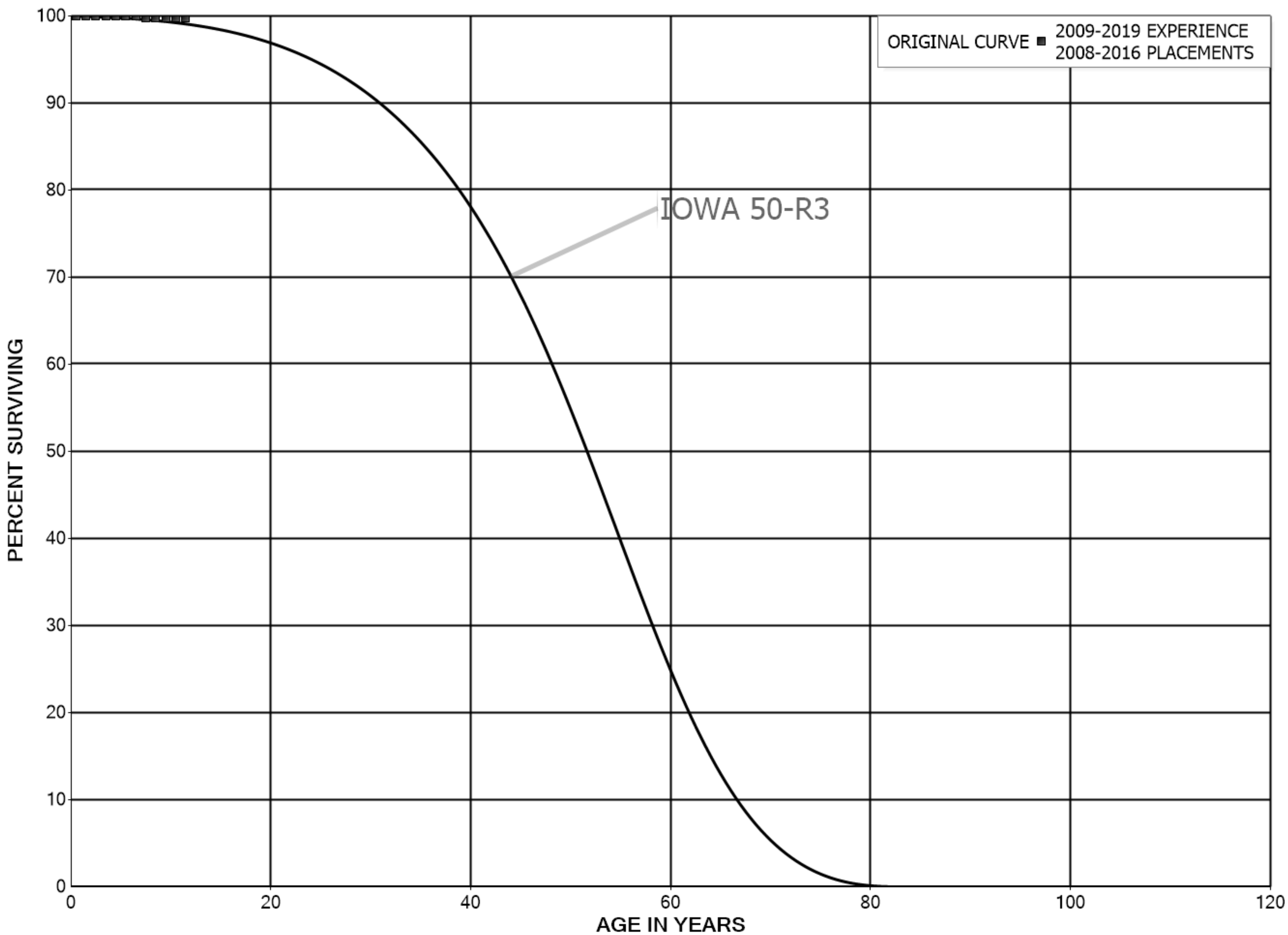
ACCOUNT 380.00 TREATMENT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1939-2019 EXPERIENCE BAND 1999-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	778,140	411	0.0005	0.9995	29.04
40.5	777,730	285,407	0.3670	0.6330	29.02
41.5	15,823,498		0.0000	1.0000	18.37
42.5	15,823,498		0.0000	1.0000	18.37
43.5	15,823,498	268,317	0.0170	0.9830	18.37
44.5	515,644		0.0000	1.0000	18.06
45.5	515,644		0.0000	1.0000	18.06
46.5	371,038	60,316	0.1626	0.8374	18.06
47.5	288,575		0.0000	1.0000	15.12
48.5	288,575		0.0000	1.0000	15.12
49.5	288,575		0.0000	1.0000	15.12
50.5	288,575	6,818	0.0236	0.9764	15.12
51.5	281,757	315	0.0011	0.9989	14.77
52.5	107,182		0.0000	1.0000	14.75
53.5	107,182	462	0.0043	0.9957	14.75
54.5	23,321		0.0000	1.0000	14.69
55.5	23,321		0.0000	1.0000	14.69
56.5	298,010		0.0000	1.0000	14.69
57.5	298,010		0.0000	1.0000	14.69
58.5	298,010		0.0000	1.0000	14.69
59.5	25,215		0.0000	1.0000	14.69
60.5	25,215		0.0000	1.0000	14.69
61.5	25,215	2,761	0.1095	0.8905	14.69
62.5	1,894		0.0000	1.0000	13.08
63.5	1,894		0.0000	1.0000	13.08
64.5	1,894		0.0000	1.0000	13.08
65.5	1,894		0.0000	1.0000	13.08
66.5	1,894		0.0000	1.0000	13.08
67.5	1,894		0.0000	1.0000	13.08
68.5	1,894		0.0000	1.0000	13.08
69.5	1,894		0.0000	1.0000	13.08
70.5	1,894		0.0000	1.0000	13.08
71.5	1,894		0.0000	1.0000	13.08
72.5	1,894		0.0000	1.0000	13.08
73.5	1,894		0.0000	1.0000	13.08
74.5	1,894		0.0000	1.0000	13.08
75.5	1,894		0.0000	1.0000	13.08
76.5	1,894		0.0000	1.0000	13.08
77.5	1,894	1,894	1.0000		13.08
78.5					

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 381.00 PLANT SEWERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

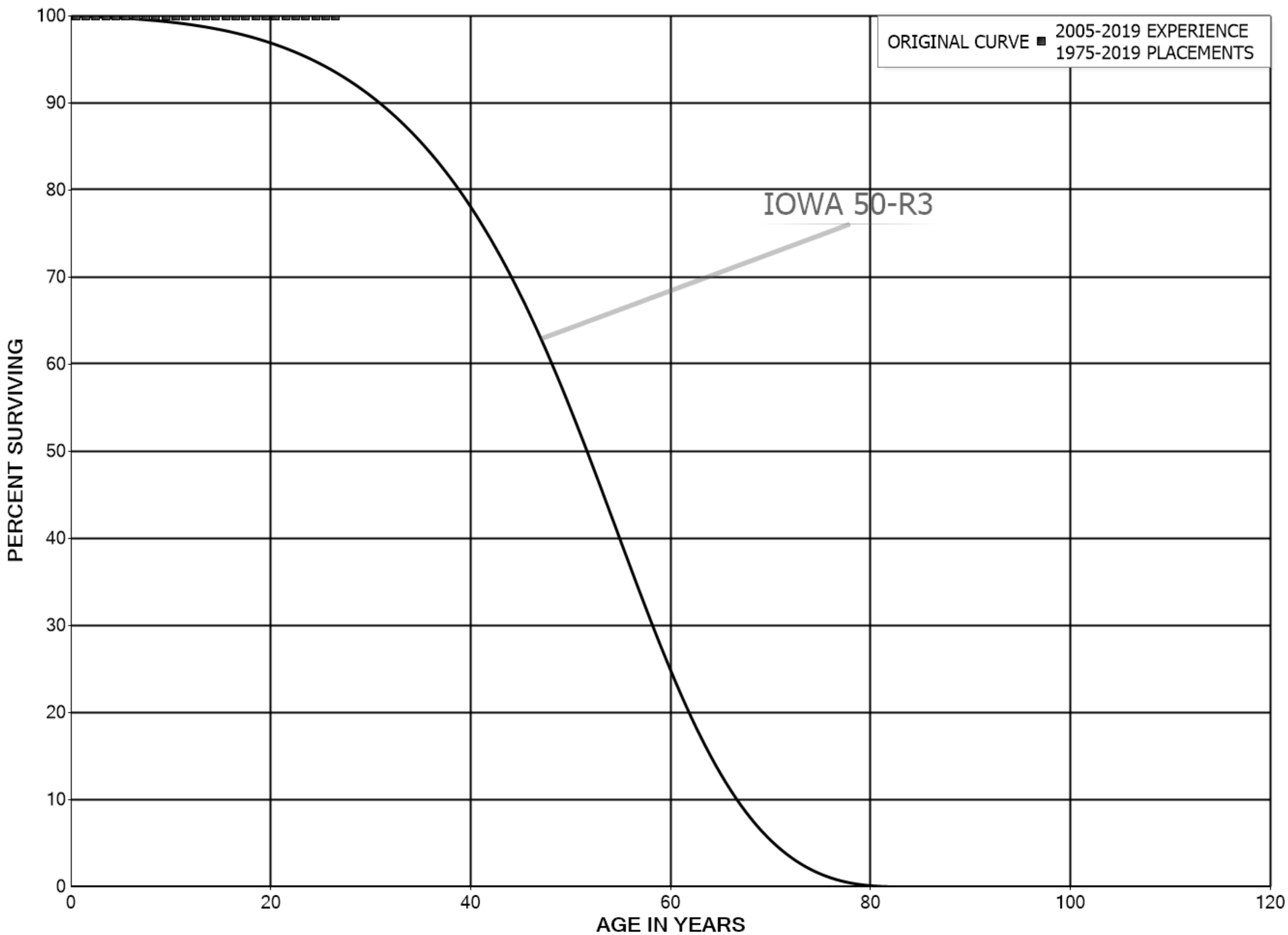
ACCOUNT 381.00 PLANT SEWERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 2008-2016 EXPERIENCE BAND 2009-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	5,524,134		0.0000	1.0000	100.00
0.5	6,227,961		0.0000	1.0000	100.00
1.5	6,227,961		0.0000	1.0000	100.00
2.5	6,227,961		0.0000	1.0000	100.00
3.5	6,182,721		0.0000	1.0000	100.00
4.5	6,175,263		0.0000	1.0000	100.00
5.5	5,940,945		0.0000	1.0000	100.00
6.5	5,940,945	13,300	0.0022	0.9978	100.00
7.5	5,925,961	2,120	0.0004	0.9996	99.78
8.5	5,917,243		0.0000	1.0000	99.74
9.5	4,729,279		0.0000	1.0000	99.74
10.5	294,412		0.0000	1.0000	99.74
11.5					99.74

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 382.00 OUTFALL SEWER LINES
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 382.00 OUTFALL SEWER LINES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1975-2019 EXPERIENCE BAND 2005-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,700,716		0.0000	1.0000	100.00
0.5	1,605,061		0.0000	1.0000	100.00
1.5	360,675		0.0000	1.0000	100.00
2.5	355,425		0.0000	1.0000	100.00
3.5	355,425		0.0000	1.0000	100.00
4.5	355,425		0.0000	1.0000	100.00
5.5	255,003		0.0000	1.0000	100.00
6.5	264,243		0.0000	1.0000	100.00
7.5	265,939		0.0000	1.0000	100.00
8.5	265,939		0.0000	1.0000	100.00
9.5	238,111		0.0000	1.0000	100.00
10.5	212,060		0.0000	1.0000	100.00
11.5	244,789	6	0.0000	1.0000	100.00
12.5	244,783		0.0000	1.0000	100.00
13.5	43,666		0.0000	1.0000	100.00
14.5	34,425		0.0000	1.0000	100.00
15.5	32,729		0.0000	1.0000	100.00
16.5	32,729		0.0000	1.0000	100.00
17.5	32,729		0.0000	1.0000	100.00
18.5	32,729		0.0000	1.0000	100.00
19.5	32,729		0.0000	1.0000	100.00
20.5	32,729		0.0000	1.0000	100.00
21.5	202,476		0.0000	1.0000	100.00
22.5	202,476		0.0000	1.0000	100.00
23.5	202,476		0.0000	1.0000	100.00
24.5	202,476		0.0000	1.0000	100.00
25.5	202,476		0.0000	1.0000	100.00
26.5					100.00
27.5					
28.5					
29.5					
30.5					
31.5					
32.5					
33.5					
34.5					
35.5					
36.5	4,984		0.0000		
37.5	4,984		0.0000		
38.5	4,984		0.0000		

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

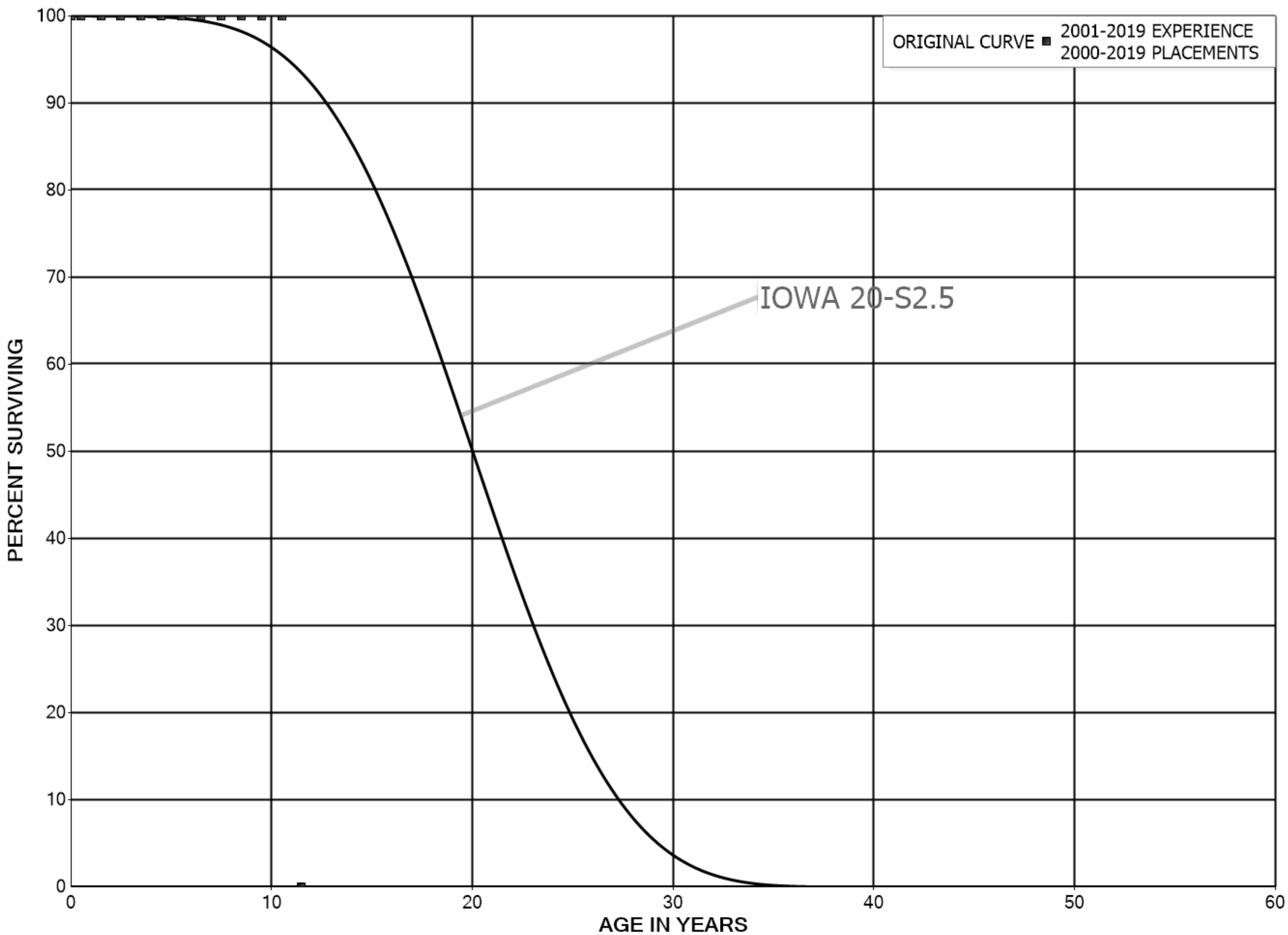
ACCOUNT 382.00 OUTFALL SEWER LINES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1975-2019 EXPERIENCE BAND 2005-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,984		0.0000		
40.5	4,984		0.0000		
41.5	4,984		0.0000		
42.5	4,984		0.0000		
43.5	4,984		0.0000		
44.5					

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 389.10 OTHER PLANT AND MISCELLANEOUS EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

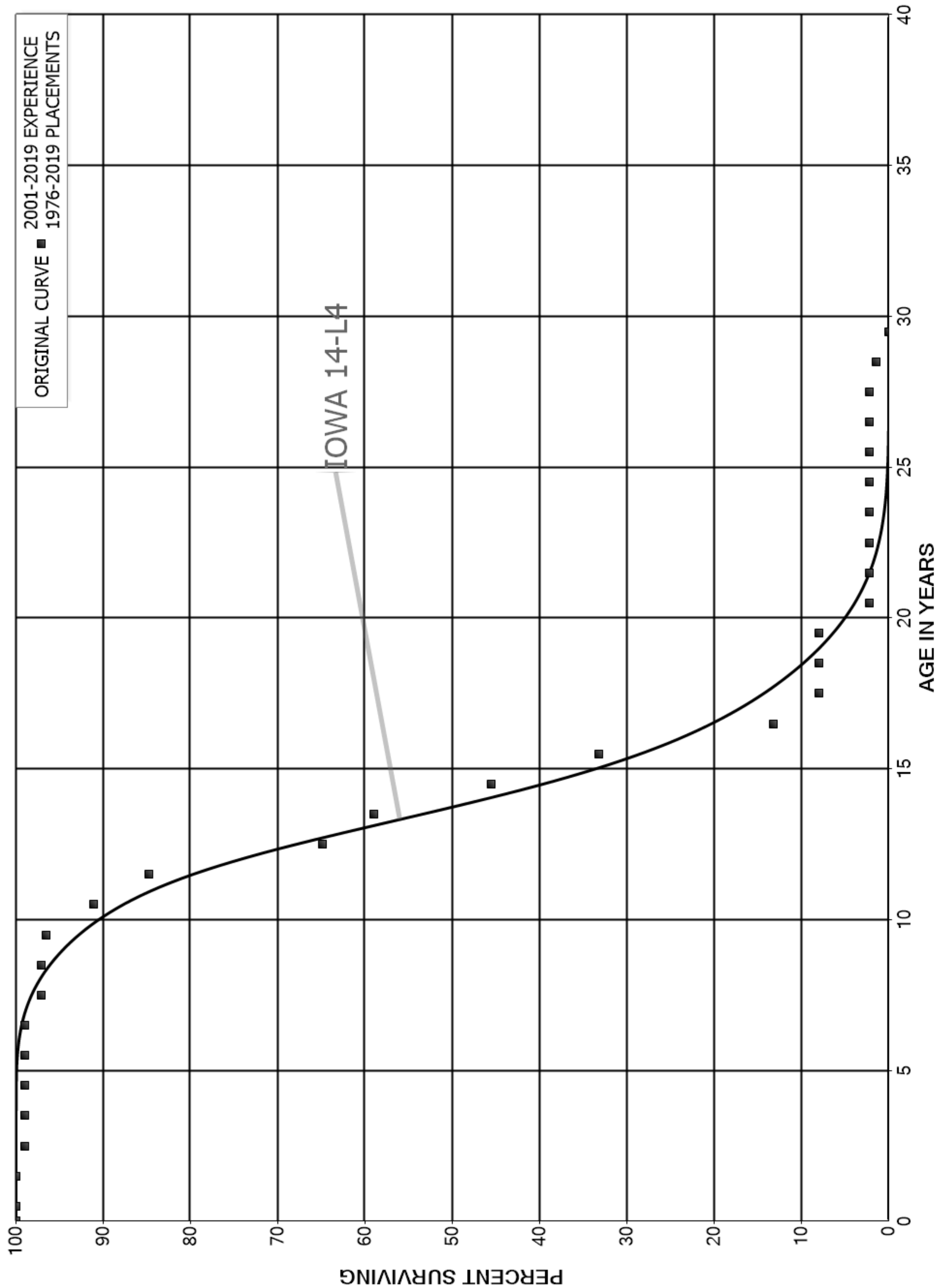
ACCOUNT 389.10 OTHER PLANT AND MISCELLANEOUS EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 2000-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	737,756		0.0000	1.0000	100.00
0.5	437,340		0.0000	1.0000	100.00
1.5	405,165		0.0000	1.0000	100.00
2.5	4,547,918		0.0000	1.0000	100.00
3.5	4,547,918		0.0000	1.0000	100.00
4.5	4,547,918	2,997	0.0007	0.9993	100.00
5.5	4,544,921		0.0000	1.0000	99.93
6.5	393,353		0.0000	1.0000	99.93
7.5	393,353		0.0000	1.0000	99.93
8.5	281,642		0.0000	1.0000	99.93
9.5	8,492		0.0000	1.0000	99.93
10.5	8,492	8,492	1.0000		99.93
11.5					

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 391.00 TRANSPORTATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

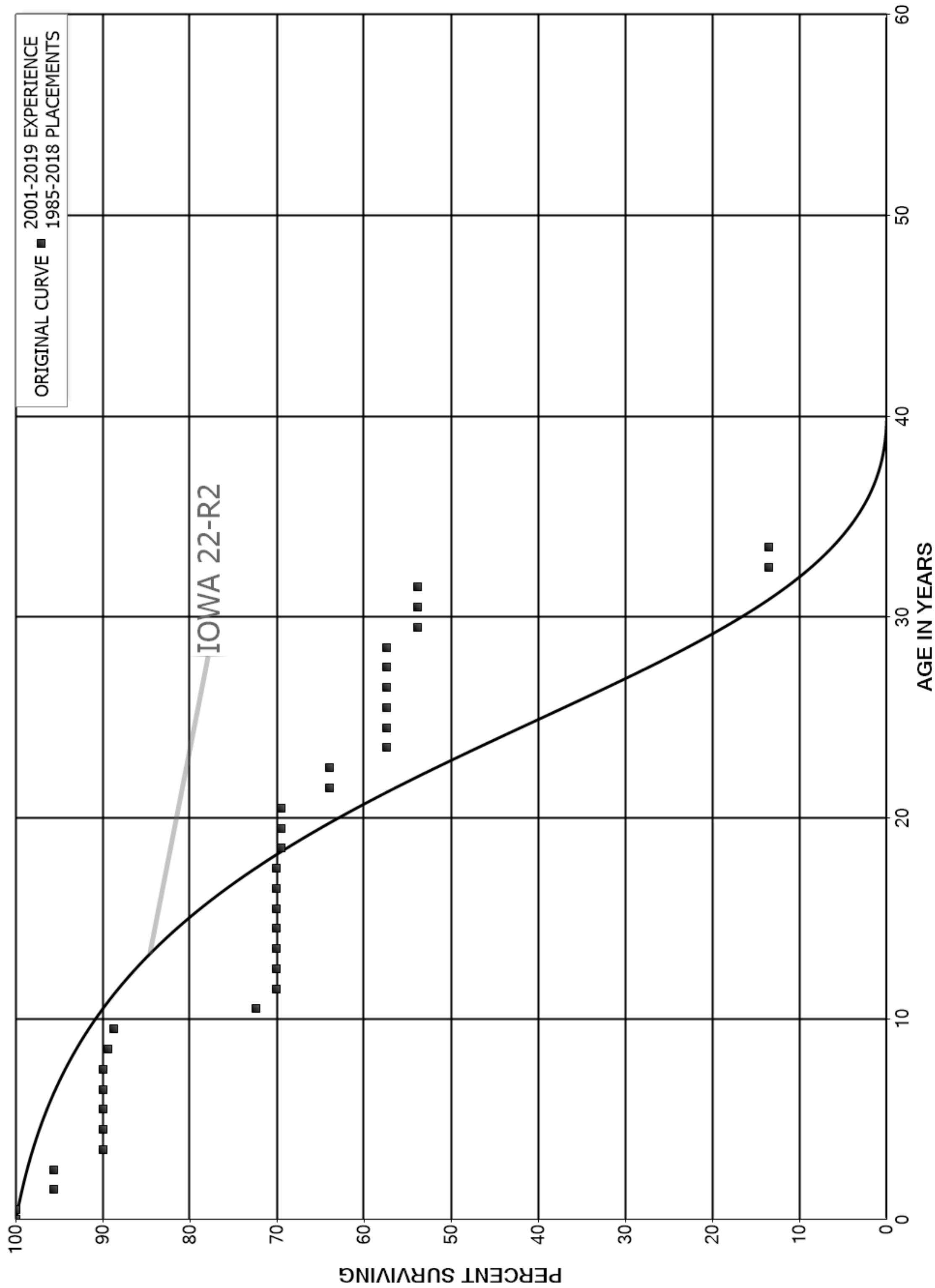
ACCOUNT 391.00 TRANSPORTATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1976-2019 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	4,168,919		0.0000	1.0000	100.00
0.5	3,692,372		0.0000	1.0000	100.00
1.5	1,458,511	14,523	0.0100	0.9900	100.00
2.5	2,332,879		0.0000	1.0000	99.00
3.5	2,514,168		0.0000	1.0000	99.00
4.5	1,930,107		0.0000	1.0000	99.00
5.5	1,664,209		0.0000	1.0000	99.00
6.5	1,677,203	32,676	0.0195	0.9805	99.00
7.5	1,535,566		0.0000	1.0000	97.08
8.5	1,373,777	8,793	0.0064	0.9936	97.08
9.5	1,545,830	87,008	0.0563	0.9437	96.45
10.5	879,899	61,030	0.0694	0.9306	91.03
11.5	743,329	174,600	0.2349	0.7651	84.71
12.5	440,822	40,215	0.0912	0.9088	64.81
13.5	348,542	79,500	0.2281	0.7719	58.90
14.5	276,542	75,000	0.2712	0.7288	45.47
15.5	195,354	117,872	0.6034	0.3966	33.14
16.5	51,900	20,700	0.3988	0.6012	13.14
17.5	31,200		0.0000	1.0000	7.90
18.5	32,855		0.0000	1.0000	7.90
19.5	32,855	23,700	0.7214	0.2786	7.90
20.5	9,155		0.0000	1.0000	2.20
21.5	9,155		0.0000	1.0000	2.20
22.5	9,155		0.0000	1.0000	2.20
23.5	9,155		0.0000	1.0000	2.20
24.5	14,155		0.0000	1.0000	2.20
25.5	14,155		0.0000	1.0000	2.20
26.5	14,155		0.0000	1.0000	2.20
27.5	14,155	5,000	0.3532	0.6468	2.20
28.5	9,155	9,155	1.0000		1.42
29.5					

PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS
ACCOUNT 395.00 POWER OPERATED EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



PENNSYLVANIA-AMERICAN WATER COMPANY
ALL WASTEWATER OPERATIONS

ACCOUNT 395.00 POWER OPERATED EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1985-2018 EXPERIENCE BAND 2001-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	192,967		0.0000	1.0000	100.00
0.5	192,967	8,551	0.0443	0.9557	100.00
1.5	127,706		0.0000	1.0000	95.57
2.5	255,380	14,864	0.0582	0.9418	95.57
3.5	324,176		0.0000	1.0000	90.01
4.5	885,603		0.0000	1.0000	90.01
5.5	967,489		0.0000	1.0000	90.01
6.5	1,410,131		0.0000	1.0000	90.01
7.5	1,250,710	8,033	0.0064	0.9936	90.01
8.5	871,073	6,988	0.0080	0.9920	89.43
9.5	536,633	98,717	0.1840	0.8160	88.71
10.5	191,853	6,125	0.0319	0.9681	72.39
11.5	137,458		0.0000	1.0000	70.08
12.5	190,308		0.0000	1.0000	70.08
13.5	169,091		0.0000	1.0000	70.08
14.5	169,091		0.0000	1.0000	70.08
15.5	169,587		0.0000	1.0000	70.08
16.5	190,470		0.0000	1.0000	70.08
17.5	117,685	875	0.0074	0.9926	70.08
18.5	116,810		0.0000	1.0000	69.56
19.5	116,810		0.0000	1.0000	69.56
20.5	124,335	9,999	0.0804	0.9196	69.56
21.5	124,336		0.0000	1.0000	63.97
22.5	124,336	12,782	0.1028	0.8972	63.97
23.5	111,554		0.0000	1.0000	57.39
24.5	111,554		0.0000	1.0000	57.39
25.5	111,554		0.0000	1.0000	57.39
26.5	18,021		0.0000	1.0000	57.39
27.5	8,021		0.0000	1.0000	57.39
28.5	8,021	496	0.0618	0.9382	57.39
29.5	30,053		0.0000	1.0000	53.84
30.5	30,053		0.0000	1.0000	53.84
31.5	30,053	22,528	0.7496	0.2504	53.84
32.5	7,525		0.0000	1.0000	13.48
33.5					13.48

PART VII. DETAILED DEPRECIATION CALCULATIONS

CUMULATIVE DEPRECIATED ORIGINAL COST

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

CUMULATIVE DEPRECIATED ORIGINAL COST BY YEAR INSTALLED
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

			DEPRECIATED ORIGINAL COST		
YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	AMOUNT (2) - (3) (4)	CUMULATIVE AMOUNT (5)	PCT OF COL 4 TOTAL (6)
1918	3,401,425	3,043,602	357,823	357,823	0.2
1938	1,277,315	1,110,368	166,947	524,770	0.3
1945	274,895	224,952	49,943	574,713	0.3
1950	1,113,864	869,740	244,124	818,837	0.5
1955	597,818	456,357	141,461	960,298	0.5
1960	1,134,402	818,181	316,221	1,276,519	0.7
1965	847,311	585,628	261,683	1,538,202	0.8
1968				1,538,202	0.8
1969				1,538,202	0.8
1970	1,002,164	654,585	347,579	1,885,781	1.0
1971				1,885,781	1.0
1972	30,686,140	18,486,756	12,199,384	14,085,165	7.8
1973	940,287	636,629	303,658	14,388,823	7.9
1974	746,284	488,639	257,645	14,646,468	8.1
1975	2,912,930	1,790,448	1,122,482	15,768,950	8.7
1976				15,768,950	8.7
1977	559,584	356,263	203,321	15,972,271	8.8
1978	1,482,740	930,934	551,806	16,524,077	9.1
1979	1,550,118	959,666	590,452	17,114,529	9.4
1980	1,718,617	1,010,508	708,109	17,822,638	9.8
1981	1,208,948	725,669	483,279	18,305,917	10.1
1982	931,876	551,541	380,335	18,686,252	10.3
1983	668,349	386,683	281,666	18,967,918	10.5
1984	767,674	437,754	329,920	19,297,838	10.6
1985	3,595,571	1,850,306	1,745,265	21,043,103	11.6
1986	1,405,207	770,069	635,138	21,678,241	11.9
1987	2,681,156	1,299,755	1,381,401	23,059,642	12.7
1988	1,098,224	518,383	579,841	23,639,483	13.0
1989	4,129,835	2,053,239	2,076,596	25,716,079	14.2
1990	4,732,482	2,275,581	2,456,901	28,172,980	15.5
1991	1,986,234	949,836	1,036,398	29,209,378	16.1
1992	3,101,545	1,358,401	1,743,144	30,952,522	17.1
1993	468,322	191,469	276,853	31,229,375	17.2
1994	475,237	204,276	270,961	31,500,336	17.4
1995	241,670	97,738	143,932	31,644,268	17.4
1996	368,116	150,327	217,789	31,862,057	17.6
1997	467,433	188,510	278,923	32,140,980	17.7
1998	2,791,984	1,077,547	1,714,437	33,855,417	18.7
1999	1,099,787	382,428	717,359	34,572,776	19.1
2000	315,425	89,762	225,663	34,798,439	19.2
2001	7,500	7,420	80	34,798,519	19.2
2002	114,435	29,175	85,260	34,883,779	19.2
2003	2,465,290	760,719	1,704,571	36,588,350	20.2
2004	6,489,414	1,816,438	4,672,976	41,261,326	22.7
2005	2,474,193	672,859	1,801,334	43,062,660	23.7

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

CUMULATIVE DEPRECIATED ORIGINAL COST BY YEAR INSTALLED
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	DEPRECIATED ORIGINAL COST AMOUNT (2) - (3) (4)	CUMULATIVE AMOUNT (5)	PCT OF COL 4 TOTAL (6)
2006	5,256,869	1,462,667	3,794,202	46,856,862	25.8
2007	1,162,108	285,170	876,938	47,733,800	26.3
2008	562,289	244,696	317,593	48,051,393	26.5
2009	1,056,155	739,512	316,643	48,368,036	26.7
2010	8,878,558	2,058,943	6,819,615	55,187,651	30.4
2011	1,117,103	223,894	893,209	56,080,860	30.9
2012	946,788	341,055	605,733	56,686,593	31.2
2013	5,289,016	1,895,288	3,393,728	60,080,321	33.1
2014	1,682,338	212,653	1,469,685	61,550,006	33.9
2015	6,244,720	955,855	5,288,865	66,838,871	36.8
2016	39,322,453	3,607,073	35,715,380	102,554,251	56.5
2017	16,056,973	1,086,854	14,970,119	117,524,370	64.8
2018	13,102,042	863,131	12,238,911	129,763,281	71.5
2019	31,062,483	895,272	30,167,211	159,930,492	88.1
2020	30,085,787	299,534	29,786,253	189,716,745	104.5
9999	11,483,899-	3,242,819-	8,241,080-	181,475,665	100.0
SUBTOTAL	244,673,584	63,197,919	181,475,665		
NONDEPRECIABLE	752,811		752,811		
TOTAL	245,426,395	63,197,919	182,228,476		

NET UTILITY PLANT IN SERVICE

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 354.20 STRUCTURES AND IMPROVEMENTS - COLLECTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-R3						
NET SALVAGE PERCENT.. 0						
2017	1,143,406.28	101,306	58,497	1,084,909	36.02	30,120
2018	1,516,467.26	96,751	55,867	1,460,600	36.71	39,788
2019	1,082,415.71	41,781	24,126	1,058,290	37.41	28,289
2020	248,677.24	3,258	1,881	246,796	37.67	6,552
	3,990,966.49	243,096	140,371	3,850,595		104,749

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 36.8 2.62

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 354.30 STRUCTURES AND IMPROVEMENTS - SPP

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-S0						
NET SALVAGE PERCENT.. 0						
1972	442,061.02	306,614	235,834	206,227	21.43	9,623
2006	2,696,234.98	844,461	649,521	2,046,714	31.80	64,362
2015	13,367.84	1,882	1,448	11,920	33.56	355
2017	741,429.48	69,843	53,720	687,709	33.67	20,425
2018	2,300,954.39	158,766	122,115	2,178,839	33.73	64,596
2019	130,208.40	5,573	4,287	125,921	33.59	3,749
2020	420,250.40	6,220	4,784	415,466	33.40	12,439
	6,744,506.51	1,393,359	1,071,709	5,672,798		175,549

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 32.3   2.60

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 354.40 STRUCTURES AND IMPROVEMENTS - TDP

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-S0						
NET SALVAGE PERCENT.. 0						
1972	12,673,557.55	8,790,380	7,528,677	5,144,881	21.43	240,078
1985	1,258,392.94	728,106	623,599	634,794	25.85	24,557
2003	2,458,549.21	886,307	759,093	1,699,456	31.04	54,751
2004	234,236.61	80,765	69,173	165,064	31.35	5,265
2009	3,280.09	860	737	2,543	32.36	79
2010	7,383,012.85	1,798,502	1,540,359	5,842,654	32.60	179,223
2012	15,218.31	3,117	2,670	12,548	33.00	380
2013	8,306.93	1,533	1,313	6,994	33.15	211
2014	188,181.59	30,711	26,303	161,879	33.34	4,855
2015	5,541,981.21	780,311	668,311	4,873,670	33.56	145,223
2016	19,789,333.27	2,333,162	1,998,278	17,791,055	33.67	528,395
2017	3,418,839.00	322,055	275,829	3,143,010	33.67	93,347
2018	37,847.47	2,611	2,236	35,611	33.73	1,056
2019	8,452.71	362	310	8,143	33.59	242
2020	3,523,155.21	52,143	44,659	3,478,496	33.40	104,147
9999	2,500,000.00-	699,075-	598,735-	1,901,265-		61,096-
	54,042,344.95	15,111,850	12,942,812	41,099,533		1,320,713

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 31.1   2.44

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 360.10 COLLECTION SEWERS - FORCE MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 75-R3						
NET SALVAGE PERCENT.. 0						
1972	234,615.90	147,925	157,024	77,592	28.42	2,730
1989	4,590.34	2,024	2,149	2,441	39.93	61
2018	112,430.66	4,329	4,595	107,836	62.44	1,727
2019	4,317.80	101	107	4,210	62.60	67
	355,954.70	154,379	163,875	192,079		4,585

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 41.9 1.29

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.10 COLLECTION SEWERS - GRAVITY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 80-R2.5						
NET SALVAGE PERCENT.. 0						
1918	3,191,459.55	2,878,697	2,833,637	357,823	11.14	32,121
1938	873,574.40	727,862	716,469	157,105	16.51	9,516
1945	211,497.90	167,676	165,051	46,447	19.73	2,354
1950	957,721.50	735,913	724,394	233,328	21.25	10,980
1955	466,568.28	342,274	336,916	129,652	23.79	5,450
1960	933,898.50	649,807	639,636	294,262	26.45	11,125
1965	653,429.93	424,337	417,695	235,735	29.97	7,866
1970	764,246.92	463,134	455,885	308,362	32.83	9,393
1972	15,352,311.98	9,083,963	8,941,772	6,410,540	33.47	191,531
1973	523,337.47	303,274	298,527	224,810	34.47	6,522
1974	461,829.14	264,166	260,031	201,798	34.80	5,799
1975	2,152,088.06	1,204,308	1,185,457	966,631	35.80	27,001
1977	317,115.26	171,052	168,375	148,740	37.15	4,004
1978	836,304.33	444,245	437,291	399,013	37.50	10,640
1979	873,487.34	456,747	449,598	423,889	37.87	11,193
1980	1,108,480.72	565,658	556,804	551,677	38.87	14,193
1981	670,813.95	336,480	331,213	339,601	39.24	8,654
1982	501,001.10	244,990	241,155	259,846	40.24	6,457
1983	368,598.05	176,927	174,158	194,440	40.62	4,787
1984	417,013.21	196,330	193,257	223,756	41.02	5,455
1985	1,587,657.79	727,147	715,765	871,893	42.02	20,749
1986	747,838.27	335,405	330,155	417,683	42.42	9,846
1987	693,594.75	302,061	297,333	396,262	43.42	9,126
1988	277,735.67	118,260	116,409	161,327	43.83	3,681
1989	2,455,379.34	1,020,947	1,004,966	1,450,413	44.26	32,770
1990	2,871,370.46	1,156,014	1,137,919	1,733,451	45.26	38,300
1991	1,112,814.37	436,668	429,833	682,981	45.68	14,951
1992	2,123,455.11	804,789	792,191	1,331,264	46.69	28,513
1993	361,509.62	133,216	131,131	230,379	47.13	4,888
1994	161,376.92	57,741	56,837	104,540	47.57	2,198
1995	44,427.75	15,292	15,053	29,375	48.58	605
1996	174,689.83	58,207	57,296	117,394	49.03	2,394
1997	222,128.95	70,992	69,881	152,248	50.03	3,043
1998	1,430,708.08	440,944	434,042	996,666	50.50	19,736
1999	726,281.64	215,488	212,115	514,167	50.96	10,090
2000	303,350.93	85,818	84,475	218,876	51.96	4,212
2002	114,434.55	29,639	29,175	85,260	52.93	1,611
2003	6,741.13	1,652	1,626	5,115	53.93	95
2004	1,750,176.42	407,091	400,719	1,349,457	54.43	24,793
2005	1,349,597.44	297,046	292,396	1,057,201	54.92	19,250
2006	1,134,329.21	235,260	231,577	902,752	55.43	16,286

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.10 COLLECTION SEWERS - GRAVITY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 80-R2.5						
NET SALVAGE PERCENT.. 0						
2007	630,722.76	121,729	119,824	510,899	56.43	9,054
2008	185,621.87	33,412	32,889	152,733	56.94	2,682
2010	199,780.47	30,626	30,147	169,633	57.99	2,925
2011	633,378.87	88,420	87,036	546,343	58.53	9,334
2012	205,827.25	25,893	25,488	180,339	59.07	3,053
2013	340,752.36	38,096	37,500	303,252	59.61	5,087
2014	1,124,574.06	109,646	107,930	1,016,644	60.17	16,896
2015	16,166.46	1,352	1,331	14,835	60.29	246
2016	12,884,096.13	892,868	878,890	12,005,206	60.44	198,630
2017	6,790,973.91	368,071	362,309	6,428,665	61.02	105,353
2018	2,893,576.65	114,296	112,507	2,781,070	60.79	45,749
2019	23,326,957.79	566,845	557,971	22,768,987	60.23	378,034
2020	6,262,304.97	53,856	53,013	6,209,292	57.98	107,094
9999	8,142,432.47-	2,229,132-	2,194,239-	5,948,193-		117,152-
	98,636,676.90	27,003,495	26,580,811	72,055,866		1,419,163

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 50.8   1.44

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.20 MANHOLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-S2.5						
NET SALVAGE PERCENT.. 0						
1918	190,740.12	190,740	190,740			
1938	262,193.77	253,069	252,352	9,842	2.97	3,314
1945	40,598.59	38,317	38,208	2,391	4.50	531
1950	100,243.41	93,287	93,023	7,220	5.26	1,373
1955	82,838.50	75,416	75,202	7,636	6.45	1,184
1960	124,691.88	110,901	110,587	14,105	7.52	1,876
1965	115,738.63	100,207	99,923	15,816	8.60	1,839
1970	131,408.46	109,490	109,180	22,228	10.11	2,199
1972	1,405,585.66	1,152,018	1,148,756	256,830	10.67	24,070
1973	300,363.29	243,955	243,264	57,099	10.98	5,200
1974	145,064.71	116,690	116,360	28,705	11.31	2,538
1975	428,653.04	341,294	340,328	88,325	11.65	7,582
1977	135,622.29	105,012	104,715	30,907	12.68	2,437
1978	365,118.17	279,315	278,524	86,594	13.06	6,630
1979	376,272.96	284,199	283,394	92,879	13.45	6,906
1980	344,540.23	256,751	256,024	88,516	13.85	6,391
1981	303,797.64	223,200	222,568	81,230	14.26	5,696
1982	241,133.87	174,533	174,039	67,095	14.69	4,567
1983	167,164.09	119,104	118,767	48,397	15.13	3,199
1984	193,116.16	135,336	134,953	58,163	15.58	3,733
1985	425,305.94	291,420	290,595	134,711	16.31	8,259
1986	362,301.42	243,756	243,066	119,235	16.78	7,106
1987	250,966.47	165,638	165,169	85,797	17.26	4,971
1988	96,391.32	62,346	62,169	34,222	17.75	1,928
1989	923,944.86	582,085	580,436	343,509	18.50	18,568
1990	1,029,430.03	634,232	632,436	396,994	19.00	20,894
1991	480,551.49	287,754	286,939	193,612	19.76	9,798
1992	446,668.33	260,944	260,205	186,463	20.28	9,194
1993	106,812.01	60,509	60,338	46,474	21.04	2,209
1994	78,789.86	43,429	43,306	35,484	21.58	1,644
1995	19,031.29	10,144	10,115	8,916	22.34	399
1996	77,782.36	40,019	39,906	37,876	23.12	1,638
1997	99,514.69	49,339	49,199	50,316	23.90	2,105
1998	667,575.26	318,433	317,531	350,044	24.67	14,189
1999	208,269.50	95,387	95,117	113,152	25.45	4,446
2004	334,054.05	119,591	119,252	214,802	29.59	7,259
2005	622,664.98	210,398	209,802	412,863	30.37	13,594
2006	485,373.24	154,155	153,718	331,655	31.16	10,644
2007	261,473.94	77,292	77,073	184,401	32.16	5,734
2008	80,960.38	22,167	22,104	58,856	33.16	1,775
2010	100,531.05	23,223	23,157	77,374	34.95	2,214

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.20 MANHOLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-S2.5						
NET SALVAGE PERCENT.. 0						
2011	201,873.54	42,192	42,073	159,801	35.95	4,445
2012	100,205.36	18,738	18,685	81,520	36.95	2,206
2013	16,187.93	2,684	2,676	13,512	37.75	358
2014	101,870.34	14,629	14,588	87,282	38.75	2,252
2018	49,417.77	2,728	2,720	46,698	42.75	1,092
2019	3,834,764.62	127,314	126,954	3,707,811	43.75	84,750
2020	190,000.00	2,090	2,084	187,916	44.75	4,199
	17,107,597.50	8,365,470	8,342,320	8,765,277		339,135

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.8 1.98

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 362.00 SPECIAL COLLECTION STRUCTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R2.5						
NET SALVAGE PERCENT.. 0						
2020	12,631,538.89	142,736	105,473	12,526,066	43.75	286,310
	12,631,538.89	142,736	105,473	12,526,066		286,310

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 43.8 2.27

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 363.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

SURVIVOR CURVE.. IOWA 47-R3
NET SALVAGE PERCENT.. 0

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
1918	19,225.25	19,225	19,225			
1938	141,547.27	141,547	141,547			
1945	22,798.07	22,547	21,693	1,105	0.84	1,105
1950	55,898.92	54,384	52,323	3,576	1.96	1,824
1955	48,411.23	45,981	44,239	4,172	3.46	1,206
1960	75,811.77	70,634	67,958	7,854	4.44	1,769
1965	78,142.91	70,688	68,010	10,133	5.85	1,732
1970	106,508.99	93,046	89,520	16,989	7.31	2,324
1972	578,007.85	493,388	474,693	103,315	8.32	12,418
1973	116,585.78	98,573	94,838	21,748	8.68	2,506
1974	139,389.89	116,669	112,248	27,142	9.06	2,996
1975	332,188.91	275,086	264,663	67,526	9.45	7,146
1977	106,845.97	86,449	83,173	23,673	10.26	2,307
1978	281,317.64	223,591	215,119	66,199	10.97	6,035
1979	300,357.96	235,601	226,674	73,684	11.41	6,458
1980	265,595.89	205,465	197,680	67,916	11.85	5,731
1981	234,336.91	178,658	171,888	62,449	12.31	5,073
1982	189,740.91	141,717	136,347	53,394	13.05	4,091
1983	132,586.39	97,451	93,758	38,828	13.52	2,872
1984	157,544.72	113,858	109,544	48,001	14.01	3,426
1985	324,214.34	229,025	220,347	103,867	14.75	7,042
1986	295,067.44	204,600	196,848	98,219	15.25	6,441
1987	204,775.56	139,247	133,971	70,805	15.76	4,493
1988	70,422.42	46,690	44,921	25,501	16.52	1,544
1989	745,920.56	484,028	465,688	280,233	17.04	16,446
1990	831,681.40	525,124	505,226	326,455	17.81	18,330
1991	392,868.52	242,243	233,064	159,805	18.34	8,713
1992	531,421.32	318,056	306,005	225,416	19.12	11,790
1994	66,283.63	37,410	35,992	30,292	20.45	1,481
1995	17,144.75	9,399	9,043	8,102	21.01	386
1996	69,371.32	36,711	35,320	34,051	21.80	1,562
1997	87,061.26	44,601	42,911	44,150	22.37	1,974
1998	572,978.15	282,364	271,665	301,313	23.16	13,010
1999	165,235.73	78,157	75,196	90,040	23.95	3,759
2000	12,073.72	5,495	5,287	6,787	24.55	276
2004	187,298.50	70,162	67,503	119,796	27.55	4,348
2005	501,930.42	177,382	170,661	331,269	28.36	11,681
2006	405,833.42	134,737	129,631	276,202	29.17	9,469
2007	228,730.16	71,021	68,330	160,400	29.98	5,350
2008	64,928.47	18,829	18,116	46,812	30.60	1,530
2009	79,546.26	21,318	20,510	59,036	31.42	1,879

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 363.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 47-R3						
NET SALVAGE PERCENT.. 0						
2011	170,919.10	38,149	36,703	134,216	33.06	4,060
2012	79,904.16	16,029	15,422	64,482	33.87	1,904
2013	16,088.15	2,860	2,752	13,336	34.69	384
2014	63,306.64	9,838	9,465	53,842	35.34	1,524
2016	134,413.93	14,570	14,018	120,396	37.00	3,254
2017	253,335.06	21,533	20,717	232,618	37.65	6,178
2018	237,460.86	14,485	13,936	223,525	38.48	5,809
2019	424,568.14	15,667	15,073	409,495	39.15	10,460
2020	370,000.00	4,662	4,486	365,514	39.34	9,291
9999	841,466.15-	467,076-	449,845-	391,621-		18,792-
	10,146,160.47	5,631,874	5,424,102	4,722,058		226,595

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 20.8   2.23

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 364.00 FLOW MEASURING DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 15-L2.5						
NET SALVAGE PERCENT.. 0						
2010	104,719.11	69,931	47,155	57,564	5.22	11,028
2011	9,728.50	6,118	4,125	5,604	5.61	999
2016	382,145.13	130,846	88,230	293,915	8.64	34,018
2017	163,692.75	44,344	29,901	133,792	9.42	14,203
2018	43,907.33	8,615	5,809	38,098	10.24	3,721
2019	464,220.76	55,289	37,282	426,938	11.09	38,498
	1,168,413.58	315,143	212,502	955,911		102,467

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.3 8.77

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 371.00 PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 30-S0.5						
NET SALVAGE PERCENT.. 0						
1997	49,951.49	33,338	23,219	26,732	11.71	2,283
1998	116,626.88	75,831	52,813	63,814	12.10	5,274
2006	332,732.98	163,572	113,922	218,811	15.00	14,587
2008	13,674.66	6,051	4,214	9,461	15.75	601
2009	42,854.89	17,840	12,425	30,430	16.12	1,888
2010	619,829.79	240,804	167,711	452,119	16.53	27,351
2012	52,731.69	17,391	12,112	40,620	17.27	2,352
2013	20,953.94	6,240	4,346	16,608	17.69	939
2014	21,603.26	5,701	3,971	17,632	18.13	973
2015	23,715.85	5,426	3,779	19,937	18.54	1,075
2016	962,652.14	185,022	128,861	833,791	18.92	44,069
2017	71,370.59	10,941	7,620	63,751	19.33	3,298
2018	1,581,983.11	177,973	123,952	1,458,031	19.72	73,937
2019	232,061.86	16,105	11,216	220,846	20.10	10,987
2020	1,218,972.00	29,255	20,375	1,198,597	20.38	58,812
	5,361,715.13	991,490	690,536	4,671,179		248,426

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 18.8   4.63

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 380.00 TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 35-S1.5						
NET SALVAGE PERCENT.. 0						
1987	1,531,819.53	1,195,738	703,282	828,538	9.42	87,955
1988	653,674.80	501,369	294,884	358,791	9.87	36,352
1994	168,786.83	115,855	68,141	100,646	12.11	8,311
1995	161,066.43	108,011	63,527	97,539	12.52	7,791
1996	46,272.63	30,272	17,805	28,468	12.95	2,198
1997	8,776.67	5,610	3,300	5,477	13.26	413
1998	4,095.21	2,543	1,496	2,599	13.73	189
2004	3,983,648.92	1,971,906	1,159,791	2,823,858	16.83	167,787
2006	4,401.88	1,966	1,156	3,246	17.97	181
2009	44,609.96	16,363	9,624	34,986	19.85	1,763
2010	126,318.30	42,847	25,201	101,117	20.46	4,942
2012	39,099.44	10,932	6,430	32,669	21.90	1,492
2014	63,305.11	13,744	8,084	55,221	23.44	2,356
2016	4,288,576.27	654,437	384,912	3,903,664	25.00	156,147
2017	2,558,443.88	305,478	179,669	2,378,775	25.82	92,129
2018	1,012,672.66	86,584	50,925	961,748	26.74	35,967
2019	29,205.63	1,501	883	28,323	27.66	1,024
2020	4,875,888.00	83,865	49,326	4,826,562	28.57	168,938
	19,600,662.15	5,149,021	3,028,436	16,572,226		775,935

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 21.4   3.96

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 382.00 OUTFALL SEWER LINES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R3						
NET SALVAGE PERCENT.. 0						
2017	12,867.84	1,027	635	12,233	40.36	303
2018	1,445,509.40	83,117	51,355	1,394,154	40.98	34,020
2019	95,655.24	3,329	2,057	93,598	41.60	2,250
	1,554,032.48	87,473	54,047	1,499,986		36,573

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 41.0   2.35

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 389.10 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 20-S2.5						
NET SALVAGE PERCENT.. 0						
2013	4,135,844.45	1,675,017	1,414,107	2,721,737	11.02	246,982
2019	144,061.75	11,928	10,070	133,992	16.62	8,062
	4,279,906.20	1,686,945	1,424,177	2,855,730		255,044

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.2 5.96

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 389.60 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2020	120,000.00	12,000	12,000	108,000	4.50	24,000
	120,000.00	12,000	12,000	108,000		24,000

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 4.5   20.00

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 390.00 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2008	12,008.00	7,505	2,814	9,194	7.50	1,226
2009	3,443.43	1,980	742	2,701	8.50	318
2010	44,755.08	23,496	8,811	35,944	9.50	3,784
2011	12,420.37	5,900	2,212	10,208	10.50	972
2012	35,803.65	15,217	5,706	30,098	11.50	2,617
2013	4,929.42	1,849	693	4,236	12.50	339
2014	23,508.40	7,640	2,865	20,643	13.50	1,529
2015	14,460.77	3,977	1,491	12,970	14.50	894
2016	706,971.10	159,068	59,650	647,321	15.50	41,763
2017	96,502.69	16,888	6,333	90,170	16.50	5,465
2018	53,190.91	6,649	2,494	50,697	17.50	2,897
	1,007,993.82	250,169	93,811	914,183		61,804

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 14.8   6.13

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 391.00 TRANSPORTATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 14-L4						
NET SALVAGE PERCENT.. 0						
2001	7,500.00	6,932	7,420	80	1.60	50
2006	99,532.58	85,578	91,602	7,931	2.36	3,361
2008	138,275.00	113,220	121,190	17,085	2.77	6,168
2009	648,949.00	508,257	544,035	104,914	3.18	32,992
2010	245,374.89	180,866	193,598	51,777	3.75	13,807
2011	69,519.00	47,419	50,757	18,762	4.43	4,235
2012	283,568.72	176,436	188,856	94,713	5.16	18,355
2013	569,531.08	317,343	339,681	229,850	5.96	38,565
2014	74,011.10	36,132	38,675	35,336	6.81	5,189
2015	628,453.46	260,934	279,302	349,151	7.75	45,052
2016	130,529.00	44,458	47,588	82,941	8.71	9,523
2017	76,549.06	20,308	21,738	54,811	9.69	5,656
2018	1,423,668.46	269,785	288,775	1,134,893	10.69	106,164
2019	637,746.89	72,512	77,616	560,131	11.69	47,915
2020	22,500.00	853	913	21,587	12.69	1,701
	5,055,708.24	2,141,033	2,291,746	2,763,962		338,733

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 8.2 6.70

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 393.00 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2007	20,177.20	13,620	1,451	18,726	6.50	2,881
2008	18,550.25	11,594	1,235	17,315	7.50	2,309
2009	52,571.58	30,229	3,220	49,352	8.50	5,806
2010	23,867.97	12,531	1,335	22,533	9.50	2,372
2011	11,907.00	5,656	602	11,305	10.50	1,077
2012	34,047.65	14,470	1,541	32,507	11.50	2,827
2013	14,325.60	5,372	572	13,754	12.50	1,100
2014	13,575.00	4,412	470	13,105	13.50	971
2015	6,574.00	1,808	193	6,381	14.50	440
2016	27,741.12	6,242	665	27,076	15.50	1,747
2017	332,504.39	58,188	6,198	326,306	16.50	19,776
2018	232,628.65	29,079	3,097	229,532	17.50	13,116
2019	235,660.71	17,675	1,882	233,779	18.50	12,637
2020	202,500.00	5,062	540	201,960	19.50	10,357
	1,226,631.12	215,938	23,001	1,203,631		77,416

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.5 6.31

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 394.00 LABORATORY EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2006	4,563.82	4,412	365	4,199	0.50	4,199
2007	1,068.93	962	80	989	1.50	659
2010	2,418.04	1,693	140	2,278	4.50	506
2011	7,356.65	4,659	386	6,971	5.50	1,267
2012	727.50	412	34	694	6.50	107
2013	4,573.96	2,287	189	4,385	7.50	585
2014	8,402.05	3,641	302	8,100	8.50	953
2017	30,472.83	7,110	589	29,884	11.50	2,599
2019	91,308.59	9,131	756	90,553	13.50	6,708
	150,892.37	34,307	2,841	148,052		17,583

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 8.4   11.65

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 395.00 POWER OPERATED EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 22-R2						
NET SALVAGE PERCENT.. 0						
2006	93,867.04	57,709	91,175	2,692	9.08	296
2007	19,935.00	11,654	18,412	1,523	9.59	159
2008	48,270.00	26,669	42,134	6,136	10.12	606
2009	180,900.00	93,815	148,219	32,681	10.67	3,063
2010	27,950.00	13,500	21,329	6,621	11.24	589
2012	99,654.42	40,579	64,111	35,543	12.38	2,871
2013	157,521.76	57,889	91,459	66,063	12.91	5,117
2016	15,995.00	3,786	5,981	10,014	14.51	690
2017	29,847.33	5,653	8,931	20,916	14.98	1,396
2018	44,891.21	6,294	9,944	34,947	15.33	2,280
	718,831.76	317,548	501,695	217,136		17,067

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.7 2.37

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 396.00 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2017	235,316.77	54,906	33,997	201,320	11.50	17,506
2018	92,490.12	15,415	9,545	82,945	12.50	6,636
2019	114,354.29	11,435	7,080	107,275	13.50	7,946
	442,161.18	81,756	50,622	391,539		32,088

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.2 7.26

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 397.00 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2020

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2017	101,420.98	23,665	20,171	81,250	11.50	7,065
2018	22,944.61	3,824	3,259	19,686	12.50	1,575
2019	206,521.63	20,652	17,602	188,919	13.50	13,994
	330,887.22	48,141	41,032	289,855		22,634

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.8 6.84

PART VIII. EXPERIENCED AND ESTIMATED NET SALVAGE

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

EXPERIENCED AND ESTIMATED RETIREMENTS BY ACCOUNT AND ASSOCIATED
COST OF REMOVAL, GROSS SALVAGE, AND NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2017 TRANSACTION YEAR				
354.40	5,819.01	1,715.39		1,715.39-
361.10	30,872.99	70,299.53		70,299.53-
363.00	802.02	18,801.55	250.00	18,551.55-
371.00	1,772.00			
380.00	79,306.20	4,297.60		4,297.60-
390.00	68,118.70			
393.00	58,434.64			
394.00	49,060.15			
395.00	6,125.00			
	300,310.71	95,114.07	250.00	94,864.07-
2018 TRANSACTION YEAR				
354.20		12,897.00		12,897.00-
354.30	5,732.53	2,859.26		2,859.26-
354.40	202,178.63	2,403.28		2,403.28-
360.10		2,819.19		2,819.19-
361.10	229,297.81	28,292.26		28,292.26-
363.00	4,745.21	27,682.42		27,682.42-
371.00	65,154.40	522.61		522.61-
380.00	1,806,025.87	58,050.21		58,050.21-
382.00		1,045.59		1,045.59-
390.00	64,677.45	13,128.96		13,128.96-
391.00	423,853.34	42,449.74		42,449.74-
393.00	225,336.27	4,038.83		4,038.83-
394.00	11,316.17			
395.00	8,551.14			
	3,046,868.82	196,189.35		196,189.35-

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

EXPERIENCED AND ESTIMATED RETIREMENTS BY ACCOUNT AND ASSOCIATED
COST OF REMOVAL, GROSS SALVAGE, AND NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2019 TRANSACTION YEAR				
354.30	729,988.56	85,934.54		85,934.54-
354.40	1,020,415.82	64,798.11		64,798.11-
360.10		.09		.09-
361.10	6,619.40	530,646.50		530,646.50-
361.20		29,936.27		29,936.27-
363.00	3,929.16	52,929.84		52,929.84-
364.00	59,781.23			
371.00	185,365.58	43,007.97		43,007.97-
380.00	1,330,426.10	92,172.60		92,172.60-
382.00		3,306.40		3,306.40-
390.00	126,241.84			
391.00	75,000.00	45,195.91		45,195.91-
393.00	7,573.30	28,109.74		28,109.74-
394.00	19,315.01	4,804.76		4,804.76-
395.00	14,863.50	5,217.77		5,217.77-
396.00		39,091.19		39,091.19-
397.00		4,026.89		4,026.89-
	3,579,519.50	1,029,178.58		1,029,178.58-
2020 TRANSACTION YEAR				
354.20	14,317.97			
354.30	24,196.56	2,903.59		2,903.59-
354.40	202,851.07	12,171.06		12,171.06-
361.10	360,561.83	162,252.82		162,252.82-
361.20	5,181.89			
363.00	15,545.66	9,327.40	466.37	8,861.03-
371.00	70,184.19	11,931.31		11,931.31-
380.00	280,736.74	14,036.84		14,036.84-
389.10	6,909.18			
	980,485.09	212,623.02	466.37	212,156.65-
TOTAL	7,907,184.12	1,533,105.02	716.37	1,532,388.65-

EXHIBIT NO. 11-W - DEPRECIATION STUDY

WASTEWATER CSS SCRANTON OPERATIONS

AS OF DECEMBER 31, 2021

Exhibit No. 11-W
Witness: J. J. Spanos

PENNSYLVANIA-AMERICAN WATER COMPANY

MECHANICSBURG, PENNSYLVANIA

WASTEWATER CSS SCRANTON OPERATIONS

2021 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO WASTEWATER PLANT
AS OF DECEMBER 31, 2021

Prepared by:

Gannett Fleming

Excellence Delivered ***As Promised***

Exhibit No. 11-W
Witness: J. J. Spanos

PENNSYLVANIA-AMERICAN WATER COMPANY

Mechanicsburg, Pennsylvania

WASTEWATER CSS SCRANTON OPERATIONS

2021 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WASTEWATER PLANT AS OF DECEMBER 31, 2021

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

Camp Hill, Pennsylvania

Gannett Fleming

*Excellence Delivered **As Promised***

April 22, 2020

Pennsylvania-American Water Company
852 Wesley Drive
Mechanicsburg, PA 17055

Attention: Ashley E. Everette
Director, Rates & Regulatory

Ladies and Gentlemen:

Pursuant to your request, we have determined the annual depreciation accruals applicable to wastewater plant as of December 31, 2021. The results of our study at December 31, 2020 are presented in our report titled “2020 Depreciation Study - Calculated Annual Depreciation Accruals Related to Wastewater Plant as of December 31, 2020". The same methods, procedures and estimates are used in both studies.

Summaries of the original cost, annual accruals, book depreciation reserve and amortization of net salvage are presented in Tables 1 through 5, beginning on page I-3 of the attached report.

Respectfully submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC

John J. Spanos

JOHN J. SPANOS
President

JJS:mle

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PENNSYLVANIA-AMERICAN WATER COMPANY

WASTEWATER CSS SCRANTON OPERATIONS

DEPRECIATION STUDY

PART I. RESULTS OF STUDY

DESCRIPTION OF SUMMARY TABULATIONS

Tables 1 through 5 presented on pages I-3 through I-7 summarize the results of the depreciation study as of December 31, 2021. Table 1 sets forth the development of the net original cost by account as of December 31, 2021. Table 2 sets forth, by depreciable group, the estimated survivor curve, original cost, book depreciation reserve as of December 31, 2021, future book accruals, calculated annual accrual amount and rate, and composite remaining life for plant in service. Table 3 presents the bringforward of the book reserve to December 31, 2021. Table 4 sets forth the calculation of the depreciation accruals for the twelve months ended December 31, 2021. Table 5 presents the annual amortization of experienced and estimated net salvage based on the period 2017 through 2021.

DESCRIPTION OF DETAILED TABULATIONS

The supporting data for the depreciation calculations are presented in account sequence in the section beginning on page II-6. The original cost, calculated accrued depreciation, allocated book reserve, future accruals, remaining life and annual accrual are shown for each vintage of each account or subaccount. The amounts of regular retirements, gross salvage and cost of removal are set forth by account for the years 2017 through 2021, beginning on pages III-2 and III-4.

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 1. DEVELOPMENT OF NET ORIGINAL COST AS OF DECEMBER 31, 2021

DEPRCIABLE GROUP (1)	ORIGINAL COST AS OF DECEMBER 31, 2021 (2)	-	CUSTOMER ADVANCES (3)	-	CONTRIBUTIONS IN AID OF CONSTRUCTION (4)	-	EXCLUDED PROPERTY (5)	=	NET ORIGINAL COST AS OF DECMEBER 31, 2021 (6)
DEPRECIABLE PLANT									
354.20 STRUCTURES AND IMPROVEMENTS - COLLECTION	4,265,676.26								4,265,676.26
354.30 STRUCTURES AND IMPROVEMENTS - SPP	7,208,750.41								7,208,750.41
354.40 STRUCTURES AND IMPROVEMENTS - TDP	60,434,318.15				2,500,000.00				57,934,318.15
360.10 COLLECTION SEWERS - FORCE MAINS	355,954.70								355,954.70
361.10 COLLECTION SEWERS - GRAVITY MAINS	112,085,789.80				8,171,782.47				103,914,007.33
361.20 MANHOLES	17,292,375.52								17,292,375.52
362.00 SPECIAL COLLECTION STRUCTURES	12,631,538.89								12,631,538.89
363.00 SERVICES	11,341,960.69				841,466.15				10,500,494.54
364.00 FLOW MEASURING DEVICES	1,168,413.58								1,168,413.58
371.00 PUMPING EQUIPMENT	5,866,134.68								5,866,134.68
380.00 TREATMENT EQUIPMENT	21,618,340.35								21,618,340.35
382.00 OUTFALL SEWER LINES	1,554,032.48								1,554,032.48
389.10 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES	4,279,906.20								4,279,906.20
389.60 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS	120,000.00								120,000.00
390.00 OFFICE FURNITURE AND EQUIPMENT	1,007,993.82								1,007,993.82
391.00 TRANSPORTATION EQUIPMENT	5,078,208.24								5,078,208.24
393.00 TOOLS, SHOP AND GARAGE EQUIPMENT	1,429,131.12								1,429,131.12
394.00 LABORATORY EQUIPMENT	146,328.55								146,328.55
395.00 POWER OPERATED EQUIPMENT	718,831.76								718,831.76
396.00 COMMUNICATION EQUIPMENT	442,161.18								442,161.18
397.00 MISCELLANEOUS EQUIPMENT	330,887.22								330,887.22
TOTAL DEPRECIABLE PLANT	**269,376,733.60**		**0.00**		**11,513,248.62**		**0.00**		**257,863,484.98**
NONDEPRECIABLE PLANT									
353.20 LAND AND LAND RIGHTS - COLLECTION	599,222.68								599,222.68
353.30 LAND AND LAND RIGHTS - SPP	43,570.00								43,570.00
353.40 LAND AND LAND RIGHTS - TDP	110,019.50								110,019.50
TOTAL NONDEPRECIABLE PLANT	**752,812.18**		**0.00**		**0.00**		**0.00**		**752,812.18**
TOTAL UTILITY PLANT	**270,129,545.78**		**0.00**		**11,513,248.62**		**0.00**		**258,616,297.16**

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 2. SUMMARY OF ESTIMATED SURVIVOR CURVE, ORIGINAL COST, BOOK RESERVE, AND
CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WASTEWATER PLANT AS OF DECEMBER 31, 2021

	DEPRECIABLE GROUP	SURVIVOR CURVE	ORIGINAL COST AS OF DECEMBER 31, 2021	BOOK RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)=(6)/(3)	(8)
	DEPRECIABLE PLANT							
354.20	STRUCTURES AND IMPROVEMENTS - COLLECTION	45-R3	4,265,676.26	231,336	4,034,340	111,559	2.62	36.2
354.30	STRUCTURES AND IMPROVEMENTS - SPP	55-S0	7,208,750.41	1,234,624	5,974,126	184,921	2.57	32.3
354.40	STRUCTURES AND IMPROVEMENTS - TDP	55-S0	57,934,318.15	14,033,354	43,900,964	1,404,559	2.42	31.3
360.10	COLLECTION SEWERS - FORCE MAINS	75-R3	355,954.70	169,031	186,923	4,495	1.26	41.6
361.10	COLLECTION SEWERS - GRAVITY MAINS	80-R2.5	103,914,007.33	27,714,928	76,199,079	1,490,718	1.43	51.1
361.20	MANHOLES	50-S2.5	17,292,375.52	8,683,399	8,608,976	335,210	1.94	25.7
362.00	SPECIAL COLLECTION STRUCTURES	60-R2.5	12,631,538.89	392,209	12,239,330	269,292	2.13	45.5
363.00	SERVICES	47-R3	10,500,494.54	5,650,887	4,849,608	229,821	2.19	21.1
364.00	FLOW MEASURING DEVICES	15-L2.5	1,168,413.58	314,972	853,441	98,554	8.43	8.7
371.00	PUMPING EQUIPMENT	30-S0.5	5,866,134.68	914,497	4,951,638	265,352	4.52	18.7
380.00	TREATMENT EQUIPMENT	35-S1.5	21,618,340.35	3,711,167	17,907,173	827,866	3.83	21.6
382.00	OUTFALL SEWER LINES	50-R3	1,554,032.48	91,437	1,462,596	36,210	2.33	40.4
389.10	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES	20-S2.5	4,279,906.20	1,679,259	2,600,647	249,952	5.84	10.4
389.60	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS	5-SQ	120,000.00	36,000	84,000	24,000	20.00	3.5
390.00	OFFICE FURNITURE AND EQUIPMENT	20-SQ	1,007,993.82	158,227	849,767	61,518	6.10	13.8
391.00	TRANSPORTATION EQUIPMENT	14-L4	5,078,208.24	2,648,747	2,429,462	325,062	6.40	7.5
393.00	TOOLS, SHOP AND GARAGE EQUIPMENT	20-SQ	1,429,131.12	113,095	1,316,036	86,118	6.03	15.3
394.00	LABORATORY EQUIPMENT	15-SQ	146,328.55	16,255	130,073	13,166	9.00	9.9
395.00	POWER OPERATED EQUIPMENT	22-R2	718,831.76	519,776	199,056	16,321	2.27	12.2
396.00	COMMUNICATION EQUIPMENT	15-SQ	442,161.18	90,541	351,621	31,361	7.09	11.2
397.00	MISCELLANEOUS EQUIPMENT	15-SQ	330,887.22	64,470	266,417	22,559	6.82	11.8
	TOTAL DEPRECIABLE PLANT		**257,863,484.98**	**68,468,211**	**189,395,273**	**6,088,614**	**2.36**	**31.1**
	NONDEPRECIABLE PLANT							
353.20	LAND AND LAND RIGHTS - COLLECTION		599,222.68					
353.30	LAND AND LAND RIGHTS - SPP		43,570.00					
353.40	LAND AND LAND RIGHTS - TDP		110,019.50					
	TOTAL NONDEPRECIABLE PLANT		**752,812.18**					
	AMORTIZATION OF NET SALVAGE					**343,598**		
	TOTAL UTILITY PLANT		**258,616,297.16**	**68,468,211**	**189,395,273**	**6,432,212**		

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 3. BRINGFORWARD TO DECEMBER 31, 2021, OF BOOK RESERVE AS OF DECEMBER 31, 2020

ACCOUNT (1)	PROJECTED BOOK RESERVE BALANCE AS OF 12/31/2020 (2)	+	PROJECTED DEPRECIATION ACCRUALS (3)	-	PROJECTED RETIREMENTS (4)	-	PROJECTED COST OF REMOVAL (5)	+	PROJECTED SALVAGE (6)	+	ACQUISITIONS (7)	=	PROJECTED BOOK RESERVE BALANCE AS OF 12/31/2021 (8)
354.20	140,371		107,885		16,921								231,336
354.30	1,071,709		194,942		28,596		3,431						1,234,624
354.40	12,942,812		1,344,655		239,729		14,384						14,033,354
360.10	163,875		5,156										169,031
361.10	26,580,811		1,608,078		326,870		147,091						27,714,928
361.20	8,342,320		346,301		5,222								8,683,399
362.00	105,473		286,736										392,209
363.00	5,424,102		251,380		15,666		9,400		470				5,650,887
364.00	212,502		102,470										314,972
371.00	690,536		260,313		31,070		5,282						914,497
380.00	3,028,436		813,226		124,281		6,214						3,711,167
382.00	54,047		37,390										91,437
389.10	1,424,177		255,082										1,679,259
389.60	12,000		24,000										36,000
390.00	93,811		64,416										158,227
391.00	2,291,746		357,000										2,648,747
393.00	23,001		90,094										113,095
394.00	2,841		18,252		4,564		274						16,255
395.00	501,695		18,080										519,776
396.00	50,622		39,919										90,541
397.00	41,032		23,438										64,470
TOTAL	**63,197,920**		**6,248,815**		**792,918**		**186,076**		**470**		**0**		**68,468,211**

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 4. CALCULATION OF DEPRECIATION ACCRUALS FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2021

ACCOUNT (1)	NET ORIGINAL COST AS OF 12/31/2020 (2)	NET ORIGINAL COST AS OF 12/31/2021 (3)	ACCRUAL RATE (4)	DEPRECIATION ACCRUALS (5)*	AMORTIZATION OF NET SALVAGE (6)	PROJECTED DEPRECIATION ACCRUALS (7)=(5)+(6)
354.20	3,990,966.49	4,265,676.26	2.62	105,306	2,579	107,885
354.30	6,744,506.51	7,208,750.41	2.60	176,603	18,339	194,942
354.40	54,042,344.95	57,934,318.15	2.44	1,328,437	16,218	1,344,655
360.10	355,954.70	355,954.70	1.29	4,592	564	5,156
361.10	98,636,676.90	103,914,007.33	1.44	1,449,780	158,298	1,608,078
361.20	17,107,597.50	17,292,375.52	1.98	340,314	5,987	346,301
362.00	12,631,538.89	12,631,538.89	2.27	286,736		286,736
363.00	10,146,160.47	10,500,494.54	2.23	229,775	21,605	251,380
364.00	1,168,413.58	1,168,413.58	8.77	102,470		102,470
371.00	5,361,715.13	5,866,134.68	4.63	249,221	11,092	260,313
380.00	19,600,662.15	21,618,340.35	3.96	779,515	33,711	813,226
382.00	1,554,032.48	1,554,032.48	2.35	36,520	870	37,390
389.10	4,279,906.20	4,279,906.20	5.96	255,082		255,082
389.60	120,000.00	120,000.00	20.00	24,000		24,000
390.00	1,007,993.82	1,007,993.82	6.13	61,790	2,626	64,416
391.00	5,055,708.24	5,078,208.24	6.70	339,471	17,529	357,000
393.00	1,226,631.12	1,429,131.12	6.31	83,664	6,430	90,094
394.00	150,892.37	146,328.55	11.65	17,291	961	18,252
395.00	718,831.76	718,831.76	2.37	17,036	1,044	18,080
396.00	442,161.18	442,161.18	7.26	32,101	7,818	39,919
397.00	330,887.22	330,887.22	6.84	22,633	805	23,438
TOTAL	**244,673,581.66**	**257,863,484.98**		**5,942,339**	**306,476**	**6,248,815**

* Total accruals shown are based on average monthly balances.

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 5. AMORTIZATION OF EXPERIENCED AND ESTIMATED NET SALVAGE

	2017		2018		2019		PROJECTED 2020		PROJECTED 2021			
ACCOUNT (1)	GROSS SALVAGE (2)	- COST OF REMOVAL (3)	+ GROSS SALVAGE (4)	- COST OF REMOVAL (5)	+ GROSS SALVAGE (6)	- COST OF REMOVAL (7)	+ GROSS SALVAGE (8)	- COST OF REMOVAL (9)	+ GROSS SALVAGE (10)	- COST OF REMOVAL (11)	= NET SALVAGE (12)*	SALVAGE ACCRUAL (13)=(12)/5
354.20				12,897							(12,897)	(2,579)
354.30				2,859		85,935		2,904		3,431	(95,129)	(19,026)
354.40		1,715		2,403		64,798		12,171		14,384	(95,472)	(19,094)
360.10				2,819		0					(2,819)	(564)
361.10		70,300		28,292		530,647		162,253		147,091	(938,582)	(187,716)
361.20						29,936					(29,936)	(5,987)
363.00	250	18,802		27,682		52,930	466	9,327	470	9,400	(116,954)	(23,391)
371.00				523		43,008		11,931		5,282	(60,744)	(12,149)
380.00		4,298		58,050		92,173		14,037		6,214	(174,771)	(34,954)
382.00				1,046		3,306					(4,352)	(870)
390.00				13,129							(13,129)	(2,626)
391.00				42,450		45,196					(87,646)	(17,529)
393.00				4,039		28,110					(32,149)	(6,430)
394.00						4,805				274	(5,079)	(1,016)
395.00						5,218					(5,218)	(1,044)
396.00						39,091					(39,091)	(7,818)
397.00						4,027					(4,027)	(805)
TOTAL	**250**	**95,114**	**0**	**196,189**	**0**	**1,029,179**	**466**	**212,623**	**470**	**186,076**	**(1,717,995)**	**(343,598)**

* Column (12) equals the summation of Columns (2) through (11).

PART II. DETAILED DEPRECIATION CALCULATIONS

CUMULATIVE DEPRECIATED ORIGINAL COST

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

CUMULATIVE DEPRECIATED ORIGINAL COST BY YEAR INSTALLED
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

			DEPRECIATED ORIGINAL COST		
YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	AMOUNT (2) - (3) (4)	CUMULATIVE AMOUNT (5)	PCT OF COL 4 TOTAL (6)
1918	3,290,559	2,969,115	321,444	321,444	0.2
1938	1,260,722	1,100,498	160,224	481,668	0.3
1945	271,992	225,537	46,455	528,123	0.3
1950	1,103,538	866,728	236,810	764,933	0.4
1955	593,498	457,110	136,388	901,321	0.5
1960	1,127,396	820,598	306,798	1,208,119	0.6
1965	843,144	592,462	250,682	1,458,801	0.8
1968				1,458,801	0.8
1969				1,458,801	0.8
1970	998,097	664,164	333,933	1,792,734	0.9
1971				1,792,734	0.9
1972	30,473,797	18,707,596	11,766,201	13,558,935	7.2
1973	937,586	647,433	290,153	13,849,088	7.3
1974	743,965	494,992	248,973	14,098,061	7.4
1975	2,903,409	1,822,504	1,080,905	15,178,966	8.0
1976				15,178,966	8.0
1977	558,135	363,236	194,899	15,373,865	8.1
1978	1,479,070	947,452	531,618	15,905,483	8.4
1979	1,546,429	976,131	570,298	16,475,781	8.7
1980	1,714,384	1,032,266	682,118	17,157,899	9.1
1981	1,206,330	739,401	466,929	17,624,828	9.3
1982	929,972	565,125	364,847	17,989,675	9.5
1983	667,020	394,663	272,357	18,262,032	9.6
1984	766,221	447,218	319,003	18,581,035	9.8
1985	3,580,479	1,901,189	1,679,290	20,260,325	10.7
1986	1,402,796	788,245	614,551	20,874,876	11.0
1987	2,625,678	1,378,983	1,246,695	22,121,571	11.7
1988	1,075,978	552,860	523,118	22,644,689	12.0
1989	4,123,200	2,109,925	2,013,275	24,657,964	13.0
1990	4,725,099	2,348,583	2,376,516	27,034,480	14.3
1991	1,983,409	978,651	1,004,758	28,039,238	14.8
1992	3,096,655	1,405,352	1,691,303	29,730,541	15.7
1993	467,609	197,285	270,324	30,000,865	15.8
1994	471,139	216,753	254,386	30,255,251	16.0
1995	238,279	106,589	131,690	30,386,941	16.0
1996	366,878	157,682	209,196	30,596,137	16.2
1997	465,419	198,094	267,325	30,863,462	16.3
1998	2,786,095	1,127,129	1,658,966	32,522,428	17.2
1999	1,098,564	398,936	699,628	33,222,056	17.5
2000	314,975	93,935	221,040	33,443,096	17.7
2001	7,500	7,500		33,443,096	17.7
2002	114,282	30,457	83,825	33,526,921	17.7
2003	2,453,487	804,386	1,649,101	35,176,022	18.6
2004	6,451,285	2,035,825	4,415,460	39,591,482	20.9
2005	2,472,367	715,517	1,756,850	41,348,332	21.8

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

CUMULATIVE DEPRECIATED ORIGINAL COST BY YEAR INSTALLED
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

			DEPRECIATED ORIGINAL COST		
YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	AMOUNT (2) - (3) (4)	CUMULATIVE AMOUNT (5)	PCT OF COL 4 TOTAL (6)
2006	5,229,912	1,579,757	3,650,155	44,998,487	23.8
2007	1,161,334	310,721	850,613	45,849,100	24.2
2008	561,884	260,896	300,988	46,150,088	24.4
2009	1,055,382	785,754	269,628	46,419,716	24.5
2010	8,846,111	2,275,909	6,570,202	52,989,918	28.0
2011	1,116,477	251,497	864,980	53,854,898	28.4
2012	945,957	382,655	563,302	54,418,200	28.7
2013	5,288,535	2,199,266	3,089,269	57,507,469	30.4
2014	1,680,724	249,708	1,431,016	58,938,485	31.1
2015	6,232,513	1,129,580	5,102,933	64,041,418	33.8
2016	39,267,440	4,489,034	34,778,406	98,819,824	52.2
2017	16,036,262	1,478,788	14,557,474	113,377,298	59.9
2018	13,084,121	1,274,570	11,809,551	125,186,849	66.1
2019	31,043,967	1,508,890	29,535,077	154,721,926	81.7
2020	30,077,505	987,893	29,089,612	183,811,538	97.1
2021	14,012,171	153,096	13,859,075	197,670,613	104.4
9999	11,513,249-	3,237,908-	8,275,341-	189,395,272	100.0
SUBTOTAL	257,863,483	68,468,211	189,395,272		
NONDEPRECIABLE	752,811		752,811		
TOTAL	258,616,294	68,468,211	190,148,083		

NET UTILITY PLANT IN SERVICE

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 354.20 STRUCTURES AND IMPROVEMENTS - COLLECTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-R3						
NET SALVAGE PERCENT.. 0						
2017	1,136,210.80	128,846	86,418	1,049,793	35.18	29,841
2018	1,510,098.13	133,795	89,737	1,420,361	36.02	39,433
2019	1,079,475.99	68,871	46,192	1,033,284	36.71	28,147
2020	248,260.58	9,583	6,427	241,834	37.41	6,464
2021	291,630.76	3,820	2,562	289,069	37.67	7,674
	4,265,676.26	344,915	231,336	4,034,340		111,559

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 36.2   2.62

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 354.30 STRUCTURES AND IMPROVEMENTS - SPP

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-S0						
NET SALVAGE PERCENT.. 0						
1972	435,297.84	303,838	245,341	189,957	21.42	8,868
2006	2,680,683.21	885,162	714,743	1,965,940	31.45	62,510
2015	13,328.44	2,175	1,756	11,572	33.34	347
2017	739,809.35	87,224	70,431	669,378	33.67	19,881
2018	2,296,831.11	216,361	174,706	2,122,125	33.67	63,027
2019	130,038.06	8,973	7,245	122,793	33.73	3,640
2020	419,923.00	17,973	14,513	405,410	33.59	12,069
2021	492,839.40	7,294	5,889	486,950	33.40	14,579
	7,208,750.41	1,529,000	1,234,624	5,974,126		184,921

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 32.3 2.57

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 354.40 STRUCTURES AND IMPROVEMENTS - TDP

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-S0						
NET SALVAGE PERCENT.. 0						
1972	12,538,727.58	8,752,032	7,644,169	4,894,559	21.42	228,504
1985	1,248,139.35	733,407	640,570	607,569	25.61	23,724
2003	2,446,754.53	919,001	802,671	1,644,084	30.76	53,449
2004	233,157.11	84,053	73,413	159,744	31.04	5,146
2009	3,268.40	915	799	2,469	32.14	77
2010	7,358,307.94	1,929,348	1,685,124	5,673,184	32.36	175,315
2012	15,174.14	3,402	2,971	12,203	32.87	371
2013	8,284.95	1,697	1,482	6,803	33.00	206
2014	187,727.87	34,636	30,252	157,476	33.15	4,750
2015	5,529,971.33	902,491	788,251	4,741,720	33.34	142,223
2016	19,752,203.74	2,781,110	2,429,067	17,323,137	33.56	516,184
2017	3,413,395.47	402,439	351,497	3,061,898	33.67	90,938
2018	37,798.24	3,561	3,110	34,688	33.67	1,030
2019	8,444.54	583	509	7,936	33.73	235
2020	3,521,260.31	150,710	131,633	3,389,627	33.59	100,912
2021	4,131,702.65	61,149	53,408	4,078,295	33.40	122,105
9999	2,500,000.00-	693,337-	605,572-	1,894,428-		60,610-
	57,934,318.15	16,067,197	14,033,354	43,900,964		1,404,559

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 31.3 2.42

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 360.10 COLLECTION SEWERS - FORCE MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 75-R3						
NET SALVAGE PERCENT.. 0						
1972	234,615.90	149,826	160,193	74,423	28.02	2,656
1989	4,590.34	2,074	2,218	2,372	39.44	60
2018	112,430.66	6,026	6,443	105,988	61.86	1,713
2019	4,317.80	166	177	4,141	62.44	66
	355,954.70	158,092	169,031	186,923		4,495

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 41.6 1.26

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.10 COLLECTION SEWERS - GRAVITY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 80-R2.5						
NET SALVAGE PERCENT.. 0						
1918	3,082,296.86	2,807,356	2,760,853	321,444	10.14	31,701
1938	859,369.65	717,574	705,688	153,682	16.50	9,314
1945	208,880.36	167,773	164,994	43,886	18.74	2,342
1950	947,962.38	732,017	719,891	228,071	21.09	10,814
1955	462,635.87	341,518	335,861	126,775	23.59	5,374
1960	927,376.82	650,184	639,414	287,963	26.22	10,983
1965	649,647.05	429,417	422,304	227,343	28.97	7,848
1970	760,575.66	470,036	462,250	298,326	31.83	9,372
1972	15,283,899.99	9,155,056	9,003,405	6,280,495	33.14	189,514
1973	521,091.75	308,330	303,223	217,869	33.47	6,509
1974	459,924.09	266,526	262,111	197,813	34.47	5,739
1975	2,143,545.05	1,226,108	1,205,798	937,747	34.80	26,947
1977	315,948.75	174,341	171,453	144,496	36.15	3,997
1978	833,343.60	449,506	442,060	391,284	37.15	10,533
1979	870,511.67	462,416	454,756	415,756	37.50	11,087
1980	1,104,847.51	577,725	568,155	536,693	37.87	14,172
1981	668,698.92	341,237	335,584	333,115	38.87	8,570
1982	499,481.84	250,540	246,390	253,092	39.24	6,450
1983	367,523.16	179,719	176,742	190,781	40.24	4,741
1984	415,844.04	199,605	196,299	219,545	40.62	5,405
1985	1,583,378.74	745,455	733,107	850,272	41.02	20,728
1986	745,901.02	341,623	335,964	409,937	42.02	9,756
1987	691,869.48	310,303	305,163	386,706	42.42	9,116
1988	277,073.02	120,665	118,666	158,407	43.42	3,648
1989	2,449,751.87	1,043,104	1,025,825	1,423,927	43.83	32,487
1990	2,865,049.60	1,191,288	1,171,555	1,693,495	44.26	38,262
1991	1,110,462.00	447,072	439,666	670,796	45.26	14,821
1992	2,119,145.58	831,553	817,779	1,301,367	45.68	28,489
1993	360,805.34	136,745	134,480	226,325	46.69	4,847
1994	161,075.18	59,356	58,373	102,702	47.13	2,179
1995	44,348.04	15,868	15,605	28,743	47.57	604
1996	174,389.13	60,025	59,031	115,358	48.58	2,375
1997	221,762.17	73,891	72,667	149,095	49.03	3,041
1998	1,428,442.32	456,530	448,968	979,474	50.03	19,578
1999	725,178.78	223,500	219,798	505,381	50.50	10,008
2000	302,909.30	89,873	88,384	214,525	50.96	4,210
2002	114,281.88	30,970	30,457	83,825	52.45	1,598
2003	6,732.51	1,744	1,715	5,018	52.93	95
2004	1,748,032.19	428,268	421,174	1,326,858	53.93	24,603
2005	1,348,013.25	313,548	308,354	1,039,659	54.43	19,101
2006	1,133,053.81	249,385	245,254	887,800	54.92	16,165

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.10 COLLECTION SEWERS - GRAVITY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 80-R2.5						
NET SALVAGE PERCENT.. 0						
2007	630,043.53	130,671	128,506	501,538	55.43	9,048
2008	185,430.43	35,788	35,195	150,235	56.43	2,662
2010	199,591.58	33,292	32,741	166,851	57.46	2,904
2011	632,805.62	97,009	95,402	537,404	57.99	9,267
2012	205,648.93	28,709	28,233	177,416	58.53	3,031
2013	340,469.81	42,831	42,122	298,348	59.07	5,051
2014	1,123,682.39	125,628	123,547	1,000,135	59.61	16,778
2015	16,154.22	1,575	1,549	14,605	60.17	243
2016	12,874,761.81	1,076,330	1,058,500	11,816,262	60.29	195,990
2017	6,786,266.24	470,288	462,498	6,323,768	60.44	104,629
2018	2,891,657.92	156,728	154,132	2,737,526	61.02	44,863
2019	23,312,161.21	920,830	905,576	22,406,585	60.79	368,590
2020	6,258,505.88	152,082	149,563	6,108,943	60.23	101,427
2021	5,633,550.00	48,449	47,646	5,585,904	57.98	96,342
9999	8,171,782.47-	2,216,209-	2,179,498-	5,992,285-		117,230-
	103,914,007.33	28,181,751	27,714,928	76,199,079		1,490,718

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 51.1 1.43

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.20 MANHOLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-S2.5						
NET SALVAGE PERCENT.. 0						
1918	189,511.24	189,511	189,511			
1938	261,341.58	253,135	254,799	6,543	2.71	2,414
1945	40,500.28	38,419	38,672	1,828	4.15	440
1950	100,050.42	93,707	94,323	5,727	4.84	1,183
1955	82,715.61	75,908	76,407	6,309	5.96	1,059
1960	124,547.10	111,831	112,566	11,981	6.99	1,714
1965	115,639.68	100,618	101,279	14,361	8.44	1,702
1970	131,326.75	110,236	110,961	20,366	9.85	2,068
1972	1,404,814.35	1,161,220	1,168,853	235,961	10.38	22,732
1973	300,210.95	246,053	247,670	52,541	10.67	4,924
1974	144,996.86	117,766	118,540	26,457	10.98	2,410
1975	428,463.59	344,656	346,922	81,542	11.31	7,210
1977	135,571.76	106,180	106,878	28,694	12.32	2,329
1978	364,990.09	282,612	284,470	80,520	12.68	6,350
1979	376,151.03	287,756	289,648	86,503	13.06	6,624
1980	344,439.60	260,155	261,865	82,575	13.45	6,139
1981	303,714.45	226,328	227,816	75,898	13.85	5,480
1982	241,072.90	177,116	178,280	62,793	14.26	4,403
1983	167,126.40	120,966	121,761	45,365	14.69	3,088
1984	193,075.65	137,566	138,470	54,606	15.13	3,609
1985	425,224.00	297,997	299,956	125,268	15.58	8,040
1986	362,240.19	248,207	249,839	112,401	16.31	6,892
1987	250,927.12	168,824	169,934	80,993	16.78	4,827
1988	96,377.38	63,609	64,027	32,350	17.26	1,874
1989	923,830.33	597,533	601,461	322,369	17.75	18,162
1990	1,029,312.47	648,467	652,729	376,583	18.50	20,356
1991	480,501.25	296,037	297,983	182,518	19.00	9,606
1992	446,628.73	267,441	269,199	177,430	19.76	8,979
1993	106,803.43	62,395	62,805	43,998	20.28	2,170
1994	78,784.12	44,631	44,924	33,860	21.04	1,609
1995	19,030.13	10,489	10,558	8,472	21.58	393
1996	77,778.14	41,456	41,729	36,049	22.34	1,614
1997	99,509.85	51,198	51,535	47,975	23.12	2,075
1998	667,548.41	330,971	333,146	334,402	23.90	13,992
1999	208,262.26	99,341	99,994	108,268	24.67	4,389
2004	334,049.28	126,872	127,706	206,343	28.58	7,220
2005	622,657.92	222,912	224,377	398,281	29.59	13,460
2006	485,368.61	164,006	165,084	320,285	30.37	10,546
2007	261,472.03	83,044	83,590	177,882	31.16	5,709
2008	80,959.94	23,932	24,089	56,871	32.16	1,768
2010	100,530.74	25,434	25,601	74,930	33.95	2,207

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.20 MANHOLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-S2.5						
NET SALVAGE PERCENT.. 0						
2011	201,873.12	46,633	46,940	154,933	34.95	4,433
2012	100,205.20	20,943	21,081	79,124	35.95	2,201
2013	16,187.91	3,027	3,047	13,141	36.95	356
2014	101,870.28	16,890	17,001	84,869	37.75	2,248
2018	49,417.77	3,825	3,850	45,568	41.75	1,091
2019	3,834,764.62	211,679	213,070	3,621,695	42.75	84,718
2020	190,000.00	6,308	6,350	183,650	43.75	4,198
2021	190,000.00	2,090	2,103	187,897	44.75	4,199
	17,292,375.52	8,627,930	8,683,399	8,608,976		335,210

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.7   1.94

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 362.00 SPECIAL COLLECTION STRUCTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R2.5						
NET SALVAGE PERCENT.. 0						
2020	12,631,538.89	404,209	392,209	12,239,330	45.45	269,292
	12,631,538.89	404,209	392,209	12,239,330		269,292

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 45.5   2.13

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 363.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 47-R3						
NET SALVAGE PERCENT.. 0						
1918	18,750.62	18,751	18,751			
1938	140,011.15	140,011	140,011			
1945	22,611.84	22,487	21,871	741	0.42	741
1950	55,525.58	53,993	52,514	3,012	2.03	1,484
1955	48,146.30	46,105	44,842	3,304	2.94	1,124
1960	75,472.27	70,551	68,618	6,854	4.29	1,598
1965	77,857.66	70,819	68,879	8,979	5.61	1,601
1970	106,194.14	93,515	90,953	15,241	6.98	2,184
1972	576,441.24	499,313	485,635	90,806	7.65	11,870
1973	116,283.38	99,259	96,540	19,743	8.32	2,373
1974	139,044.05	117,562	114,341	24,703	8.68	2,846
1975	331,400.85	277,383	269,784	61,617	9.06	6,801
1977	106,614.83	87,296	84,905	21,710	9.85	2,204
1978	280,736.79	227,144	220,922	59,815	10.26	5,830
1979	299,766.13	238,254	231,727	68,039	10.97	6,202
1980	265,096.69	207,942	202,246	62,851	11.41	5,508
1981	233,917.00	180,958	176,001	57,916	11.85	4,887
1982	189,416.96	144,411	140,455	48,962	12.31	3,977
1983	132,370.83	98,868	96,160	36,211	13.05	2,775
1984	157,300.94	115,616	112,449	44,852	13.52	3,317
1985	323,737.16	233,965	227,556	96,181	14.01	6,865
1986	294,654.62	208,144	202,442	92,213	14.75	6,252
1987	204,503.40	141,803	137,918	66,585	15.25	4,366
1988	70,333.56	47,827	46,517	23,817	15.76	1,511
1989	745,027.60	493,953	480,421	264,607	16.52	16,017
1990	830,737.41	539,066	524,299	306,438	17.04	17,983
1991	392,446.01	247,790	241,002	151,444	17.81	8,503
1992	530,880.20	327,341	318,374	212,506	18.34	11,587
1994	66,223.25	38,608	37,550	28,673	19.67	1,458
1995	17,130.00	9,668	9,403	7,727	20.45	378
1996	69,314.96	37,998	36,957	32,358	21.01	1,540
1997	86,994.54	46,038	44,777	42,218	21.80	1,937
1998	572,564.23	293,325	285,289	287,275	22.37	12,842
1999	165,123.30	81,373	79,144	85,979	23.16	3,712
2000	12,065.99	5,707	5,551	6,515	23.95	272
2004	187,205.23	74,040	72,012	115,193	26.75	4,306
2005	501,696.25	187,935	182,786	318,910	27.55	11,576
2006	405,656.24	143,359	139,432	266,224	28.36	9,387
2007	228,636.96	75,907	73,827	154,810	29.17	5,307
2008	64,903.74	20,153	19,601	45,303	29.98	1,511
2009	79,517.97	23,060	22,428	57,090	30.60	1,866

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 363.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 47-R3						
NET SALVAGE PERCENT.. 0						
2011	170,866.29	41,982	40,832	130,034	32.24	4,033
2012	79,881.18	17,829	17,341	62,540	33.06	1,892
2013	16,083.85	3,226	3,138	12,946	33.87	382
2014	63,290.92	11,253	10,945	52,346	34.69	1,509
2016	134,385.22	17,739	17,253	117,132	36.17	3,238
2017	253,284.98	27,456	26,704	226,581	37.00	6,124
2018	237,417.47	20,180	19,627	217,790	37.65	5,785
2019	424,496.49	25,894	25,184	399,312	38.48	10,377
2020	369,942.41	13,651	13,277	356,665	39.15	9,110
2021	370,000.01	4,662	4,534	365,466	39.34	9,290
9999	841,466.15-	465,261-	452,838-	388,628-		18,417-
	10,500,494.54	5,805,909	5,650,887	4,849,608		229,821

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 21.1   2.19

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 364.00 FLOW MEASURING DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 15-L2.5						
NET SALVAGE PERCENT.. 0						
2010	104,719.11	73,345	58,388	46,331	4.92	9,417
2011	9,728.50	6,497	5,172	4,556	5.22	873
2016	382,145.13	156,794	124,819	257,326	7.90	32,573
2017	163,692.75	56,048	44,618	119,075	8.64	13,782
2018	43,907.33	11,894	9,469	34,438	9.42	3,656
2019	464,220.76	91,080	72,506	391,715	10.24	38,253
	1,168,413.58	395,658	314,972	853,441		98,554

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 8.7   8.43

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 371.00 PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 30-S0.5						
NET SALVAGE PERCENT.. 0						
1997	48,529.12	33,175	25,415	23,114	11.34	2,038
1998	113,510.53	75,757	58,037	55,474	11.71	4,737
2006	327,378.23	168,469	129,064	198,314	14.62	13,565
2008	13,487.11	6,317	4,839	8,648	15.32	564
2009	42,316.52	18,725	14,345	27,972	15.75	1,776
2010	612,742.91	255,085	195,420	417,323	16.12	25,889
2012	52,244.14	18,808	14,409	37,835	16.89	2,240
2013	20,782.44	6,854	5,251	15,531	17.27	899
2014	21,448.93	6,387	4,893	16,556	17.69	936
2015	23,570.45	6,220	4,765	18,805	18.13	1,037
2016	957,703.99	219,123	167,870	789,834	18.54	42,602
2017	71,073.03	13,660	10,465	60,608	18.92	3,203
2018	1,576,899.46	241,739	185,196	1,391,703	19.33	71,997
2019	231,537.26	26,048	19,955	211,582	19.72	10,729
2020	1,217,420.85	84,489	64,727	1,152,694	20.10	57,348
2021	535,489.71	12,852	9,846	525,644	20.38	25,792
	5,866,134.68	1,193,708	914,497	4,951,638		265,352

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 18.7   4.52

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 380.00 TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

SURVIVOR CURVE.. IOWA 35-S1.5
NET SALVAGE PERCENT.. 0

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
1987	1,478,378.22	1,167,919	765,968	712,410	9.17	77,689
1988	632,193.77	493,490	323,650	308,544	9.42	32,754
1994	165,056.38	115,738	75,906	89,150	11.72	7,607
1995	157,770.72	108,294	71,023	86,748	12.11	7,163
1996	45,395.30	30,442	19,965	25,430	12.52	2,031
1997	8,623.49	5,641	3,700	4,923	12.95	380
1998	4,029.49	2,576	1,689	2,340	13.26	176
2004	3,948,841.24	2,045,500	1,341,520	2,607,321	16.28	160,155
2006	4,371.96	2,060	1,351	3,021	17.39	174
2009	44,414.66	17,544	11,506	32,909	19.15	1,718
2010	125,852.51	46,163	30,276	95,577	19.85	4,815
2012	39,001.61	12,079	7,922	31,080	21.17	1,468
2014	63,206.68	15,738	10,322	52,885	22.62	2,338
2016	4,285,004.14	794,440	521,025	3,763,979	24.17	155,729
2017	2,557,047.40	390,205	255,912	2,301,135	25.00	92,045
2018	1,012,339.64	120,873	79,273	933,067	25.82	36,137
2019	29,201.04	2,497	1,638	27,563	26.74	1,031
2020	4,875,653.27	250,609	164,359	4,711,294	27.66	170,329
2021	2,141,958.83	36,842	24,162	2,117,796	28.57	74,127
	21,618,340.35	5,658,650	3,711,167	17,907,173		827,866

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 21.6 3.83

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 382.00 OUTFALL SEWER LINES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R3						
NET SALVAGE PERCENT.. 0						
2017	12,867.84	1,315	984	11,884	39.55	300
2018	1,445,509.40	115,352	86,336	1,359,173	40.36	33,676
2019	95,655.24	5,500	4,117	91,539	40.98	2,234
	1,554,032.48	122,167	91,437	1,462,596		36,210

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 40.4   2.33

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 389.10 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 20-S2.5						
NET SALVAGE PERCENT.. 0						
2013	4,135,844.45	1,877,260	1,661,661	2,474,183	10.23	241,856
2019	144,061.75	19,881	17,598	126,464	15.62	8,096
	4,279,906.20	1,897,141	1,679,259	2,600,647		249,952

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.4 5.84

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 389.60 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2020	120,000.00	36,000	36,000	84,000	3.50	24,000
	120,000.00	36,000	36,000	84,000		24,000

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 3.5   20.00

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 390.00 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2008	12,008.00	8,105	4,267	7,741	6.50	1,191
2009	3,443.43	2,152	1,133	2,310	7.50	308
2010	44,755.08	25,734	13,547	31,208	8.50	3,672
2011	12,420.37	6,521	3,433	8,987	9.50	946
2012	35,803.65	17,007	8,953	26,851	10.50	2,557
2013	4,929.42	2,095	1,103	3,826	11.50	333
2014	23,508.40	8,816	4,641	18,867	12.50	1,509
2015	14,460.77	4,700	2,474	11,987	13.50	888
2016	706,971.10	194,417	102,345	604,626	14.50	41,698
2017	96,502.69	21,713	11,431	85,072	15.50	5,489
2018	53,190.91	9,308	4,900	48,291	16.50	2,927
	1,007,993.82	300,568	158,227	849,767		61,518

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 13.8 6.10

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 391.00 TRANSPORTATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 14-L4						
NET SALVAGE PERCENT.. 0						
2001	7,500.00	7,026	7,500			
2006	99,532.58	86,852	93,396	6,137	2.26	2,715
2008	138,275.00	116,483	125,260	13,015	2.53	5,144
2009	648,949.00	531,359	571,395	77,554	2.77	27,998
2010	245,374.89	192,178	206,658	38,717	3.18	12,175
2011	69,519.00	51,242	55,103	14,416	3.75	3,844
2012	283,568.72	193,422	207,996	75,573	4.43	17,059
2013	569,531.08	354,362	381,062	188,469	5.16	36,525
2014	74,011.10	41,239	44,346	29,665	5.96	4,977
2015	628,453.46	306,811	329,929	298,524	6.81	43,836
2016	130,529.00	54,196	58,280	72,249	7.75	9,322
2017	76,549.06	26,073	28,038	48,511	8.71	5,570
2018	1,423,668.46	377,699	406,157	1,017,511	9.69	105,006
2019	637,746.89	120,853	129,959	507,788	10.69	47,501
2020	22,500.00	2,558	2,751	19,749	11.69	1,689
2021	22,500.00	853	917	21,583	12.69	1,701
	5,078,208.24	2,463,206	2,648,747	2,429,462		325,062

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 7.5 6.40

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 393.00 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2007	20,177.20	14,628	5,860	14,317	5.50	2,603
2008	18,550.25	12,521	5,016	13,534	6.50	2,082
2009	52,571.58	32,857	13,162	39,410	7.50	5,255
2010	23,867.97	13,724	5,497	18,371	8.50	2,161
2011	11,907.00	6,251	2,504	9,403	9.50	990
2012	34,047.65	16,173	6,478	27,570	10.50	2,626
2013	14,325.60	6,088	2,439	11,887	11.50	1,034
2014	13,575.00	5,091	2,039	11,536	12.50	923
2015	6,574.00	2,137	856	5,718	13.50	424
2016	27,741.12	7,629	3,056	24,685	14.50	1,702
2017	332,504.39	74,813	29,968	302,536	15.50	19,518
2018	232,628.65	40,710	16,308	216,321	16.50	13,110
2019	235,660.71	29,458	11,800	223,861	17.50	12,792
2020	202,500.00	15,188	6,084	196,416	18.50	10,617
2021	202,500.00	5,062	2,028	200,472	19.50	10,281
	1,429,131.12	282,330	113,095	1,316,036		86,118

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.3 6.03

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 394.00 LABORATORY EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2007	1,068.93	1,033	423	646	0.50	646
2010	2,418.04	1,854	760	1,658	3.50	474
2011	7,356.65	5,150	2,111	5,246	4.50	1,166
2012	727.50	461	189	538	5.50	98
2013	4,573.96	2,592	1,063	3,511	6.50	540
2014	8,402.05	4,201	1,722	6,680	7.50	891
2017	30,472.83	9,142	3,748	26,725	10.50	2,545
2019	91,308.59	15,218	6,239	85,069	12.50	6,806
	146,328.55	39,651	16,255	130,073		13,166

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.9 9.00

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 395.00 POWER OPERATED EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 22-R2						
NET SALVAGE PERCENT.. 0						
2006	93,867.04	60,525	91,433	2,434	8.54	285
2007	19,935.00	12,256	18,515	1,420	9.08	156
2008	48,270.00	28,219	42,629	5,641	9.59	588
2009	180,900.00	99,947	150,986	29,914	10.12	2,956
2010	27,950.00	14,495	21,897	6,053	10.67	567
2012	99,654.42	44,406	67,082	32,572	11.82	2,756
2013	157,521.76	64,143	96,898	60,624	12.38	4,897
2016	15,995.00	4,514	6,819	9,176	13.99	656
2017	29,847.33	7,065	10,673	19,174	14.51	1,321
2018	44,891.21	8,502	12,844	32,047	14.98	2,139
	718,831.76	344,072	519,776	199,056		16,321

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.2   2.27

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 396.00 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2017	235,316.77	70,595	57,461	177,856	10.50	16,939
2018	92,490.12	21,581	17,566	74,924	11.50	6,515
2019	114,354.29	19,059	15,514	98,841	12.50	7,907
	442,161.18	111,235	90,541	351,621		31,361

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.2   7.09

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 397.00 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2021

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2017	101,420.98	30,426	27,942	73,479	10.50	6,998
2018	22,944.61	5,354	4,917	18,028	11.50	1,568
2019	206,521.63	34,421	31,611	174,911	12.50	13,993
	330,887.22	70,201	64,470	266,417		22,559

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.8 6.82

PART III. EXPERIENCED AND ESTIMATED NET SALVAGE

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

EXPERIENCED AND ESTIMATED RETIREMENTS BY ACCOUNT AND ASSOCIATED
COST OF REMOVAL, GROSS SALVAGE, AND NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2017 TRANSACTION YEAR				
354.40	5,819.01	1,715.39		1,715.39-
361.10	30,872.99	70,299.53		70,299.53-
363.00	802.02	18,801.55	250.00	18,551.55-
371.00	1,772.00			
380.00	79,306.20	4,297.60		4,297.60-
390.00	68,118.70			
393.00	58,434.64			
394.00	49,060.15			
395.00	6,125.00			
	300,310.71	95,114.07	250.00	94,864.07-
2018 TRANSACTION YEAR				
354.20		12,897.00		12,897.00-
354.30	5,732.53	2,859.26		2,859.26-
354.40	202,178.63	2,403.28		2,403.28-
360.10		2,819.19		2,819.19-
361.10	229,297.81	28,292.26		28,292.26-
363.00	4,745.21	27,682.42		27,682.42-
371.00	65,154.40	522.61		522.61-
380.00	1,806,025.87	58,050.21		58,050.21-
382.00		1,045.59		1,045.59-
390.00	64,677.45	13,128.96		13,128.96-
391.00	423,853.34	42,449.74		42,449.74-
393.00	225,336.27	4,038.83		4,038.83-
394.00	11,316.17			
395.00	8,551.14			
	3,046,868.82	196,189.35		196,189.35-

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

EXPERIENCED AND ESTIMATED RETIREMENTS BY ACCOUNT AND ASSOCIATED
COST OF REMOVAL, GROSS SALVAGE, AND NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2019 TRANSACTION YEAR				
354.30	729,988.56	85,934.54		85,934.54-
354.40	1,020,415.82	64,798.11		64,798.11-
360.10		.09		.09-
361.10	6,619.40	530,646.50		530,646.50-
361.20		29,936.27		29,936.27-
363.00	3,929.16	52,929.84		52,929.84-
364.00	59,781.23			
371.00	185,365.58	43,007.97		43,007.97-
380.00	1,330,426.10	92,172.60		92,172.60-
382.00		3,306.40		3,306.40-
390.00	126,241.84			
391.00	75,000.00	45,195.91		45,195.91-
393.00	7,573.30	28,109.74		28,109.74-
394.00	19,315.01	4,804.76		4,804.76-
395.00	14,863.50	5,217.77		5,217.77-
396.00		39,091.19		39,091.19-
397.00		4,026.89		4,026.89-
	3,579,519.50	1,029,178.58		1,029,178.58-
2020 TRANSACTION YEAR				
354.20	14,317.97			
354.30	24,196.56	2,903.59		2,903.59-
354.40	202,851.07	12,171.06		12,171.06-
361.10	360,561.83	162,252.82		162,252.82-
361.20	5,181.89			
363.00	15,545.66	9,327.40	466.37	8,861.03-
371.00	70,184.19	11,931.31		11,931.31-
380.00	280,736.74	14,036.84		14,036.84-
389.10	6,909.18			
	980,485.09	212,623.02	466.37	212,156.65-

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

EXPERIENCED AND ESTIMATED RETIREMENTS BY ACCOUNT AND ASSOCIATED
COST OF REMOVAL, GROSS SALVAGE, AND NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2021 TRANSACTION YEAR				
354.20	16,920.99			
354.30	28,595.50	3,431.46		3,431.46-
354.40	239,729.45	14,383.77		14,383.77-
361.10	326,869.57	147,091.31		147,091.31-
361.20	5,221.98			
363.00	15,665.93	9,399.56	469.98	8,929.58-
371.00	31,070.16	5,281.93		5,281.93-
380.00	124,280.63	6,214.03		6,214.03-
394.00	4,563.82	273.83		273.83-
	792,918.03	186,075.89	469.98	185,605.91-
TOTAL	8,700,102.15	1,719,180.91	1,186.35	1,717,994.56-

EXHIBIT NO. 11-X - DEPRECIATION STUDY

WASTEWATER CSS SCRANTON OPERATIONS

AS OF DECEMBER 31, 2022

Exhibit No. 11-X
Witness: J. J. Spanos

PENNSYLVANIA-AMERICAN WATER COMPANY

MECHANICSBURG, PENNSYLVANIA

WASTEWATER CSS SCRANTON OPERATIONS

2022 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO WASTEWATER PLANT
AS OF DECEMBER 31, 2022

Prepared by:

Gannett Fleming

Excellence Delivered ***As Promised***

Exhibit No. 11-X
Witness: J. J. Spanos

PENNSYLVANIA-AMERICAN WATER COMPANY

Mechanicsburg, Pennsylvania

WASTEWATER CSS SCRANTON OPERATIONS

2022 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WASTEWATER PLANT AS OF DECEMBER 31, 2022

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

Camp Hill, Pennsylvania

Excellence Delivered **As Promised**

April 22, 2020

Pennsylvania-American Water Company
852 Wesley Drive
Mechanicsburg, PA 17055

Attention: Ashley E. Everette
Director, Rates & Regulatory

Ladies and Gentlemen:

Pursuant to your request, we have determined the annual depreciation accruals applicable to wastewater plant as of December 31, 2022. The results of our study at December 31, 2020 are presented in our report titled “2020 Depreciation Study - Calculated Annual Depreciation Accruals Related to Wastewater Plant as of December 31, 2020". The same methods, procedures and estimates are used in both studies.

Summaries of the original cost, annual accruals, book depreciation reserve and amortization of net salvage are presented in Tables 1 through 5, beginning on page I-3 of the attached report.

Respectfully submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC

John J. Spanos

JOHN J. SPANOS
President

JJS:mle

066548.100

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PART I. RESULTS OF STUDY

DESCRIPTION OF SUMMARY TABULATIONS

Tables 1 through 5 presented on pages I-3 through I-7 summarize the results of the depreciation study as of December 31, 2022. Table 1 sets forth the development of the net original cost by account as of December 31, 2022. Table 2 sets forth, by depreciable group, the estimated survivor curve, original cost, book depreciation reserve as of December 31, 2022, future book accruals, calculated annual accrual amount and rate, and composite remaining life for plant in service. Table 3 presents the bringforward of the book reserve to December 31, 2022. Table 4 sets forth the calculation of the depreciation accruals for the twelve months ended December 31, 2022. Table 5 presents the annual amortization of experienced and estimated net salvage based on the period 2018 through 2022.

DESCRIPTION OF DETAILED TABULATIONS

The supporting data for the depreciation calculations are presented in account sequence in the section beginning on page II-6. The original cost, calculated accrued depreciation, allocated book reserve, future accruals, remaining life and annual accrual are shown for each vintage of each account or subaccount. The amounts of regular retirements, gross salvage and cost of removal are set forth by account for the years 2018 through 2022, beginning on pages III-2 and III-3.

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 1. DEVELOPMENT OF NET ORIGINAL COST AS OF DECEMBER 31, 2022

DEPRCIABLE GROUP (1)	ORIGINAL COST AS OF DECEMBER 31, 2022 (2)	- CUSTOMER ADVANCES (3)	- CONTRIBUTIONS IN AID OF CONSTRUCTION (4)	- EXCLUDED PROPERTY (5)	= NET ORIGINAL COST AS OF DECMEBER 31, 2022 (6)
DEPRECIABLE PLANT					
354.20 STRUCTURES AND IMPROVEMENTS - COLLECTION	4,611,492.88				4,611,492.88
354.30 STRUCTURES AND IMPROVEMENTS - SPP	7,793,160.83				7,793,160.83
354.40 STRUCTURES AND IMPROVEMENTS - TDP	65,333,703.43		2,500,000.00		62,833,703.43
360.10 COLLECTION SEWERS - FORCE MAINS	355,954.70				355,954.70
361.10 COLLECTION SEWERS - GRAVITY MAINS	116,048,849.44		8,201,132.47		107,847,716.97
361.20 MANHOLES	17,476,642.15				17,476,642.15
362.00 SPECIAL COLLECTION STRUCTURES	14,093,316.43				14,093,316.43
363.00 SERVICES	11,694,760.58		841,466.15		10,853,294.43
364.00 FLOW MEASURING DEVICES	1,168,413.58				1,168,413.58
371.00 PUMPING EQUIPMENT	6,863,523.88				6,863,523.88
380.00 TREATMENT EQUIPMENT	25,607,897.16				25,607,897.16
382.00 OUTFALL SEWER LINES	3,015,810.02				3,015,810.02
389.10 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES	4,279,906.20				4,279,906.20
389.60 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS	120,000.00				120,000.00
390.00 OFFICE FURNITURE AND EQUIPMENT	1,007,993.82				1,007,993.82
391.00 TRANSPORTATION EQUIPMENT	5,100,708.24				5,100,708.24
393.00 TOOLS, SHOP AND GARAGE EQUIPMENT	1,631,631.12				1,631,631.12
394.00 LABORATORY EQUIPMENT	145,259.62				145,259.62
395.00 POWER OPERATED EQUIPMENT	718,831.76				718,831.76
396.00 COMMUNICATION EQUIPMENT	442,161.18				442,161.18
397.00 MISCELLANEOUS EQUIPMENT	330,887.22				330,887.22
TOTAL DEPRECIABLE PLANT	**287,840,904.24**	**0.00**	**11,542,598.62**	**0.00**	**276,298,305.62**
NONDEPRECIABLE PLANT					
353.20 LAND AND LAND RIGHTS - COLLECTION	599,222.68				599,222.68
353.30 LAND AND LAND RIGHTS - SPP	43,570.00				43,570.00
353.40 LAND AND LAND RIGHTS - TDP	110,019.50				110,019.50
TOTAL NONDEPRECIABLE PLANT	**752,812.18**	**0.00**	**0.00**	**0.00**	**752,812.18**
TOTAL UTILITY PLANT	**288,593,716.42**	**0.00**	**11,542,598.62**	**0.00**	**277,051,117.80**

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 2. SUMMARY OF ESTIMATED SURVIVOR CURVE, ORIGINAL COST, BOOK RESERVE, AND
CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WASTEWATER PLANT AS OF DECEMBER 31, 2022

	DEPRECIABLE GROUP	SURVIVOR CURVE	ORIGINAL COST AS OF DECEMBER 31, 2022	BOOK RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)=(6)/(3)	(8)
	DEPRECIABLE PLANT							
354.20	STRUCTURES AND IMPROVEMENTS - COLLECTION	45-R3	4,611,492.88	322,965	4,288,528	120,358	2.61	35.6
354.30	STRUCTURES AND IMPROVEMENTS - SPP	55-S0	7,793,160.83	1,395,737	6,397,423	197,535	2.53	32.4
354.40	STRUCTURES AND IMPROVEMENTS - TDP	55-S0	62,833,703.43	15,111,816	47,721,887	1,525,207	2.43	31.3
360.10	COLLECTION SEWERS - FORCE MAINS	75-R3	355,954.70	174,080	181,874	4,477	1.26	40.6
361.10	COLLECTION SEWERS - GRAVITY MAINS	80-R2.5	107,847,716.97	29,019,365	78,828,352	1,532,376	1.42	51.4
361.20	MANHOLES	50-S2.5	17,476,642.15	9,020,673	8,455,969	331,151	1.89	25.5
362.00	SPECIAL COLLECTION STRUCTURES	60-R2.5	14,093,316.43	624,336	13,468,981	296,864	2.11	45.4
363.00	SERVICES	47-R3	10,853,294.43	5,880,672	4,972,622	232,314	2.14	21.4
364.00	FLOW MEASURING DEVICES	15-L2.5	1,168,413.58	413,469	754,944	94,130	8.06	8.0
371.00	PUMPING EQUIPMENT	30-S0.5	6,863,523.88	1,114,276	5,749,248	308,356	4.49	18.6
380.00	TREATMENT EQUIPMENT	35-S1.5	25,607,897.16	4,295,455	21,312,442	953,351	3.72	22.4
382.00	OUTFALL SEWER LINES	50-R3	3,015,810.02	91,712	2,924,098	71,806	2.38	40.7
389.10	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES	20-S2.5	4,279,906.20	1,929,206	2,350,701	244,548	5.71	9.6
389.60	OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS	5-SQ	120,000.00	60,000	60,000	24,000	20.00	2.5
390.00	OFFICE FURNITURE AND EQUIPMENT	20-SQ	1,007,993.82	222,340	785,654	61,262	6.08	12.8
391.00	TRANSPORTATION EQUIPMENT	14-L4	5,100,708.24	2,991,987	2,108,721	307,893	6.04	6.8
393.00	TOOLS, SHOP AND GARAGE EQUIPMENT	20-SQ	1,631,631.12	211,687	1,419,944	95,025	5.82	14.9
394.00	LABORATORY EQUIPMENT	15-SQ	145,259.62	29,256	116,004	12,373	8.52	9.4
395.00	POWER OPERATED EQUIPMENT	22-R2	718,831.76	537,137	181,695	15,587	2.17	11.7
396.00	COMMUNICATION EQUIPMENT	15-SQ	442,161.18	129,708	312,453	30,576	6.92	10.2
397.00	MISCELLANEOUS EQUIPMENT	15-SQ	330,887.22	87,842	243,046	22,479	6.79	10.8
	TOTAL DEPRECIABLE PLANT		**276,298,305.62**	**73,663,720**	**202,634,586**	**6,481,668**	**2.35**	**31.3**
	NONDEPRECIABLE PLANT							
353.20	LAND AND LAND RIGHTS - COLLECTION		599,222.68					
353.30	LAND AND LAND RIGHTS - SPP		43,570.00					
353.40	LAND AND LAND RIGHTS - TDP		110,019.50					
	TOTAL NONDEPRECIABLE PLANT		**752,812.18**					
	AMORTIZATION OF NET SALVAGE					**360,842**		
	TOTAL UTILITY PLANT		**277,051,117.80**	**73,663,720**	**202,634,586**	**6,842,510**		

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 3. BRINGFORWARD TO DECEMBER 31, 2022, OF BOOK RESERVE AS OF DECEMBER 31, 2021

ACCOUNT (1)	PROJECTED BOOK RESERVE BALANCE AS OF 12/31/2021 (2)	+	PROJECTED DEPRECIATION ACCRUALS (3)	-	PROJECTED RETIREMENTS (4)	-	PROJECTED COST OF REMOVAL (5)	+	PROJECTED SALVAGE (6)	+	ACQUISITIONS (7)	=	PROJECTED BOOK RESERVE BALANCE AS OF 12/31/2022 (8)
354.20	231,336		115,158		23,529								322,965
354.30	1,234,624		205,647		39,762		4,771						1,395,737
354.40	14,033,354		1,431,809		333,346		20,001						15,111,816
360.10	169,031		5,049										174,080
361.10	27,714,928		1,695,415		269,640		121,338						29,019,365
361.20	8,683,399		343,007		5,733								9,020,673
362.00	392,209		270,349		38,222								624,336
363.00	5,650,887		256,790		17,200		10,320		516				5,880,672
364.00	314,972		98,497										413,469
371.00	914,497		279,177		67,861		11,536						1,114,276
380.00	3,711,167		869,303		271,443		13,572						4,295,455
382.00	91,437		38,498		38,222								91,712
389.10	1,679,259		249,947										1,929,206
389.60	36,000		24,000										60,000
390.00	158,227		64,114										222,340
391.00	2,648,747		343,240										2,991,987
393.00	113,095		98,593										211,687
394.00	16,255		14,133		1,069		64						29,256
395.00	519,776		17,361										537,137
396.00	90,541		39,167										129,708
397.00	64,470		23,372										87,842
TOTAL	**68,468,211**		**6,482,625**		**1,106,029**		**181,603**		**516**		**0**		**73,663,720**

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 4. CALCULATION OF DEPRECIATION ACCRUALS FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

ACCOUNT (1)	NET ORIGINAL COST AS OF 12/31/2021 (2)	NET ORIGINAL COST AS OF 12/31/2022 (3)	ACCRUAL RATE (4)	DEPRECIATION ACCRUALS (5)*	AMORTIZATION OF NET SALVAGE (6)	PROJECTED DEPRECIATION ACCRUALS (7)=(5)+(6)
354.20	4,265,676.26	4,611,492.88	2.62	112,579	2,579	115,158
354.30	7,208,750.41	7,793,160.83	2.57	186,621	19,026	205,647
354.40	57,934,318.15	62,833,703.43	2.42	1,412,715	19,094	1,431,809
360.10	355,954.70	355,954.70	1.26	4,485	564	5,049
361.10	103,914,007.33	107,847,716.97	1.43	1,507,699	187,716	1,695,415
361.20	17,292,375.52	17,476,642.15	1.94	337,020	5,987	343,007
362.00	12,631,538.89	14,093,316.43	2.13	270,349		270,349
363.00	10,500,494.54	10,853,294.43	2.19	233,399	23,391	256,790
364.00	1,168,413.58	1,168,413.58	8.43	98,497		98,497
371.00	5,866,134.68	6,863,523.88	4.52	267,028	12,149	279,177
380.00	21,618,340.35	25,607,897.16	3.83	834,349	34,954	869,303
382.00	1,554,032.48	3,015,810.02	2.33	37,628	870	38,498
389.10	4,279,906.20	4,279,906.20	5.84	249,947		249,947
389.60	120,000.00	120,000.00	20.00	24,000		24,000
390.00	1,007,993.82	1,007,993.82	6.10	61,488	2,626	64,114
391.00	5,078,208.24	5,100,708.24	6.40	325,711	17,529	343,240
393.00	1,429,131.12	1,631,631.12	6.03	92,163	6,430	98,593
394.00	146,328.55	145,259.62	9.00	13,117	1,016	14,133
395.00	718,831.76	718,831.76	2.27	16,317	1,044	17,361
396.00	442,161.18	442,161.18	7.09	31,349	7,818	39,167
397.00	330,887.22	330,887.22	6.82	22,567	805	23,372
TOTAL	**257,863,484.98**	**276,298,305.62**		**6,139,027**	**343,598**	**6,482,625**

* Total accruals shown are based on average monthly balances.

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

TABLE 5. AMORTIZATION OF EXPERIENCED AND ESTIMATED NET SALVAGE

ACCOUNT (1)	2018 GROSS SALVAGE (2)	- 2018 COST OF REMOVAL (3)	+ 2019 GROSS SALVAGE (4)	- 2019 COST OF REMOVAL (5)	+ PROJECTED 2020 GROSS SALVAGE (6)	- PROJECTED 2020 COST OF REMOVAL (7)	+ PROJECTED 2021 GROSS SALVAGE (8)	- PROJECTED 2021 COST OF REMOVAL (9)	+ PROJECTED 2022 GROSS SALVAGE (10)	- PROJECTED 2022 COST OF REMOVAL (11)	= NET SALVAGE (12)*	SALVAGE ACCRUAL (13)=(12)/5
354.20		12,897									(12,897)	(2,579)
354.30		2,859		85,935		2,904		3,431		4,771	(99,900)	(19,980)
354.40		2,403		64,798		12,171		14,384		20,001	(113,757)	(22,751)
360.10		2,819		0							(2,819)	(564)
361.10		28,292		530,647		162,253		147,091		121,338	(989,621)	(197,924)
361.20				29,936							(29,936)	(5,987)
363.00		27,682		52,930	466	9,327	470	9,400	516	10,320	(108,207)	(21,641)
371.00		523		43,008		11,931		5,282		11,536	(72,280)	(14,456)
380.00		58,050		92,173		14,037		6,214		13,572	(184,046)	(36,809)
382.00		1,046		3,306							(4,352)	(870)
390.00		13,129									(13,129)	(2,626)
391.00		42,450		45,196							(87,646)	(17,529)
393.00		4,039		28,110							(32,149)	(6,430)
394.00				4,805				274		64	(5,143)	(1,029)
395.00				5,218							(5,218)	(1,044)
396.00				39,091							(39,091)	(7,818)
397.00				4,027							(4,027)	(805)
TOTAL	**0**	**196,189**	**0**	**1,029,179**	**466**	**212,623**	**470**	**186,076**	**516**	**181,603**	**(1,804,218)**	**(360,842)**

* Column (12) equals the summation of Columns (2) through (11).

PART II. DETAILED DEPRECIATION CALCULATIONS

CUMULATIVE DEPRECIATED ORIGINAL COST

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

CUMULATIVE DEPRECIATED ORIGINAL COST BY YEAR INSTALLED
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	AMOUNT (2) - (3) (4)	DEPRECIATED ORIGINAL COST CUMULATIVE AMOUNT (5)	DEPRECIATED ORIGINAL COST PCT OF COL 4 TOTAL (6)
1918	3,209,832	2,905,582	304,250	304,250	0.2
1938	1,247,367	1,104,025	143,342	447,592	0.2
1945	269,653	225,906	43,747	491,339	0.2
1950	1,095,209	868,840	226,369	717,708	0.4
1955	589,917	459,272	130,645	848,353	0.4
1960	1,121,549	826,496	295,053	1,143,406	0.6
1965	839,594	598,439	241,155	1,384,561	0.7
1968				1,384,561	0.7
1969				1,384,561	0.7
1970	994,586	672,740	321,846	1,706,407	0.8
1971				1,706,407	0.8
1972	30,223,976	18,920,610	11,303,366	13,009,773	6.4
1973	935,191	657,908	277,283	13,287,056	6.6
1974	741,898	504,988	236,910	13,523,966	6.7
1975	2,895,079	1,851,508	1,043,571	14,567,537	7.2
1976				14,567,537	7.2
1977	556,831	370,329	186,502	14,754,039	7.3
1978	1,475,759	968,682	507,077	15,261,116	7.5
1979	1,543,091	996,241	546,850	15,807,966	7.8
1980	1,710,601	1,052,576	658,025	16,465,991	8.1
1981	1,203,955	757,499	446,456	16,912,447	8.3
1982	928,236	577,376	350,860	17,263,307	8.5
1983	665,811	405,407	260,404	17,523,711	8.6
1984	764,893	457,640	307,253	17,830,964	8.8
1985	3,562,568	1,943,592	1,618,976	19,449,940	9.6
1986	1,400,583	812,997	587,586	20,037,526	9.9
1987	2,512,386	1,389,933	1,122,453	21,159,979	10.4
1988	1,030,468	559,703	470,765	21,630,744	10.7
1989	4,117,129	2,170,928	1,946,201	23,576,945	11.6
1990	4,718,348	2,420,023	2,298,325	25,875,270	12.8
1991	1,980,806	1,012,853	967,953	26,843,223	13.2
1992	3,092,188	1,450,252	1,641,936	28,485,159	14.1
1993	466,972	204,614	262,358	28,747,517	14.2
1994	462,886	224,245	238,641	28,986,158	14.3
1995	231,154	110,552	120,602	29,106,760	14.4
1996	364,662	164,342	200,320	29,307,080	14.5
1997	461,773	205,114	256,659	29,563,739	14.6
1998	2,777,038	1,175,765	1,601,273	31,165,012	15.4
1999	1,097,435	416,687	680,748	31,845,760	15.7
2000	314,566	97,998	216,568	32,062,328	15.8
2001	7,500	7,500		32,062,328	15.8
2002	114,142	31,918	82,224	32,144,552	15.9
2003	2,437,789	837,723	1,600,066	33,744,618	16.7
2004	6,368,856	2,192,614	4,176,242	37,920,860	18.7
2005	2,470,640	761,115	1,709,525	39,630,385	19.6

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

CUMULATIVE DEPRECIATED ORIGINAL COST BY YEAR INSTALLED
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	DEPRECIATED ORIGINAL COST AMOUNT (2) - (3) (4)	CUMULATIVE AMOUNT (5)	PCT OF COL 4 TOTAL (6)
2006	5,197,281	1,677,646	3,519,635	43,150,020	21.3
2007	1,159,530	333,929	825,601	43,975,621	21.7
2008	561,302	275,495	285,807	44,261,428	21.8
2009	1,053,789	820,554	233,235	44,494,663	22.0
2010	8,796,727	2,449,552	6,347,175	50,841,838	25.1
2011	1,115,880	277,920	837,960	51,679,798	25.5
2012	944,468	420,828	523,640	52,203,438	25.8
2013	5,287,881	2,494,421	2,793,460	54,996,898	27.1
2014	1,678,647	285,411	1,393,236	56,390,134	27.8
2015	6,215,071	1,289,618	4,925,453	61,315,587	30.3
2016	39,183,313	5,325,239	33,858,074	95,173,661	47.0
2017	16,006,213	1,854,984	14,151,229	109,324,890	54.0
2018	13,018,053	1,634,621	11,383,432	120,708,322	59.6
2019	31,022,369	2,124,906	28,897,463	149,605,785	73.8
2020	30,023,614	1,613,036	28,410,578	178,016,363	87.9
2021	14,003,650	454,329	13,549,321	191,565,684	94.5
2022	19,570,200	222,633	19,347,567	210,913,251	104.1
9999	11,542,599-	3,263,934-	8,278,665-	202,634,586	100.0
SUBTOTAL	276,298,306	73,663,720	202,634,586		
NONDEPRECIABLE	752,811		752,811		
TOTAL	277,051,117	73,663,720	203,387,397		

NET UTILITY PLANT IN SERVICE

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 354.20 STRUCTURES AND IMPROVEMENTS - COLLECTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-R3						
NET SALVAGE PERCENT.. 0						
2017	1,126,772.43	154,931	110,622	1,016,150	34.50	29,454
2018	1,501,344.27	170,252	121,562	1,379,782	35.18	39,221
2019	1,075,240.38	95,266	68,021	1,007,219	36.02	27,963
2020	247,626.32	15,799	11,281	236,345	36.71	6,438
2021	291,164.04	11,239	8,024	283,140	37.41	7,569
2022	369,345.44	4,838	3,455	365,891	37.67	9,713
	4,611,492.88	452,325	322,965	4,288,528		120,358

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 35.6   2.61

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 354.30 STRUCTURES AND IMPROVEMENTS - SPP

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-S0						
NET SALVAGE PERCENT.. 0						
1972	426,289.52	301,387	252,432	173,858	20.93	8,307
2006	2,660,234.79	917,249	768,258	1,891,977	31.35	60,350
2015	13,272.94	2,449	2,051	11,222	33.15	339
2017	737,387.15	103,824	86,960	650,427	33.56	19,381
2018	2,290,482.44	270,048	226,184	2,064,298	33.67	61,310
2019	129,747.53	12,222	10,237	119,511	33.67	3,549
2020	419,225.53	28,927	24,228	394,998	33.73	11,711
2021	492,348.14	21,073	17,650	474,698	33.59	14,132
2022	624,172.79	9,238	7,737	616,435	33.40	18,456
	7,793,160.83	1,666,417	1,395,737	6,397,423		197,535

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 32.4   2.53

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 354.40 STRUCTURES AND IMPROVEMENTS - TDP

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-S0						
NET SALVAGE PERCENT.. 0						
1972	12,358,078.73	8,737,162	7,703,275	4,654,804	20.93	222,399
1985	1,234,567.80	740,741	653,087	581,481	25.00	23,259
2003	2,431,064.46	948,115	835,922	1,595,142	30.50	52,300
2004	231,715.89	87,032	76,733	154,983	30.76	5,038
2009	3,252.56	966	852	2,401	31.95	75
2010	7,324,523.96	2,050,867	1,808,184	5,516,340	32.14	171,635
2012	15,113.13	3,682	3,246	11,867	32.60	364
2013	8,254.24	1,851	1,632	6,622	32.87	201
2014	187,086.17	38,315	33,781	153,305	33.00	4,646
2015	5,512,901.96	1,017,130	896,771	4,616,131	33.15	139,250
2016	19,697,455.56	3,214,625	2,834,231	16,863,225	33.34	505,796
2017	3,405,156.05	479,446	422,712	2,982,444	33.56	88,869
2018	37,720.39	4,447	3,921	33,799	33.67	1,004
2019	8,430.55	794	700	7,731	33.67	230
2020	3,516,919.13	242,667	213,952	3,302,967	33.73	97,924
2021	4,128,731.08	176,710	155,800	3,972,931	33.59	118,277
2022	5,232,731.77	77,444	68,279	5,164,453	33.40	154,624
9999	2,500,000.00-	681,960-	601,262-	1,898,738-		60,684-
	62,833,703.43	17,140,034	15,111,816	47,721,887		1,525,207

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 31.3   2.43

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 360.10 COLLECTION SEWERS - FORCE MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 75-R3						
NET SALVAGE PERCENT.. 0						
1972	234,615.90	152,829	163,301	71,315	27.02	2,639
1989	4,590.34	2,122	2,267	2,323	38.96	60
2018	112,430.66	7,735	8,265	104,166	60.86	1,712
2019	4,317.80	231	247	4,071	61.86	66
	355,954.70	162,917	174,080	181,874		4,477

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 40.6 1.26

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.10 COLLECTION SEWERS - GRAVITY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 80-R2.5						
NET SALVAGE PERCENT.. 0						
1918	3,003,392.69	2,730,685	2,699,143	304,250	10.44	29,143
1938	848,619.34	717,083	708,800	139,819	15.50	9,021
1945	206,850.85	166,722	164,796	42,055	18.65	2,255
1950	940,251.09	729,447	721,021	219,230	20.95	10,464
1955	459,478.14	341,163	337,222	122,256	23.41	5,222
1960	922,058.47	651,158	643,637	278,421	26.00	10,708
1965	646,516.42	431,226	426,245	220,271	28.71	7,672
1970	757,499.36	473,286	467,819	289,680	31.53	9,187
1972	15,226,297.11	9,227,136	9,120,555	6,105,742	32.83	185,981
1973	519,196.29	310,999	307,407	211,789	33.14	6,391
1974	458,309.61	271,182	268,050	190,260	33.47	5,684
1975	2,136,284.45	1,237,977	1,223,677	912,607	34.47	26,475
1977	314,952.72	176,248	174,212	140,741	35.80	3,931
1978	830,809.59	458,441	453,146	377,664	36.15	10,447
1979	867,958.89	468,177	462,769	405,190	37.15	10,907
1980	1,101,723.36	585,235	578,475	523,248	37.50	13,953
1981	666,875.86	348,709	344,681	322,195	37.87	8,508
1982	498,169.19	254,216	251,280	246,889	38.87	6,352
1983	366,592.23	183,883	181,759	184,833	39.24	4,710
1984	414,828.93	202,851	200,508	214,321	40.24	5,326
1985	1,579,654.63	758,234	749,476	830,179	40.62	20,438
1986	744,210.89	350,374	346,327	397,884	41.02	9,700
1987	690,359.41	316,185	312,533	377,826	42.02	8,992
1988	276,490.61	124,006	122,574	153,917	42.42	3,628
1989	2,444,793.26	1,064,707	1,052,409	1,392,384	43.42	32,068
1990	2,859,466.28	1,217,561	1,203,497	1,655,969	43.83	37,782
1991	1,108,378.91	460,864	455,541	652,838	44.26	14,750
1992	2,115,319.44	851,628	841,791	1,273,528	45.26	28,138
1993	360,178.45	141,334	139,701	220,477	45.68	4,827
1994	160,805.90	60,945	60,241	100,565	46.69	2,154
1995	44,276.72	16,316	16,128	28,149	47.13	597
1996	174,119.35	62,300	61,580	112,539	47.57	2,366
1997	221,432.21	76,217	75,337	146,095	48.58	3,007
1998	1,426,398.59	475,276	469,786	956,613	49.03	19,511
1999	724,181.25	231,448	228,774	495,407	50.03	9,902
2000	302,508.74	93,233	92,156	210,353	50.50	4,165
2002	114,142.27	32,291	31,918	82,224	51.96	1,582
2003	6,724.61	1,822	1,801	4,924	52.45	94
2004	1,746,060.47	452,230	447,006	1,299,054	52.93	24,543
2005	1,346,552.45	329,905	326,094	1,020,458	53.93	18,922
2006	1,131,874.41	263,274	260,233	871,641	54.43	16,014

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.10 COLLECTION SEWERS - GRAVITY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 80-R2.5						
NET SALVAGE PERCENT.. 0						
2007	629,413.62	138,534	136,934	492,480	54.92	8,967
2008	185,252.38	38,421	37,977	147,275	55.43	2,657
2010	199,414.88	35,895	35,480	163,935	56.94	2,879
2011	632,267.76	105,462	104,244	528,024	57.46	9,189
2012	205,481.14	31,500	31,136	174,345	57.99	3,006
2013	340,203.14	47,492	46,943	293,260	58.53	5,010
2014	1,122,837.69	141,253	139,621	983,217	59.07	16,645
2015	16,142.57	1,805	1,784	14,359	59.61	241
2016	12,865,849.29	1,254,420	1,239,930	11,625,919	60.17	193,218
2017	6,781,757.96	566,955	560,406	6,221,352	60.29	103,190
2018	2,889,814.76	200,264	197,951	2,691,864	60.44	44,538
2019	23,297,906.04	1,262,747	1,248,162	22,049,744	61.02	361,353
2020	6,254,834.63	247,066	244,212	6,010,623	60.79	98,875
2021	5,630,380.14	136,818	135,238	5,495,142	60.23	91,236
2022	4,232,700.00	36,401	35,980	4,196,720	57.98	72,382
9999	8,201,132.47-	2,232,526-	2,206,738-	5,994,394-		116,527-
	107,847,716.97	29,358,481	29,019,365	78,828,352		1,532,376

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 51.4   1.42

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.20 MANHOLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-S2.5						
NET SALVAGE PERCENT.. 0						
1918	188,206.05	188,206	188,206			
1938	260,424.50	253,081	256,902	3,522	2.45	1,438
1945	40,394.83	38,504	39,085	1,310	3.80	345
1950	99,840.91	93,371	94,781	5,060	5.02	1,008
1955	82,581.58	75,810	76,954	5,628	6.03	933
1960	124,388.78	111,950	113,640	10,749	6.94	1,549
1965	115,530.92	100,974	102,498	13,033	8.29	1,572
1970	131,236.00	110,921	112,596	18,640	9.61	1,940
1972	1,403,961.08	1,169,780	1,187,440	216,521	10.11	21,417
1973	300,040.74	248,014	251,758	48,283	10.38	4,652
1974	144,921.57	118,778	120,571	24,351	10.67	2,282
1975	428,253.24	347,827	353,078	75,175	10.98	6,847
1977	135,515.47	107,897	109,526	25,989	11.65	2,231
1978	364,847.29	285,748	290,062	74,785	12.32	6,070
1979	376,012.84	291,147	295,542	80,471	12.68	6,346
1980	344,327.02	263,410	267,387	76,940	13.06	5,891
1981	303,621.28	229,325	232,787	70,834	13.45	5,266
1982	241,003.72	179,596	182,307	58,697	13.85	4,238
1983	167,083.80	122,756	124,609	42,475	14.26	2,979
1984	193,029.97	139,715	141,824	51,206	14.69	3,486
1985	425,130.30	302,905	307,478	117,652	15.13	7,776
1986	362,169.83	253,809	257,641	104,529	15.58	6,709
1987	250,882.59	171,905	174,500	76,383	16.31	4,683
1988	96,361.54	64,832	65,811	30,551	16.78	1,821
1989	923,695.66	609,639	618,843	304,853	17.26	17,662
1990	1,029,178.28	665,673	675,723	353,455	17.75	19,913
1991	480,443.70	302,680	307,250	173,194	18.50	9,362
1992	446,581.33	275,139	279,293	167,288	19.00	8,805
1993	106,793.54	63,948	64,913	41,881	19.76	2,119
1994	78,777.48	46,022	46,717	32,060	20.28	1,581
1995	19,028.71	10,780	10,943	8,086	21.04	384
1996	77,773.22	42,869	43,516	34,257	21.58	1,587
1997	99,504.18	53,036	53,837	45,667	22.34	2,044
1998	667,514.78	343,436	348,621	318,894	23.12	13,793
1999	208,253.71	103,252	104,811	103,443	23.90	4,328
2004	334,042.99	133,484	135,499	198,544	27.80	7,142
2005	622,648.95	236,482	240,052	382,597	28.58	13,387
2006	485,362.81	173,760	176,383	308,980	29.59	10,442
2007	261,469.43	88,351	89,685	171,784	30.37	5,656
2008	80,959.34	25,713	26,101	54,858	31.16	1,761
2010	100,530.28	27,525	27,941	72,589	33.16	2,189

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 361.20 MANHOLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-S2.5						
NET SALVAGE PERCENT.. 0						
2011	201,872.49	51,074	51,845	150,027	33.95	4,419
2012	100,204.98	23,147	23,496	76,709	34.95	2,195
2013	16,187.88	3,383	3,434	12,754	35.95	355
2014	101,870.17	19,050	19,338	82,532	36.95	2,234
2018	49,417.77	4,912	4,986	44,432	40.75	1,090
2019	3,834,764.62	296,811	301,292	3,533,473	41.75	84,634
2020	190,000.00	10,488	10,646	179,354	42.75	4,195
2021	190,000.00	6,308	6,403	183,597	43.75	4,197
2022	190,000.00	2,090	2,122	187,878	44.75	4,198
	17,476,642.15	8,889,313	9,020,673	8,455,969		331,151

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.5 1.89

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 362.00 SPECIAL COLLECTION STRUCTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R2.5						
NET SALVAGE PERCENT.. 0						
2020	12,593,316.43	654,852	608,583	11,984,733	45.58	262,938
2022	1,500,000.00	16,950	15,753	1,484,247	43.75	33,926
	14,093,316.43	671,802	624,336	13,468,981		296,864

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 45.4 2.11

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 363.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 47-R3						
NET SALVAGE PERCENT.. 0						
1918	18,232.95	18,233	18,233			
1938	138,322.92	138,323	138,323			
1945	22,407.79	22,403	22,025	383	0.02	383
1950	55,117.26	53,949	53,038	2,079	1.57	1,324
1955	47,857.12	45,871	45,096	2,761	2.92	946
1960	75,102.16	70,408	69,219	5,883	4.17	1,411
1965	77,546.85	70,893	69,696	7,851	5.40	1,454
1970	105,851.00	93,911	92,325	13,526	6.67	2,028
1972	574,733.44	502,087	493,607	81,126	7.31	11,098
1973	115,953.69	100,439	98,743	17,211	7.65	2,250
1974	138,666.93	118,366	116,367	22,300	8.32	2,680
1975	330,541.37	279,473	274,753	55,788	8.68	6,427
1977	106,362.34	88,079	86,591	19,771	9.45	2,092
1978	280,101.92	229,347	225,474	54,628	9.85	5,546
1979	299,119.13	242,017	237,930	61,189	10.26	5,964
1980	264,550.86	210,265	206,714	57,837	10.97	5,272
1981	233,457.79	183,124	180,031	53,427	11.41	4,682
1982	189,062.61	146,259	143,789	45,274	11.85	3,821
1983	132,134.98	100,740	99,039	33,096	12.31	2,689
1984	157,034.17	117,289	115,308	41,726	13.05	3,197
1985	323,214.87	237,563	233,551	89,664	13.52	6,632
1986	294,202.66	212,620	209,029	85,174	14.01	6,080
1987	204,205.36	144,251	141,815	62,390	14.75	4,230
1988	70,236.23	48,702	47,879	22,357	15.25	1,466
1989	744,049.30	505,954	497,409	246,640	15.76	15,650
1990	829,702.99	550,093	540,803	288,900	16.52	17,488
1991	391,982.95	254,358	250,062	141,921	17.04	8,329
1992	530,286.98	334,823	329,168	201,119	17.81	11,292
1994	66,157.03	39,595	38,926	27,231	19.12	1,424
1995	17,113.81	9,977	9,809	7,305	19.67	371
1996	69,253.12	39,086	38,426	30,827	20.45	1,507
1997	86,921.37	47,650	46,845	40,076	21.01	1,907
1998	572,110.44	302,761	297,648	274,462	21.80	12,590
1999	165,000.02	84,530	83,102	81,898	22.37	3,661
2000	12,057.51	5,942	5,842	6,216	23.16	268
2004	187,102.84	77,535	76,226	110,877	26.14	4,242
2005	501,439.06	198,319	194,969	306,470	26.75	11,457
2006	405,461.55	151,886	149,321	256,141	27.55	9,297
2007	228,534.30	80,764	79,400	149,134	28.36	5,259
2008	64,876.51	21,539	21,175	43,702	29.17	1,498
2009	79,486.82	24,681	24,264	55,223	29.98	1,842

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 363.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 47-R3						
NET SALVAGE PERCENT.. 0						
2011	170,808.10	45,777	45,004	125,804	31.42	4,004
2012	79,855.86	19,621	19,290	60,566	32.24	1,879
2013	16,079.11	3,589	3,528	12,551	33.06	380
2014	63,273.59	12,693	12,479	50,795	33.87	1,500
2016	134,353.59	20,879	20,526	113,828	35.34	3,221
2017	253,229.77	33,426	32,861	220,369	36.17	6,093
2018	237,369.63	25,731	25,297	212,073	37.00	5,732
2019	424,417.51	36,075	35,466	388,952	37.65	10,331
2020	369,878.92	22,563	22,182	347,697	38.48	9,036
2021	369,941.50	13,651	13,420	356,522	39.15	9,107
2022	370,000.00	4,662	4,583	365,417	39.34	9,289
9999	841,466.15-	463,573-	455,934-	385,532-		18,012-
	10,853,294.43	5,979,199	5,880,672	4,972,622		232,314

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 21.4   2.14

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 364.00 FLOW MEASURING DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 15-L2.5						
NET SALVAGE PERCENT.. 0						
2010	104,719.11	76,047	66,667	38,052	4.71	8,079
2011	9,728.50	6,814	5,974	3,754	4.92	763
2016	382,145.13	180,831	158,526	223,619	7.24	30,887
2017	163,692.75	67,163	58,878	104,815	7.90	13,268
2018	43,907.33	15,034	13,180	30,727	8.64	3,556
2019	464,220.76	125,757	110,244	353,976	9.42	37,577
	1,168,413.58	471,646	413,469	754,944		94,130

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 8.0 8.06

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 371.00 PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 30-S0.5						
NET SALVAGE PERCENT.. 0						
1997	45,621.94	31,876	25,219	20,403	11.00	1,855
1998	107,126.71	73,232	57,937	49,190	11.34	4,338
2006	316,644.73	170,323	134,751	181,894	14.17	12,837
2008	13,110.48	6,445	5,099	8,011	15.00	534
2009	41,233.09	19,314	15,280	25,953	15.32	1,694
2010	598,437.44	264,809	209,503	388,934	15.75	24,694
2012	51,250.58	19,911	15,753	35,498	16.53	2,147
2013	20,430.38	7,355	5,819	14,611	16.89	865
2014	21,128.94	6,968	5,513	15,616	17.27	904
2015	23,265.15	6,928	5,481	17,784	17.69	1,005
2016	947,129.17	249,947	197,745	749,384	18.13	41,334
2017	70,420.18	16,112	12,747	57,673	18.54	3,111
2018	1,565,257.09	300,842	238,010	1,327,247	18.92	70,150
2019	230,233.73	35,295	27,924	202,310	19.33	10,466
2020	1,212,659.00	136,424	107,932	1,104,727	19.72	56,021
2021	534,325.27	37,082	29,337	504,988	20.10	25,124
2022	1,065,250.00	25,566	20,226	1,045,024	20.38	51,277
	6,863,523.88	1,408,429	1,114,276	5,749,248		308,356

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 18.6 4.49

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 380.00 TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 35-S1.5						
NET SALVAGE PERCENT.. 0						
1987	1,366,938.48	1,091,910	761,085	605,853	8.94	67,769
1988	587,379.88	464,030	323,439	263,941	9.17	28,783
1994	157,146.07	112,422	78,361	78,785	11.34	6,948
1995	150,734.70	105,695	73,672	77,063	11.72	6,575
1996	43,516.21	29,870	20,820	22,696	12.11	1,874
1997	8,293.09	5,561	3,876	4,417	12.52	353
1998	3,887.04	2,543	1,773	2,114	12.95	163
2004	3,869,934.11	2,090,538	1,457,150	2,412,784	15.75	153,193
2006	4,302.90	2,130	1,485	2,818	16.83	167
2009	43,952.25	18,513	12,904	31,048	18.55	1,674
2010	124,735.75	49,271	34,343	90,393	19.15	4,720
2012	38,760.61	13,148	9,164	29,597	20.46	1,447
2014	62,954.32	17,602	12,269	50,685	21.90	2,314
2016	4,275,144.34	928,134	646,929	3,628,215	23.44	154,787
2017	2,552,870.37	473,302	329,902	2,222,968	24.17	91,972
2018	1,011,250.74	154,317	107,562	903,689	25.00	36,148
2019	29,182.45	3,484	2,428	26,754	25.82	1,036
2020	4,874,153.71	416,740	290,477	4,583,677	26.74	171,416
2021	2,141,760.14	110,086	76,732	2,065,028	27.66	74,658
2022	4,261,000.00	73,289	51,084	4,209,916	28.57	147,354
	25,607,897.16	6,162,585	4,295,455	21,312,442		953,351

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 22.4   3.72

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 382.00 OUTFALL SEWER LINES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R3						
NET SALVAGE PERCENT.. 0						
2017	12,312.37	1,530	822	11,490	38.75	297
2018	1,409,243.73	144,025	77,346	1,331,898	39.55	33,676
2019	94,253.92	7,521	4,039	90,215	40.36	2,235
2022	1,500,000.00	17,700	9,505	1,490,495	41.87	35,598
	3,015,810.02	170,776	91,712	2,924,098		71,806

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 40.7 2.38

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 389.10 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - INTANGIBLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 20-S2.5						
NET SALVAGE PERCENT.. 0						
2013	4,135,844.45	2,074,540	1,903,718	2,232,126	9.44	236,454
2019	144,061.75	27,775	25,488	118,574	14.65	8,094
	4,279,906.20	2,102,315	1,929,206	2,350,701		244,548

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.6   5.71

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 389.60 OTHER PLANT AND MISCELLANEOUS EQUIPMENT - CPS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2020	120,000.00	60,000	60,000	60,000	2.50	24,000
	120,000.00	60,000	60,000	60,000		24,000

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 2.5 20.00

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 390.00 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2008	12,008.00	8,706	5,515	6,493	5.50	1,181
2009	3,443.43	2,324	1,472	1,971	6.50	303
2010	44,755.08	27,972	17,720	27,035	7.50	3,605
2011	12,420.37	7,142	4,525	7,895	8.50	929
2012	35,803.65	18,797	11,908	23,896	9.50	2,515
2013	4,929.42	2,341	1,483	3,446	10.50	328
2014	23,508.40	9,991	6,329	17,179	11.50	1,494
2015	14,460.77	5,423	3,436	11,025	12.50	882
2016	706,971.10	229,766	145,558	561,413	13.50	41,586
2017	96,502.69	26,538	16,812	79,691	14.50	5,496
2018	53,190.91	11,968	7,582	45,609	15.50	2,943
	1,007,993.82	350,968	222,340	785,654		61,262

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.8 6.08

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 391.00 TRANSPORTATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 14-L4						
NET SALVAGE PERCENT.. 0						
2001	7,500.00	7,095	7,500			
2006	99,532.58	88,186	95,355	4,178	2.12	1,971
2008	138,275.00	118,889	128,554	9,721	2.36	4,119
2009	648,949.00	546,675	591,116	57,833	2.53	22,859
2010	245,374.89	200,913	217,246	28,129	2.77	10,155
2011	69,519.00	54,447	58,873	10,646	3.18	3,348
2012	283,568.72	209,019	226,011	57,558	3.75	15,349
2013	569,531.08	388,477	420,058	149,473	4.43	33,741
2014	74,011.10	46,050	49,794	24,217	5.16	4,693
2015	628,453.46	350,174	378,641	249,812	5.96	41,915
2016	130,529.00	63,724	68,904	61,625	6.81	9,049
2017	76,549.06	31,783	34,367	42,182	7.75	5,443
2018	1,423,668.46	484,901	524,321	899,347	8.71	103,255
2019	637,746.89	169,194	182,948	454,799	9.69	46,935
2020	22,500.00	4,264	4,611	17,889	10.69	1,673
2021	22,500.00	2,558	2,766	19,734	11.69	1,688
2022	22,500.00	853	922	21,578	12.69	1,700
	5,100,708.24	2,767,202	2,991,987	2,108,721		307,893

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 6.8   6.04

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 393.00 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2007	20,177.20	15,637	9,224	10,953	4.50	2,434
2008	18,550.25	13,449	7,934	10,616	5.50	1,930
2009	52,571.58	35,486	20,933	31,639	6.50	4,868
2010	23,867.97	14,917	8,800	15,068	7.50	2,009
2011	11,907.00	6,847	4,039	7,868	8.50	926
2012	34,047.65	17,875	10,545	23,503	9.50	2,474
2013	14,325.60	6,805	4,014	10,312	10.50	982
2014	13,575.00	5,769	3,403	10,172	11.50	885
2015	6,574.00	2,465	1,454	5,120	12.50	410
2016	27,741.12	9,016	5,319	22,422	13.50	1,661
2017	332,504.39	91,439	53,940	278,564	14.50	19,211
2018	232,628.65	52,341	30,876	201,753	15.50	13,016
2019	235,660.71	41,241	24,329	211,332	16.50	12,808
2020	202,500.00	25,312	14,932	187,568	17.50	10,718
2021	202,500.00	15,188	8,959	193,541	18.50	10,462
2022	202,500.00	5,062	2,986	199,514	19.50	10,231
	1,631,631.12	358,849	211,687	1,419,944		95,025

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 14.9 5.82

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 394.00 LABORATORY EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2010	2,418.04	2,015	1,220	1,198	2.50	479
2011	7,356.65	5,640	3,416	3,941	3.50	1,126
2012	727.50	509	308	420	4.50	93
2013	4,573.96	2,897	1,755	2,819	5.50	513
2014	8,402.05	4,761	2,884	5,518	6.50	849
2017	30,472.83	11,173	6,768	23,705	9.50	2,495
2019	91,308.59	21,305	12,905	78,404	11.50	6,818
	145,259.62	48,300	29,256	116,004		12,373

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.4   8.52

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 395.00 POWER OPERATED EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 22-R2						
NET SALVAGE PERCENT.. 0						
2006	93,867.04	63,191	91,860	2,007	8.01	251
2007	19,935.00	12,854	18,686	1,249	8.54	146
2008	48,270.00	29,676	43,140	5,130	9.08	565
2009	180,900.00	105,754	153,733	27,167	9.59	2,833
2010	27,950.00	15,442	22,448	5,502	10.12	544
2012	99,654.42	48,133	69,971	29,683	11.24	2,641
2013	157,521.76	70,192	102,037	55,485	11.82	4,694
2016	15,995.00	5,208	7,571	8,424	13.46	626
2017	29,847.33	8,423	12,244	17,603	13.99	1,258
2018	44,891.21	10,626	15,447	29,444	14.51	2,029
	718,831.76	369,499	537,137	181,695		15,587

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.7 2.17

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 396.00 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2017	235,316.77	86,284	79,536	155,781	9.50	16,398
2018	92,490.12	27,747	25,577	66,913	10.50	6,373
2019	114,354.29	26,682	24,595	89,759	11.50	7,805
	442,161.18	140,713	129,708	312,453		30,576

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.2 6.92

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

ACCOUNT 397.00 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2017	101,420.98	37,188	35,407	66,014	9.50	6,949
2018	22,944.61	6,883	6,553	16,392	10.50	1,561
2019	206,521.63	48,188	45,882	160,640	11.50	13,969
	330,887.22	92,259	87,842	243,046		22,479

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.8   6.79

PART III. EXPERIENCED AND ESTIMATED NET SALVAGE

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

EXPERIENCED AND ESTIMATED RETIREMENTS BY ACCOUNT AND ASSOCIATED
COST OF REMOVAL, GROSS SALVAGE, AND NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2018 TRANSACTION YEAR				
354.20		12,897.00		12,897.00-
354.30	5,732.53	2,859.26		2,859.26-
354.40	202,178.63	2,403.28		2,403.28-
360.10		2,819.19		2,819.19-
361.10	229,297.81	28,292.26		28,292.26-
363.00	4,745.21	27,682.42		27,682.42-
371.00	65,154.40	522.61		522.61-
380.00	1,806,025.87	58,050.21		58,050.21-
382.00		1,045.59		1,045.59-
390.00	64,677.45	13,128.96		13,128.96-
391.00	423,853.34	42,449.74		42,449.74-
393.00	225,336.27	4,038.83		4,038.83-
394.00	11,316.17			
395.00	8,551.14			
	3,046,868.82	196,189.35		196,189.35-
2019 TRANSACTION YEAR				
354.30	729,988.56	85,934.54		85,934.54-
354.40	1,020,415.82	64,798.11		64,798.11-
360.10		.09		.09-
361.10	6,619.40	530,646.50		530,646.50-
361.20		29,936.27		29,936.27-
363.00	3,929.16	52,929.84		52,929.84-
364.00	59,781.23			
371.00	185,365.58	43,007.97		43,007.97-
380.00	1,330,426.10	92,172.60		92,172.60-
382.00		3,306.40		3,306.40-
390.00	126,241.84			
391.00	75,000.00	45,195.91		45,195.91-
393.00	7,573.30	28,109.74		28,109.74-
394.00	19,315.01	4,804.76		4,804.76-
395.00	14,863.50	5,217.77		5,217.77-
396.00		39,091.19		39,091.19-
397.00		4,026.89		4,026.89-
	3,579,519.50	1,029,178.58		1,029,178.58-

PENNSYLVANIA-AMERICAN WATER COMPANY
WASTEWATER CSS SCRANTON OPERATIONS

EXPERIENCED AND ESTIMATED RETIREMENTS BY ACCOUNT AND ASSOCIATED
COST OF REMOVAL, GROSS SALVAGE, AND NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2020 TRANSACTION YEAR				
354.20	14,317.97			
354.30	24,196.56	2,903.59		2,903.59-
354.40	202,851.07	12,171.06		12,171.06-
361.10	360,561.83	162,252.82		162,252.82-
361.20	5,181.89			
363.00	15,545.66	9,327.40	466.37	8,861.03-
371.00	70,184.19	11,931.31		11,931.31-
380.00	280,736.74	14,036.84		14,036.84-
389.10	6,909.18			
	980,485.09	212,623.02	466.37	212,156.65-
2021 TRANSACTION YEAR				
354.20	16,920.99			
354.30	28,595.50	3,431.46		3,431.46-
354.40	239,729.45	14,383.77		14,383.77-
361.10	326,869.57	147,091.31		147,091.31-
361.20	5,221.98			
363.00	15,665.93	9,399.56	469.98	8,929.58-
371.00	31,070.16	5,281.93		5,281.93-
380.00	124,280.63	6,214.03		6,214.03-
394.00	4,563.82	273.83		273.83-
	792,918.03	186,075.89	469.98	185,605.91-
2022 TRANSACTION YEAR				
354.20	23,528.82			
354.30	39,762.37	4,771.48		4,771.48-
354.40	333,346.49	20,000.79		20,000.79-
361.10	269,640.36	121,338.16		121,338.16-
361.20	5,733.37			
362.00	38,222.46			
363.00	17,200.11	10,320.06	516.00	9,804.06-
371.00	67,860.80	11,536.34		11,536.34-
380.00	271,443.19	13,572.16		13,572.16-
382.00	38,222.46			
394.00	1,068.93	64.14		64.14-
	1,106,029.36	181,603.13	516.00	181,087.13-
TOTAL	9,505,820.80	1,805,669.97	1,452.35	1,804,217.62-